Willi Kunz

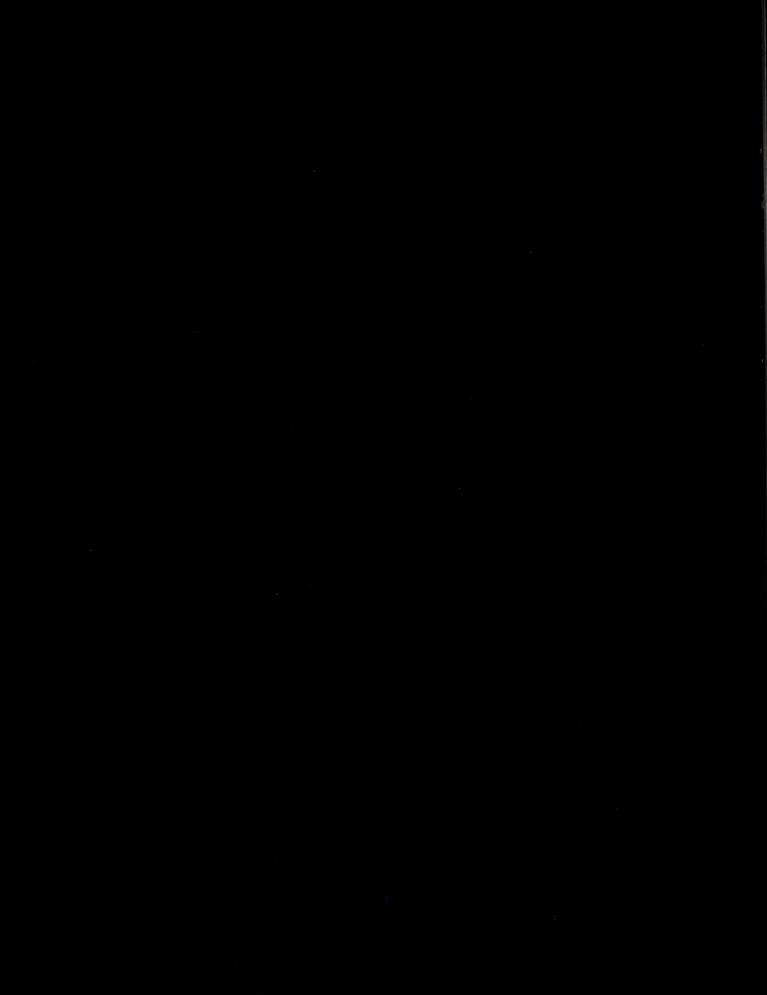
Typography:

## Macro-+Micro-

**Aesthetics** 

Fundamentals of typographic design

- With the proliferation of computers, typography has become increasingly experimental, and created according to personal visual criteria. But the design of effective typography that is, typography the reader can comprehend and understand is based on certain fundamental principles. Without these principles, typography cannot communicate, as language cannot communicate without grammar, vocabulary, and syntax.
- The fundamental principles of typography are simple, powerful means to sophisticated ends. These principles were first established with Gutenberg's movable type, and further developed by Modernism's visual revolutions in the early 20th century.
- All good typography, whether in newspapers, magazines or books, on posters, packaging or computer screens, is based on these principles. As long as letters, words, and sentences are used to transmit information, these same principles will remain valid even in the dawning age of electronic media: hypertext, Internet, and whatever new fora the future might bring.
- Part one of this book discusses the typographic elements; the microaesthetic qualities of letters, numbers, and punctuation marks, lines, and geometric elements and their diverse applications.
- Part two analyzes the design aspects of space, structure, sequence, contrast, form and counterform, and illustrates their function with examples from teaching and praxis.
- Part three demonstrates how typographic elements contribute to design on the micro-aesthetic level.
- Part four, based on a series of architectural posters, analyzes the interrelationship between purpose, macrostructure, and microaesthetics.
- In demonstrating how theory actually is put into practice, *Typography: Macro- and Microaesthetics* provides artistic and technical instruction for typographic designers, architects, and professionals in allied creative fields. By analyzing the role graphic design plays in today's media-dominated culture, it facilitates a more critical appreciation not only of the mediated foreground, but also of the unscripted background and of the various relationships between one and the other.



Typography:

**Macro- and Microaesthetics** 

In order to know an object, I must know not its external but all its internal qualities.

Willi Kunz

**Typography: Macro- and Microaesthetics** 

Second printing, 2000 Revised, expanded edition.

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#### Preface

Typography is the art of designing letters and composing text so that they may be read easily, efficiently, enjoyably. Certain fundamental principles underlie all good typography – be it in newspapers, magazines or books; on posters, packaging or computer screens. First established with Gutenberg's moveable type, then developed by Modernism's visual revolutions, these same principles will still be valid in the dawning age of electronic media: hypertext, Internet – whatever for a the future may bring.

This book sets out the enduring principles of typography, explains how to apply them, and illustrates their power and versatility with examples drawn from my twenty-five years of professional experience. By demonstrating how theory actually is put into practice, Typography:

Macro- and Microaesthetics provides artistic and technical instruction for typographic designers, architects, and professionals in allied creative fields. In addition, by analyzing the role graphic design plays in today's media-dominated culture, it facilitates a more critical appreciation not only of the mediated foreground, but also of the unscripted background and of the various relationships between one and the other.

Most books on typography only show the end product; they tell nothing about either the process of designing or the principles of design. Design annuals and glossy magazines are no better: the one is but vanity portfolio; the other but shootings of stars and trends fated to fade out by the next issue. In circular fashion, students imitate stars, designers follow trends, clients survey markets, and the public drowns in a great graphic "sea" without ever learning how to look for and at good typography. This book provides sextant and compass for charting a new course in today's inundation of information

The Information Age has arrived. And though with it the death of print media has – yet again – been predicted, paper proliferates. In the 1930s and 1950s it was said, "This will kill that;" but first radio and then television did not kill newspapers, magazines, books. Nor in the 1980s did the wired office create the paperless office. To the contrary, at home, at work, commuting in between, we all are expected to process more and more information printed on paper. Consequently, we not only have less and less time to peruse each item; also, concomitantly, we are less and less willing to labor over material that's poorly presented. Small wonder so much printed matter is discarded – the unread flotsam and jetsam of our civilization.

If printed paper is the problem, then are electronic media the solution? Yes and no. Books and computers each serve different purposes, one better than the other. Computers are the superior medium for searching out small pieces of information in sources which are very large, constantly changing, or highly individual: data bases, market quotes, and "bulletin boards," for example. They also have the added advantage that discards become ether, not landfill. Computers are the inferior medium, however, for reading long, involved text;

rather than studying a screen for hours on end, most people will print out and work on hard copy: they will, in effect, "publish" a page, a chapter, an individually edited book.

Books are a familiar format. They're simple to use and easy to transport; they work without complicated software or costly hardware. Books supplement the literary pleasures of a text with sensual satisfactions – with the visual, tactile and aesthetic qualities of paper, typography, printing and binding. Books, moreover, have an "aura;" on a shelf in a library they impart a sense of intellectual community and historic continuity that CD's in a rack just don't possess; can't finesse.

While books will always be the ultimate exemplars of print typography, electronic media also display words and images whose design must be coherent and convincing to the passive viewer. Interactive media require in addition that design be comprehensible and convenient for the active user. Hypertext is the extreme case in which the design of the original must be so comprehensively structured that it can accommodate any and all deconstructions, reassemblies, and idiosyncrasies of innumerable individual "authors." Ironically, that structure can only come from those fundamental principles of typography first formulated in the Gutenberg Bible of 1455.

Today, it is important to make a distinction between fundamental visual principles and traditional technical standards. Many of the latter arose when design and typesetting were separate professions and coordination between them required exact specification of type face and size, line length, etc. Inevitably, those specifications became not only means of communication but also ends in themselves – impersonal, technical criteria according to which typography could be designed and evaluated.

The facility of computer graphics software has both folded the role of typesetter into that of designer and eliminated the need for traditional technical standards. Typography is now created according to more personal, visual criteria. Criteria, nevertheless, remain crucial; without them – without fundamental principles – typography could no more communicate visually than could language without grammar and vocabulary communicate verbally. Typography: Macro- and Microaesthetics elaborates those principles. Specifically, the book first analyzes space, structure, sequence, contrast, form and counterform; it then demonstrates how these elements can be synthesized to create a body of work in print and electronic media.

My approach to typography is not the only one. But an understanding of the principles underlying it are necessary both to create and appreciate alternative approaches, other styles. Without those principles, one can do nothing of consequence; with them, one can do whatever he/she will. The fundamental principles of typography are simple, powerful means to various, sophisticated ends.

I would like to thank all whose collaboration has been essential in creating the first edition of Typography: Macroand Microaesthetics and the publisher, Verlag Niggli AG, for their commitment to produce again a high-quality book. Also, I am deeply grateful to the designers, educators and students who made this new edition of Typography: Macro- and Microaesthetics possible so soon.

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#### Introduction

- Whenever we speak or write, we communicate. Language, whether spoken or written, is part of what makes us unique as humans. Spoken language is ephemeral and intangible, it disappears as soon as it is uttered. When written, language is captured in a visual and spatial form, permanent and concrete. As the art of visual language, typography is inherently communicative.
- Like language, typography is both functional and expressive, serving purposes of utility and beauty. The function of typography is to communicate a message so that it effectively conveys both its intellectual meaning and its emotional feeling. This is a cognitive task, making use of letters and words which can be recognized and comprehended by the reader. At the heart of good typographic design is a critical interpretation of the meaning of the message: the more astute the interpretation, the more effective the design.
- If function is important to the intellect, then form is important to the emotions. Form is the aesthetic component of design; it is what attracts attention, invites participation, and offers enjoyment. Our day-to-day life is enriched or degraded by the aesthetic qualities of our environment. A neglected building is not only unattractive to look at, but also depressing, thus affecting us psychologically. Likewise, poorly designed visual communication assaults our sensibilities, creating a kind of visual pollution.
- Typographic form and message content are inextricably linked.

  Even the simplest design not only objectively conveys information but also gives subjective cues for the interpretation of this content. Typography seeks to integrate and balance form and function, recognizing the importance of each. Function without form is dull; form without function or purpose lacks substance and meaning.
- Perhaps the most difficult task faced by the typographic designer is to master this balance. An interesting visual effect may enhance a message, but it can also overwhelm it. When form dominates content, form in fact becomes the message and the content is weakened, even lost. Such design may initially look exciting, but it lacks depth,

- honesty, and conviction. On the other hand, if form were inconsequential, typography would become rote and dull. A message would be communicated on a cognitive level, but the artistic purpose of typography to inspire and delight would have vanished.
- The argument that visually challenging typography will entice a reader to decipher a message is invalid. Complexity is an obstacle, not an invitation. As more and more information becomes available, less and less time is spent consuming each piece. Attention spans shorten, powers of concentration decrease and an impenetrable message will be passed over in favor of something more accessible. Typography must not only allow people to read and comprehend information, but make it both easy and pleasurable to do so. Given the amount of information we are confronted with each day, this consideration is vital.
- It is less difficult to create an exclusively aesthetic solution than to create a solution that communicates effectively while remaining visually appealing. Designers must be diligent in ensuring that the aesthetics of a design do not overwhelm its content. When in doubt, it is more appropriate to adhere to the basic typographic principles that stress function than to resort to unbridled self-expression. And in the visually chaotic environment in which we find ourselves today, simple solutions often look fresh and unexpected.

- A design that pleases the eye is always more effective than one that does not. What pleases, however, is a contentious point. The one certainty is that no two people appreciate or create design in exactly the same way. Where one person might intellectually analyze a visual composition, another might intuitively sense the harmony of a design. Sensibilities differ. Such differences produce variety. They also produce disagreement about which designs are good, and why.
- Lacking analytical, consensual terms, decisions become based on vague notions, "gut" reactions, and unproven authority, prejudicing discourse among designers and their clients. The inevitable results are not only less than optimal but wanting constructive, critical tools beyond repair.
- The primary constructive tools for typographic design are a knowledge of communications theory, a good grasp of typographic principles, knowledge of the intended audience, and a clear focus on the goals of the communication, rather than on nebulous aesthetic ambitions.

  These principles are the general foundation on which specific designs can be built and evaluated; they focus the design process and making it more manageable. Weaknesses in a design can be more productively discussed when measured against specific semantic, syntactic, and pragmatic criteria.
- A focus on the objective goals and concerns of the design process is necessary for any design, yet in itself it does not guarantee a good solution. Good typographic design must also create a perceptual, subjective effect: in other words, aesthetic pleasure.
- Aesthetics are more difficult to judge than the clarity of a message because aesthetic taste is more personal and culturally specific. Deciding on the visual style or treatment that will best convey the message is more problematic than choosing the words and composing the sentences that communicate the objective and subjective content. There are no visual dictionaries or grammar books to define the subtleties and exactitudes of meaning

- of any particular visual representation. Aesthetics must be adapted to the environment in which the communication takes place. Fitting the aesthetics to their context is a complex process and must take into account not only the historical moment and cultural context, but also the graphic medium and the socioeconomic status and level of education of the intended audience.
- Many designers make the relationship of visual elements (syntax) their primary concern. In practice, the stress on visual syntax often detracts from meaning (semantics) and each element's effect and affect on the reader (pragmatics). A design may be exciting to the designer, but fail to resonate with its audience. In the initial stage of a design, visual syntax should not be the main concern, because a message is never communicated on a purely syntactical level. It is more important to find the forms of expression appropriate for the particular audience. In many instances, designers face the choice between satisfying their own aesthetic sensibilities and ambitions and creating a design for an audience with very different tastes and needs. To find and work with an aesthetic that supports communication and stimulates the reader, designers must constantly expand and refine their intellectual capacity and visual sensitivity.

The rapid introduction of new technology into the practice of typographic design has caused confusion about its role in the design process. The computer has replaced the automobile as the latest fetish of our techno-consumer society. Computer power, programs, and capabilities are discussed endlessly, with no less ignorance than reverence. Whatever has been generated digitally is deemed state-of-the-art and good; everything else is obsolete and bad. Rarely do such discussions consider the quality of the actual work produced on – not by – computers. Increasingly, it is forgotten that it is the designer's intelligence, not the software, which makes the difference between mediocre and outstanding design.

The explosion of desktop publishing and the proliferation of computers do not, themselves, weaken the designer's importance. Rather, the triumph of the computer only intensifies the need for intelligent, aesthetically pleasing design. The postindustrial information age, if it means nothing else, means more messages: messages that must be sorted, sifted, and represented in ways that people understand, enjoy, and most importantly, can use. As we become inundated with information, thoughtful, perceptive design will become a more important mark of distinction, a competitive edge.

The information age also presents new challenges to the designer: electronic media, virtual reality, interactive TV, and other modes of expression which have yet to be developed present largely unexplored territory for intelligent design. The skills already possessed by designers – organizing and visually displaying information, managing the interplay between the verbal and the visual – continue to be essential in new media. This is not to say that designers need not learn new skills, it emphasizes that their old skills will not become obsolete. The semantic, syntactic, and pragmatic principles of typographic design provide a firm basis from which to approach old challenges as well as new. The flexibility required to produce vital, creative work can come only from a deep rooting in these principles.

How do principles apply in a world that is drowning in information and reeling with distraction? Do principles inhibit creativity and individual development when typography is about exploring new directions? Principles are important in everything we do, in typography as well as in life. Principles are not ends in themselves, rather they are points of orientation highly open to interpretation; they constitute a road map which may look very clear but does not convey a picture of the final destination.

Even when principles are strictly applied, the end result is always surprising.

Typography today is based on the same principles as it was centuries ago. And it must be so, as long as letters, words, and sentences communicate. We understand a message, or we don't. This does not mean that the design of visual communication should do no more than simply transmit information. A design should also enlighten the reader and further the continuity and history of typography. The best typography communicates the conviction that it has resolved a design problem in a way both central to that problem and at the outer limits of its own possibilities.

- In typography, developments that last are not revolutionary; what is new and hot does not suddenly, completely replace what is old and cold. Rather, the significant new is evolutionary; it develops out of past traditions, while responding to present circumstances. Its persistence depends on its contribution to the continuum of typographic form and sensibilities.
- Today, I sense an anxious anticipation among designers.

  Is this millennial fear? Is it professional uncertainty about the state and fate of design? Is it the rapid pace of technological change? Information anxiety?
- For millennia, visual communication was a transaction of information within relatively small groups of people. With the invention of letterpress printing in the 15th century, the world entered a second phase of mass-produced and widely distributed information. The power of mass communication, however, was limited to those who had access to the specialist with printing equipment. With the introduction of personal computers, graphics software, and electronic media in the early 1980s, communications entered a third phase in which virtually everyone can send and receive messages. The result is a democratization of information with unpredictable consequences.
- Other social pressures have caused uncertainty. Environmental concerns raise serious questions about the future of traditional print media. The nature of reading and attention are changing, too: over the World Wide Web, information can be exchanged instantly around the world. The media increasingly presume that their audience processes information not by active reading and reflection but by passive looking and listening. Electronic media such as television and video promote info-nuggets, palatable and easily digested. Designers can adapt to the complexities and frustrations of working in today's cultural climate but only if they learn to think flexibly: to abstract essentials from the information available, integrate it with their own methodologies, and create not according to style but principles.
- Design is not a paint-by-numbers discipline there are no prescribed solutions to the unimaginable diversity of communication problems. Instead, typographic designers rely on a process which enables them to assess each situation and respond with an appropriate solution based on their knowledge of typographic principles, visual sensitivity, and personal vision. It is this foundation that gives designers the flexibility and intelligence needed to meet the challenges of a fast-moving world, with its new contexts, media, and modes of communication. It makes typography exciting and pleasurable, an endeavor whose challenge can span a lifetime of work.

1	

Typography comprises a limited set of basic elements: letters, numbers, and punctuation marks.

Despite continuous changes in aesthetic preference, design theory, and reproduction methods, the basic forms of these elements have remained constant for the past 2000 years.

Alphabets derived from the original
Latin are – and are likely always to be –
indispensable to life in the western
world. To conceive our culture and our
environment without them is
virtually impossible. No other system
of visual communication has
proven itself so powerful and versatile,
yet so precise and concise in its transcription of facts, thoughts and feelings.

ABC

abc

DEFGH

defgh

IJKLM

ijklm

NOPQR

nopqr

STUVW

stuvw

XYZ

XYZ

#### Letters, numbers, punctuation marks

The basic elements of typography are upper case letters, lower case letters, numbers, and punctuation marks. Letters evolved from prehistoric pictographs and ideographs to become the sophisticated signs of the Latin alphabet – the most widely used system of writing in the world today.

Although over the centuries variations have been made in details, the essential structure of letters and numbers has undergone no significant change. Whether carved in stone, written on paper, printed in books, or pixelated on computers, letters have always used the same basic structure the Romans used.

Perhaps the most notable modification in the structure of letters occurred in the fourth century, when minuscules (lower case letters) were distinguished from majuscules (upper case letters). While the structure of twelve

minuscules remained close to their corresponding majuscules, fourteen became sharply differentiated between upper- and lower case.

Another notable innovation was the appearance of a sans serif face in the early nineteenth century. Although little noticed until the late 1800s, today sans serif is widely recognized as embodying a radical sensibility which has had a profound impact on modern typography.

;;:!?i¿

\_ \_ ~ ~

Since the 1980s, computer graphics programs have provided designers with access to virtually every version of the Latin alphabet – access formerly restricted to printers and typesetters. Though the selection of type styles is now immense, the basic elements remain the same.

This limited set of basic elements – letters, numbers, and punctuation marks – make typography an especially challenging field of design. The contemporary designer must constantly search for creative solutions to the problem of communicating facts, thoughts, and feelings, with just these few fecund elements.

Monotype® Bembo. The original version was created by Francesco Griffo da Bologna, Italy, in the late 15th century.

Aa Cc

B b I i

D d K k

E e O o

F f P p

Gg Ss

Hh Uu

I i V v

L 1 Ww

M m Y y

Nn Xx

Q q Z z

R r

Tt

The structure of upper case letters has changed only minimally over the course of centuries.
Lower case letters have changed in varying degrees. Some forms are still closely related to their upper case counterparts, others differ considerably in their structure.

abc

ABC

defgh

DEFGH

Bembo italics.

Bembo small caps ijklm

IJKLM

nopqr

NOPQR

stuvw

STUVW

xyz

XYZ

The diversity of human language, together with the need for typography to express subtle inflections and convey the structure of information, calls for a variety of additional letters and special signs.

Italics, termed oblique in sans serif type, are mainly used to differentiate from roman type. Unobtrusive yet distinct, italics are indispensable for emphasis. A true italic typeface is vital: simulating an italic on the computer by slanting a roman face produces letterforms with strangely distorted proportions.

Small caps, slightly letterspaced for a more refined appearance, are primarily used for subtitles, acronyms, abbreviations and emphasis. They are designed to correspond to the x-height and weight of lower case letters. Genuine small caps are normally available only in expert fonts. Reducing upper case letters to the height of lower case produces small caps that are visually too light to be compatible with text.

Old-style figures, also called text figures, are designed to match the size of lower case letters. They blend more smoothly with text, and are desirable for typefaces with a small x-height. Old-style figures are common in serif typefaces, but are generally available only in expert fonts.

### 0123456789

Acute accent	ÁÉÍÓÚ	áéíóú
Grave accent	ÀÈÌÒÙ	àèìòù
Circumflex	ÂÊÎÔÛ	âêîôû
Umlaut	ÄÖÜ	äöü
Diaeresis	ËΪ	ëï
Tilde	ÃÑÕ	ãñõ
Ring accent	Å	å
Cedilla	Ç	ç
Slashed O	Ø	Ø
Ligatures	ÆŒ	ææfiflß

Accent marks, foreign punctuation marks, and other signs are essential for multilingual typography. On the computer, these symbols are inserted into the text through an often tedious process of single or multiple-step keyboard commands.

Ligatures combine two or three letters into a single character.

They are available only in expert fonts, and are crucial for the refined setting of serif type. The ligatures fi and fl are, because of their frequency, the most important. Letter-spaced text precludes the use of ligatures.

Bembo
Old-style figures.

Each type font includes a number of special signs. The series of signs below is available in all fonts.

at	@
Copyright	©
Registered	R
Trademark	TM
Degree	0
Space	#

Section	\$
Dollar	\$
Pound	£

€

Brace

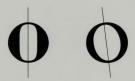
Yen

Paragraph



Variation of serifs: bracketed serif hairline serif slab serif.

TTT



Variation of curve axis: vertical oblique.

#### The parts of letters

The terms used to designate the parts of letters originated in metal typesetting. This terminology was indispensable for collaboration between the typographic designer and the typesetter, when their professions were distinct.

Although the computer has combined design and typesetting into a single activity, the terminology remains essential for comparing and evaluating individual typefaces, and for specifying, measuring, and positioning type.

Character with the contract of the contract of

Univers 55 with normal set width

Mig

 $\mathbf{Mig}$ 

Bodoni with normal set width.

Bodoni with increased set width.

#### Character width and set width

In typographic design, it is important to distinguish between the character width and the set width. The character width is the effective visual width of an individual letter. The set width, by contrast, includes the variable space to the left and right of each letter. The set width is crucial because it influences type legibility and text length. Even small changes in set width can cause considerable differences in the final length of the text.

On the computer, the set width is controlled by tracking.

Reducing the space between letters to less than the standard set width is not recommended for any text,
because excessively close letters will appear too tight
and create a spotty composition.

Renaissance-Antiqua Bembo

# Rafopkz

The uniqueness of each typeface is found in its microaesthetic details. Selection of a typeface is most strongly influenced by these details, which distinguish one typeface from another.

Baroque-Antiqua Baskerville

# Rafopkz

Neoclassical Antiqua

# Rafopkz

#### Variation of style

Our visual environment would be unbearably dull if a single typeface were applied universally. Individual typefaces, with their different styles and particular idiosyncrasies, all contribute to the visual expressiveness of typography. Only very few of the countless "new" typefaces produced and marketed every year serve a real need and promise to stand the test of time. Invariably they look dated after a few uses, and are soon superseded by a new crop.

Designers, in their quest for originality, often become preoccupied, even obsessed, with typefaces, with the unfortunate result that typefaces are used to mask weak ideas or are degraded into meaningless decoration. Typically, however, a general audience is more interested in content than in the typeface used. If the goal of typographic design is to communicate information, the audience is best served by a simple, classical typeface.

Technological advances and changes in taste will undoubtedly influence letterform design in the future. However, true developments are more than microaesthetic changes in existing styles. Mere embellishments on basic letterforms do not constitute new design, and actually work against the precepts of typography to communicate information clearly.

Most of the typefaces in use at present were created for printing on paper. On the screen or through electronic transmittal, most typefaces lose their refinements of detail and bear no resemblance to the original. Electronic media require new typefaces developed with their specific technical conditions in mind.

Slab serif

# Rafopkz

Sans serif

# Rafopkz

Sans serif Meta

# Rafopkz

Characteristics of typefaces classified by five categories of styles. The date indicates when the typeface was first produced for metal or computer composition.

The subtle details of the original design are often lost when a typeface is re-issued in digital form. In selecting a typeface, it is best to choose the version of the date closest to the original design.

Renaissance-Antiqua

Strong modulation of curves Bracketed serifs Oblique ascender terminals Oblique curve axis

Caslon, 1916 Goudy, 1916 Janson, 1919 Garamond, 1922 Bembo, 1929 Times, 1931 Van Dijck, 1935 Sabon, 1965 Baroque-Antiqua

Moderate modulation of curves Bracketed serifs Oblique ascender terminals Oblique curve axis

Baskerville, 1923 Fournier, 1925 Bell, 1931 Neoclassical Antiqua

Strong modulation of curves Straight hairline serifs Horizontal ascender terminals Vertical curve axis

Century, 1894 Walbaum, 1918 Bodoni, 1921 Centennial, 1986 Slab serif

Subtle modulation of curves Bold straight or bracketed serifs Horizontal ascender terminals

Memphis, 1929 Beton, 1930 Rockwell, 1934 Courier, 1945 Serifa, 1969 Sans serif

Subtle modulation of curves
Vertical curve axis

Akzidenz Grotesk, 1896 Franklin Gothic, 1903 Monotype Grotesk, 1926 Gill Sans, 1927 Futura, 1927 Helvetica, 1957 Univers, 1957 Syntax, 1968 Frutiger, 1976 Bell Centennial, 1978 Formata, 1984 Meta. 1991

#### A case for Univers

- In connection with my work, I am often asked why I prefer
  Univers not only to serif typefaces but also to other sans
  serifs such as Futura, Gill, or Helvetica.
- My own preference for Univers begins but does not end with its still-contemporary form and its comprehensive series of fonts. In the early 20th century, the vehement and animated debate between proponents and opponents of the new sans serif type required typographers to take a stand for one side or the other. Today, the issue of serifs versus sans serif is no longer of aesthetic relevance or ideological interest: the decision to use one face or the other is better made on the basis of functionality and appropriateness.
- Traditionalists argue that serif type is more readable than sans serif. While this may be so with lengthy text, readability is in most cases less a function of the presence of serifs in the typeface than of other factors: namely type size, weight, and slant; line length and interline space; paper, printing, and reading conditions. In fact, the most important determinant of legibility (clarity and efficiency in reading) and readability (pleasure and interest in reading) is not the particular typeface but the arrangement and structure of information.
- Throughout my professional career, I have worked with many sans serif typefaces; among them all I have found Univers uniquely versatile. Univers has neither the rigid forms of Helvetica nor the geometric constructions of Futura; unlike Gill and many other sans serif faces it comprises a series complete in terms of weights as well as widths. Univers, moreover, is quietly refined in its visual details; nothing extraneous detracts from the essential form of individual letters. The upper case letters, which are only slightly heavier than lower "read" distinctly but unobtrusively in lengthy texts.
- Univers was created in the early 1950s by Adrian Frutiger,
  a Swiss type designer with a profound knowledge of the
  history of type and print technology. The first typeface
  ever conceived as a complete series, Univers consists of
  21 fonts, with Univers 55 serving as the primary font

- from which the other 20 were developed. Univers 55 manifests all the characteristics of a good text typeface. Its large x-height with short ascenders and descenders makes the font compact yet readable in small point sizes.
- Univers was designed as a matrix with 55 at the center: to the left are expanded fonts, to the right condensed; above light, below bold. Each font is identified by a two-digit number. The first digit indicates weight, the second slant; roman is indicated by odd numbers, italics by even. Inherent in this matrix of 21 fonts are countless possibilities for visual contrast in typographic design.
- Since the introduction of desktop publishing, several Univers fonts were deliberately altered in their conversion to digital form by software manufacturers. In particular, the desktop versions of Univers 47, 57, and 67 are considerably wider than their originals, consequently weakening the contrasts between different widths. Nevertheless, Univers remains, in my opinion, unequalled for its completeness, versatility, and aesthetic distinction. Especially in the late 20th century when novelty is unhesitatingly embraced and typefaces can be created on a whim, it is hard to imagine a typeface so thoroughly conceived and executed as Univers.
- Univers, of course, is not the only typeface suitable for use in typographic design. Variety is necessary and desirable. Choosing a typeface is a process of elimination based on whether the macro- and microaesthetic qualities of the typeface are appropriate to the purpose of the communication and its context of use. Even after carefully considering all of these factors, though, a number of typefaces might be suitable for any given problem.

  Ultimately, the final choice of typeface is a question of personal preference and taste.
- All typefaces serve fundamentally the same purpose: to communicate. The purpose behind the communication for example, to inform, to entertain, or to persuade is expressed, in part, by the typeface chosen. As the communication objectives change, so might the typeface.
- Depending on its context of use, different criteria must be applied when selecting a typeface. When used in display size on a poster, typefaces are evaluated on purely aesthetic criteria: how the qualities of the letterforms, in that particular size, interact for that particular set of words.

When used for continuous text, both aesthetic and functional criteria come into play. Legibility then becomes the key consideration.

The criteria of legibility require that extra attention be paid to the specific letterforms of the typeface. Reading is a dynamic process in which all letterforms have equal value: each letterform must integrate unobtrusively into the flow of words. Because letterforms with too much individuality and character distract the reader, a typeface with too many idiosyncrasies or unusual letterforms will, most likely, not work for continuous text. Typefaces that appear more legible than others share certain characteristics such as harmony, simplicity, and dignity, qualities that are difficult to determine and quantify.

On the macroaesthetic level, a typeface is evaluated on the form and counterform of its letters, their combination in words, and the relative size of its upper and lower case. Microaesthetically, the focus is on the tapering of curves, the connection of strokes, the form of serifs, and the proportions of ascenders and descenders. In financial communications, for instance, the choice of a particular typeface may be determined by the form of the numerals. All of these subtle nuances in the design of letterforms contribute to the reason for preferring one typeface to another.

A typeface should always be evaluated in the size, type of composition, and, if possible, the color it is to be used in. A single-line type specimen is insufficient to determine the suitability of a typeface. For the same reason, it is impossible to judge typographic design based on a sketch which does not show the nuances of letterform details, size, interline space and line breaks. One of the benefits of computer technology is that it allows easy examination of these details while the project is still in the development phase.

The immense number of available typefaces tempts designers to use type style as a crutch. Typeface itself, they assume, will rescue a weak and flaw-ridden composition; conversely, a bad typeface will be blamed for a poor solution. Good typographic design depends less on the chosen typeface than on arrangement, size, line length, letter, word and interline space. Mediocre typography is caused mainly by confusion and incompetence in working with these variables, not bad typefaces. Using a novelty typeface will not save poor typographic design any more than a classic typeface will. With skill and imagination, an unusual typeface can indeed yield interesting results; still, it is better in the end to use a limited selection of proven typefaces diligently and with intelligence than to rely on novelty faces that inevitably lead to results that soon look dated.

Original Univers font matrix, conceived by Adrian Frutiger. Paris. 1956.



A

The character of all upper and lower case letters is determined by the letter's structure, a series of vertical, horizontal, slanted, and curvilinear strokes. The capital A, for instance, is made up of two slanted strokes and one horizontal stroke.





#### The form of letters

Each of the upper and lower case letters is unique because of its distinct structure. The upper case letter A, for example, derives its character from its strong triangular shape consisting of three distinct strokes – not from being light or bold, wide or narrow, roman or italic, sans serif or serif.

Typographic communication relies primarily on the structure of letters. Letterforms, therefore, should be clear and concise, unencumbered by details.

Equally important for communication are the relationships between letters, as the intrinsic visual quality of each letter changes when placed in context with other letters. A well-designed typeface allows the weight of strokes and curves, the counterforms, and the spacing between letters to coordinate into a virtually unlimited number of combinations.

The basic forms of letters can be seen as a code that is effective only if known to the reader. Drastic changes in form and structure hamper the reader's ability to differentiate between letters. Changes in form thus can only be microaesthetic changes: subtle intrusions into established norms. The challenge for the typeface designer is to expand on the accepted norm without destroying the identity of the individual letter.

I-TILE	EFHILT	fijlt	25 Elements
1/	MNKY	k	Elements of typography
1	VWX	vwxy	
/-	ZA	Z	Each letter is a code that derives its meaning from a specific combination of
1)	BDGJPRU	abdghmnpqru	vertical, horizontal, slanted and curvilinear strokes. The upper half is more essential to the identity
) -	coos	ceos	and recognition of a letter than the lower half.
	CONCERNING CO.		
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LG II	ug IIII	Fo Ff Ga Hh	

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vioual illeracy

vigual literacy

Variations of letterforms are subordinate to the basic structure of the letter.

#### Variations of letterform

The alphabet is used in countless different styles, all of them variations of basic letterforms. Most common are variations in case, face, slant, weight, and width.

Case. Each letter is used in two versions: upper case and lower case; of different forms yet identical meaning.

Because of their uniform height and similar widths, capital letters are less differentiated than lower case letters, which are distinguished by ascenders, descenders, and more varied forms.

Face. Type is generally divided into two categories: serif and sans serif, though both share the same principles of form. The additional detail of serifs and the weight difference in the strokes and curves of individual letterforms provide visual character and can enhance the readability of continuous text.

Slant. Slant refers to the angle of type relative to the baseline. Roman type is characterized by vertical strokes. Italic type deviates from roman by 12 to 15 degrees.

Weight. Weight refers to the thickness of the strokes relative to their height. In regular weight, the width of the capital letter I is about one seventh its height. Regular weight is closer to light weight than to heavy.

Width. Width refers to a letter's proportion relative to its height. In a wide typeface, the negative white space (counterform) is larger in proportion to the positive form than in a narrow typeface. The compact, narrow negative spaces of condensed letterforms are more elegant than those in wide letters.

ements of typ

WAX

wavy

photograph

GOOD

case

photograph

### photograph

photograph

#### WE APPLY CRYPTOGRAPHY TO PROTECT

we apply cryptography to protect proprietary

The word

Every word is comprised of a particular set of letters, whose sequence and form makes each word semantically and syntactically unique. A word consisting of predominantly curvilinear letters differs greatly from one composed of angular letters.

Likewise, a word set in all upper case letters is distinct from the same word set in lower case. When set in all upper case, the word is more uniform in shape and considerably wider. Lower case letters, with their ascenders and descenders, provide more varied word shapes than upper case letters, making them easier to identify and read. Because text set entirely in upper case is strenuous to read, large quantities of continuous text are generally set in lower case with an upper case letter at the beginning of each sentence.

The visual and semantic quality of a word or text may be enhanced by variation in the case, face, slant, weight and width of the letterforms. For instance, the distinct slant of italics provides a word with a certain "flow" that roman type lacks. The subtle microaesthetic details of serifs in the individual letterforms contribute significantly to the visual quality of text.

A word composed of letters with horizontal and verticel strokes appears more rigid than a word consisting of predominantly curvilinear strokes. LITTLE, consisting of horizontal and vertical strokes, WAX, consisting of predominantly slanted strokes, and GOOD, consisting of predominantly round strokes, have entirely different appearances.

Variations in letterform change the semantic and syntactic quality of the word "photograph".

Lower case letters, with their ascenders and descenders, provide more varied word shapes than upper case letters.

### sonic

### sonic

Normal letterspace is related to the counterforms of lower case letters. Type-faces with large counterforms require more letterspace than typefaces with small counterforms.

Letterspace must be decisive, either in harmony with or in strong contrast to the counterforms of lower case letters.

For text, most typefaces set with the default set width appear too tight. Additional letterspace improves legibility and aesthetic quality. Architecture of information

Letterspace (Track) 0 The architecture of information is determined on both the macro- and microaesthetic level

Letterspace (Track) 2 The architecture of information is determined on both the macro- and microaesthetic level

#### Letterspace

The space between letters is integral to all typography.

A particular letterspace may enhance or destroy the aesthetic quality of a typeface or the legibility of text. With the computer, choosing the letterspace is entirely at the discretion of the designer. Unprofessional typesetting is generally caused not by the choice of typeface, but by too much, too little, or irregular letterspacing. When letterspacing is too tight, the type appears patchy, disrupted by clusters; when too open, it looks scattered and fragmented. In both instances, the type is irritating and tiresome to read.

The correct letterspacing in a continuous text is a subtle question of balance: what is the optimum space that sufficiently separates the letters without creating a string of disconnected elements that are difficult to grasp?

The answer depends on the typeface and size, and the visual result intended by the typographic designer.

For both serif and sans serif type, the optimum letterspace for text is determined by the counterforms of the lower case letters. Typefaces with small counterforms require less space between letters than those with large counterforms. If the letterspace is visually larger than the median counterform of the lower case letters, the type appears too open.

On the computer, most design applications adopt an average set width intended to work with all type sizes. For most typefaces, however, text composed with this setting appears too tight, requiring the letterspace to be increased for optimum legibility and aesthetic quality.

## Assemblage

Letterspace (Track) 0

(Track) -5

## Assemblage

Letterspace sp

In sizes larger than 24 point, most typefaces set with the average set width value appear too open. Reduced letterspacing improves their aesthetic quality.

The visual quality of a word set in all capital letters is considerably improved by kerning. Left: Default spacing, unkerned. Right: Visually corrected spacing, kerned.

### **PANTHEON**

### **PANTHEON**

In sizes larger than 24 point, most typefaces composed with an average set width appear too open. Display sizes generally require a decrease in letterspacing.

In large type sizes, individual letterforms are visually more distinct, making it important to pay special attention to the letterforms in relation to each other. Visually awkward combinations, such as Ke, LT, ey, vo, are improved by reducing the space between the individual letters.

Adjusting the letterspace between two letters is known as kerning.

Words set in all capital letters also require attention to the space between individual letters. The particular combinations of letterforms determine whether space needs to be added or subtracted to achieve a visually even composition.

The optimum letterspace for a word set in all capital letters is determined by letters with large counterforms, such as C, D, G, O, Q, or with large surrounding space, such as L, T, V, W, Y. If any of these letters stand apart, the space between the other letters needs to be increased. Ultimately, every letter should unobtrusively integrate itself into the visual form of the word.

Word space too tight Merely visual space is Euclidean, that is, namely, continuous, homogeneous, connected and static. This was the result of the abstraction of the visual faculty from the other senses at the moment of the phonetic alphabet – the first and only time this ever happened in the world, i.e., the fifth

Word space too open Merely visual space is Euclidean, that is, namely, continuous, homogeneous, connected and static. This was the result of the abstraction of the visual faculty from the other senses at the moment of the phonetic alphabet – the first and only time this ever happened in the world

Word space should be slightly larger than the counterforms of lower case letters. Too little and too much space equally damage the legibility and aesthetic quality of text.

Normal word space for text Merely visual space is Euclidean, that is, namely, continuous, homogeneous, connected and static

Word space is uniform only in type composed ragged right. In justified type, the variation in word space from line to line should not be noticeable.

Merely[visual[space]is[Euclidean, that is, namely, continuous, homogeneous, connected and static. This was the result of

Merely visual space is Euclidean, that is, namely, continuous, homogeneous, connected and static. This was the result of the

#### Word space

A carefully composed line of type appears as a continuous, even string of words separated by unobtrusive, visually uniform space. Too much word space creates a fragmented appearance; too little space causes insufficient separation between the words for comfortable reading.

For text, the normal word space is approximately the width of the lower case i. However, the optimum word space depends on the counterforms of the lower case letters. A typeface with small counterforms requires less word space than one with large counterforms.

In larger type sizes, the word space should be decreased in accordance with the letterspace.

Uniform word space can only be achieved with ragged right setting. In justified type, extra space must be

distributed between the individual words, resulting in word spaces that vary from line to line.

Because of the noticeable differences in word space, justified type often appears uneven and erratic, especially when set to a narrow column width. Consistent and uniform word space is more important than equal line length. A text with even word spacing is more pleasant to read, not being hampered by the irregularities inherent in justified text. If justified text is required, words should be hyphenated whenever necessary to avoid excessive word space.

To achieve a visually consistent composition, word space should be slightly reduced after commas and periods.

Merely visual space is Euclidean, that is, namely, continuous, homogeneous, connected and static. This was the result of the abstraction of the visual faculty

Merely visual space is Euclidean, that is, namely, continuous, homogeneous, connected and static. This was the result of the abstraction of the visual faculty from the other senses at the moment of the phonetic alphabet - the first and only time this ever happened in the world, i.e., the fifth century B.C. In the electric simultaneous

Merely visual space is Euclidean, that is, namely, continuous, homogeneous, connected and static. This was the result of the abstraction of the visual faculty from the other senses at the moment of the phonetic alphabet - the first and only time this ever happened in the world, i.e., the fifth century B.C. In the electric simultaneous time, we are encompassed by the new electric space which is simultaneous and acoustic, i.e. we hear from all directions at once creating a space which is

Merely visual space is Euclidean, that is, namely, continuous, homogeneous, connected and static. This was the result of the abstraction of the visual faculty from the other senses at the moment of the

Merely visual space is Euclidean, that is, namely, continuous, homogeneous, connected and static. This was the result of the abstraction of the visual faculty from the other senses at the moment of the

Composed in the same type size and with the same interline space, a nerrow column of text appears more open than a wide column. To achieve a gray value similar to the narrow column, the interline space of the wide column would have to be increased.

ents of typography

For text, the interline space measured from the baseline to the x-line should not be less than the height of the capital H.

In a good ragged right composition, the difference between the longest and the shortest line is approximately one fifth to one seventh of the total column width. Paragraphs should start with a short line. followed by a long line. To achieve an even, yet visually active rag, hyphenations are mandatory.

#### Interline space

A carefully composed column of text appears as a series of lines separated by horizontal bands of white space. To guide the eye effortlessly across each line, and to facilitate the transition from one line to the next, the interline space must be visually larger than the space between words. For text to be legible, the interline space, measured from the baseline to the x-line of the line below, should never be less than the height of the capital H.

Interline space is inextricably linked to line length and the x-height of the typeface used. Composed in the same size and with the same interline space, short lines appear more open than long lines; similarly, given the same size and interline space, a typeface with a small x-height appears to have more interline space than a typeface with a large x-height. The wider the line and the larger the

x-height, the more space that is needed to separate the individual lines of type visually.

If space is limited, a smaller type size composed with a small interline space is preferable to a slightly larger type size set solid.

М	6 pt
М	7
M	8
M	9
M	10
M	11
М	12

The standard point sizes for text and display type.



#### Type size

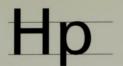
The standard type sizes used today originated in metal typesetting. Although any type size can be created on the computer, a limited range of sizes is preferable for effective work. A concise, calibrated range of sizes helps to establish ratios between type size, interline space, and the typographic structure.

Type sizes are generally divided into text sizes and display sizes, specified in points: 12 points = 1 pica; 72 points = 6 picas = 1 inch. The point size is only an indication of the actual visual size of type; at the same point size, a type-face with a large x-height will look bigger than a typeface with a small x-height.

The choice of a particular size is determined by the intended design, the nature of the information, legibility and function, and the dimensions of the available space.

The standard sizes for text type are 6, 7, 8, 9, 10, 11, 12 point; the sizes for display type are 14, 16, 18, 20, 24, 30, 36, 42, 48 and 60 point. Larger sizes are determined as required.

Continuous text is most efficiently read when set in a medium type size of approximately 9 point. At that size, the eye captures groups of 8 to 10 letters simultaneously. At larger sizes, the number of letters captured decreases, slowing down reading. Efficient reading also depends on a comfortable line length of 40 to 60 characters, and adequate interline space and physical conditions such as environment and lighting, and, most importantly, the reader's motivation.



The visual size of type is determined by the x-height of lower case letters.

9/12 pt Univers 55



The visual size of type is determined by the x-height of lower case letters.

9/12 pt Bodoni

Set in the same point size, two typefaces may appear different in size, depending on their x-height.

Elements of typography

 .375 pt
 .5
 .75
 1
 1.5
2
 3
4

### Rule weight

The weight of a rule is measured in points. The most common rule weights are .375, .5, .75, 1, 1.5, 2, 3, 4 and 6 point. Although on the computer rules can be created in any weight, it is more efficient to work with a standard set that can be easily recalled.

The choice of a particular weight is determined by its intended function and visual effect. The visual appearance of a rule depends, in part, on its length - a short rule appears heavier than a long rule of the same weight.

Dots, placed at decreasing intervals, form a visual line.

A horizontal line is stable. The two ends emphasize its direction.

The strongest contrast to a horizontal line is a vertical line. A vertical line, unlike a horizontal line, is unstable. Its quality seems to be dictated by gravity.

Depending on the angle, a slanted line is more or less unstable

#### Line elements

A line, in essence, can be perceived as dot in motion: the static quality of the dot, as it becomes a line, is transformed into dynamic movement. By nature, the length of a line is infinite, its weight undefined, its direction undetermined. In typographic design, a line assumes different functions:

it may, for example, organize, structure, connect, separate, emphasize, highlight or enclose. In typography, lines stand clearly apart. Their visual qualities are very different from type, and their presence is powerful.

When using lines, questions related to weight, length, direction, and form immediately arise. How long and what weight should the line be? Should it be straight, angled, or curved? When does the line cease to be a line and become a plane?

Highly adaptable, a line invites experimentation, possibly in the form of a loosely sketched letter or a study in rhythm. In any case, it is a dynamic element that is essential in bringing ideas to life.

A

A

An imaginary line appears between two elements that are in an uninterrupted, direct relationship to one another. A sense of space and direction is established by their presence.

Depending on the proximity and weight of the elements, visual lines assume different degrees of importance.

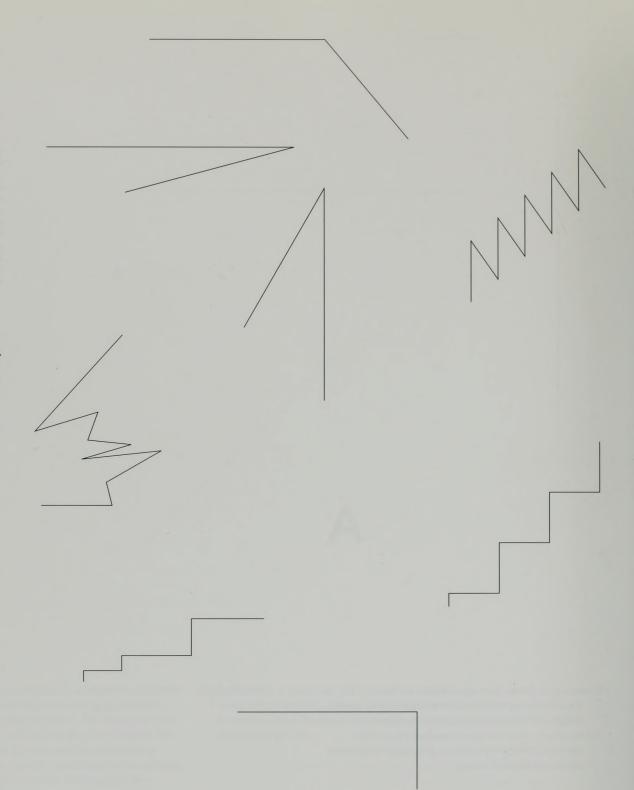
A

In typographic design there are two types of line:
the concrete line and the imaginary (visual) line. Length,
weight, and direction characterize the concrete line.
The imaginary, visual line occurs between two or more
elements. This type of line is an extraordinarily important
aspect of typographic design.

Two lines of different direction, when connected, create an angle, which begins to define a two-dimensional space. Unlike a straight line, which is defined by its two endpoints, the angled line is characterized by three points.

Angled lines contrast strongly with typography, which is predominantly horizontal and vertical.

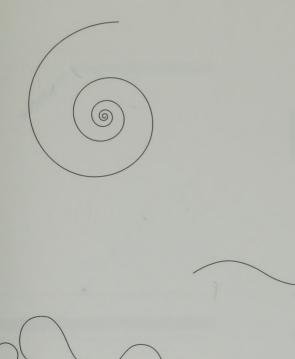
A stepped line, consisting of horizontals and verticals, echoes the horizontal and vertical characteristics of typography.



A curved line is expansive. It has a radiant quality that is increased by the points of tension on both ends. A curved line contrasts strongly with the predominant horizontals and verticals of typography.

A spiral appears infinite, moving simultaneously in opposite directions, inward and outward.

A wavy line is soft and fluid; it appears unreliable and ephemeral.



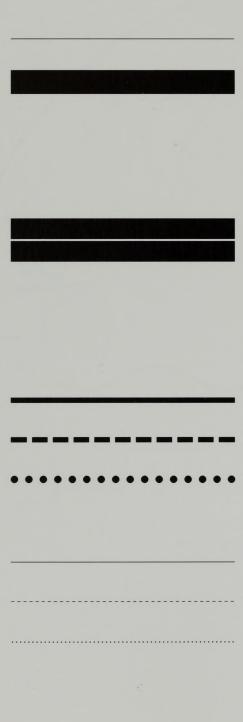


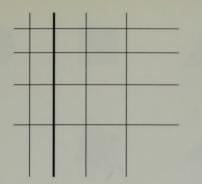
The visual identity of a line is defined by the surrounding space.
Separated by space, lines appear as figures against a background. Reducing the space causes the lines to merge into a grey value, dissolving the character of the individual

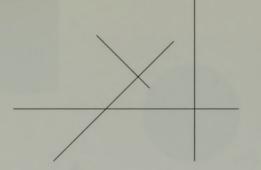
The visual character of a line depends on the proportion of its length to its width. If the width is substantially increased, the line loses its vitality and turns into a static plane. A thin line appears to be moving faster, visually, than a bold line.

Two parallel bold lines produce a thin negative line. The two bold lines seem to press down upon the negative line.

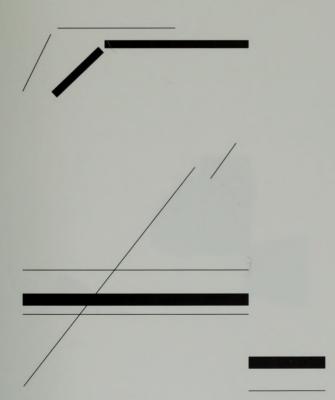
A line consisting of individual dots or dashes has more visual energy than a solid line of the same weight.

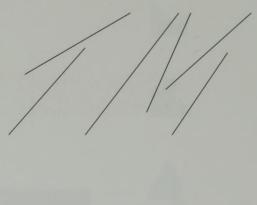






Combining different weights, breaking, repeating, crossing, shifting, and slanting change the expression of lines.





The circle, square, and equilateral triangle are the three basic geometric elements.

The circle is stable, its orientation neutral. In horizontal or vertical orientation, the square and equilateral triangle are stable; when slightly rotated they are unstable.

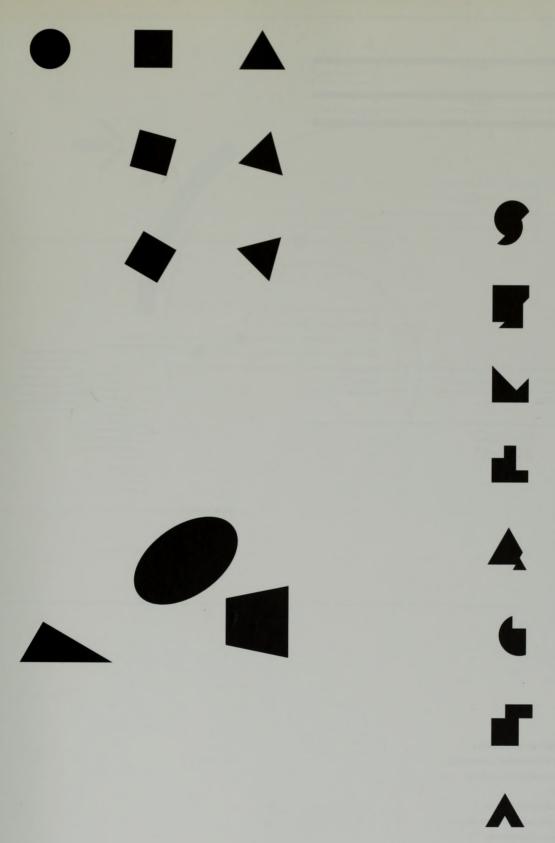
Changing one dimension transforms the square into a rectangle. A horizontal rectangle appears heavier than a vertical one of the same size.



## Geometric elements

The basic geometric elements are the square, circle, and equilateral triangle. Through combining, cutting and distorting these elements, an unlimited number of new shapes can be created. Each of the basic geometric elements is symmetrical in shape, with a distinct character that can be easily memorized, making them versatile components for visual messages and symbols. The meaning of many traffic and hazard signs worldwide, for example, is linked to these shapes.

A geometric element is perceived relative to the space it is placed in as a plane or as a dot. Depending on its surroundings, it may be perceived as a dot next to large elements; next to small elements as a plane.



The orientation and expression of the circle are fixed. The square and equilateral triangle assume different visual qualities depending on their orientation. The square, with its horizontal base and two vertical sides, is stable. Rotated between 0 and 45 degrees, it appears unstable. The equilateral triangle with a horizontal base is stable. Rotated between 0 and 60 degrees, it appears unstable.

Cutting, removing, shifting and distorting can yield an unlimited number of new shapes, each with its own characteristics.

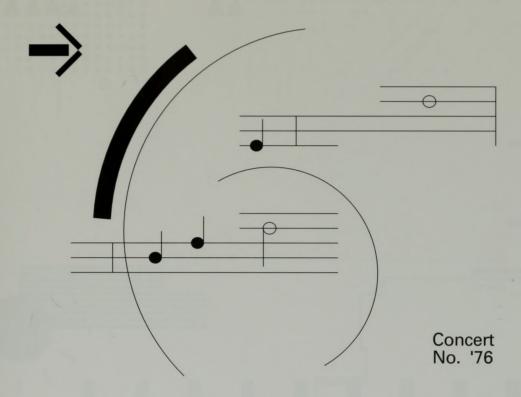
Seller	Ship to CCC	No.
		Date
	Invoice in Triplicate to this Address	Terms
Ship via	Delivery required at Destination	FOB
Show CCC Seller Code	Commodity Code	And our Order Number on your Invoice

Subject to Federal Excise Tax	Subject to State Sales Tax	Subject to City Sales Tax
A Packing Slip must accompany ill shipmenta	Charge Account No.	Requisitioned by
Immediate Attention Acceptance of this order is subject to the terms and conditions on the reverse side.	By:	Continental

As structural elements, lines can establish a hierarchy to guide the reader through the information presented. In this case, the lines are purely functional, with no other meaning attached to them.

Lines can act as transitional elements from ideas to representations: abstract concepts can be made visual by lines. A single arrangement can have many meanings, providing a rich source of expression.

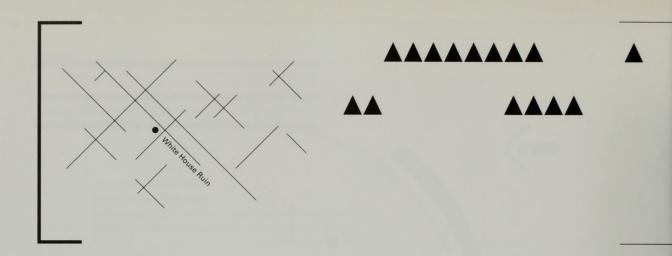
When an identifiable object is portrayed, the line is representational, its meaning tied to the object or event and its connotations.

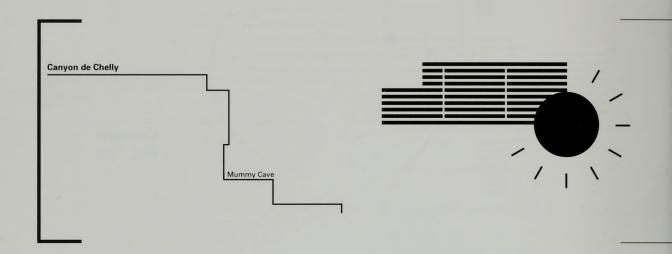


Purchase order form.

Cover design for a brochure on executive training programs.

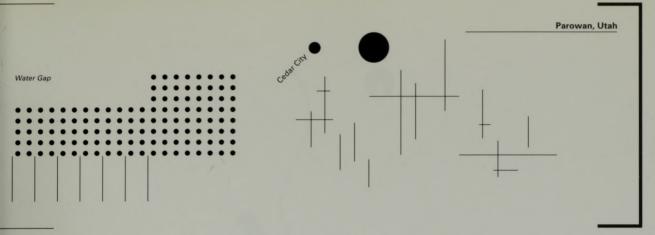
Season's greeting card.
The year is graphically represented by line elements. By their arrangement, geometric forms and lines express music.

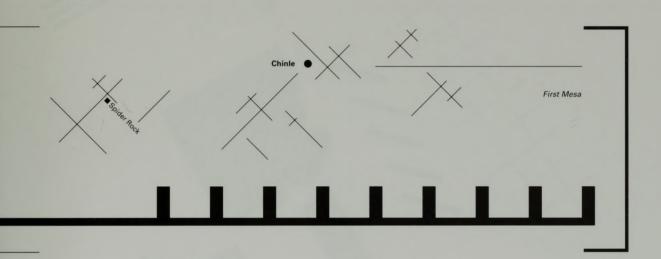




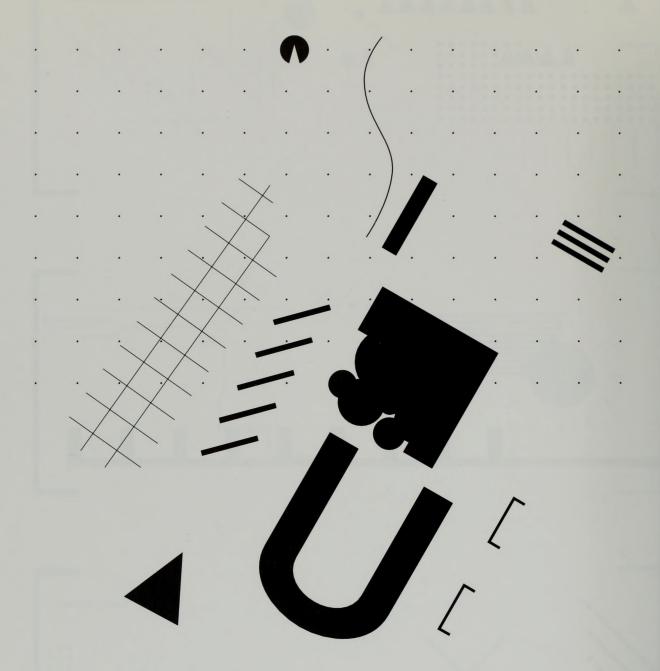
Geometric elements and lines have inherent semantic qualities conducive to illustrating visual ideas.

Connotative maps of Arizona landscapes for an essay about the petroglyphs of North American Indians. Lines, circles, and triangles are used to visualize canyons, mountains, deserts, salt lakes, and other natural landmarks.

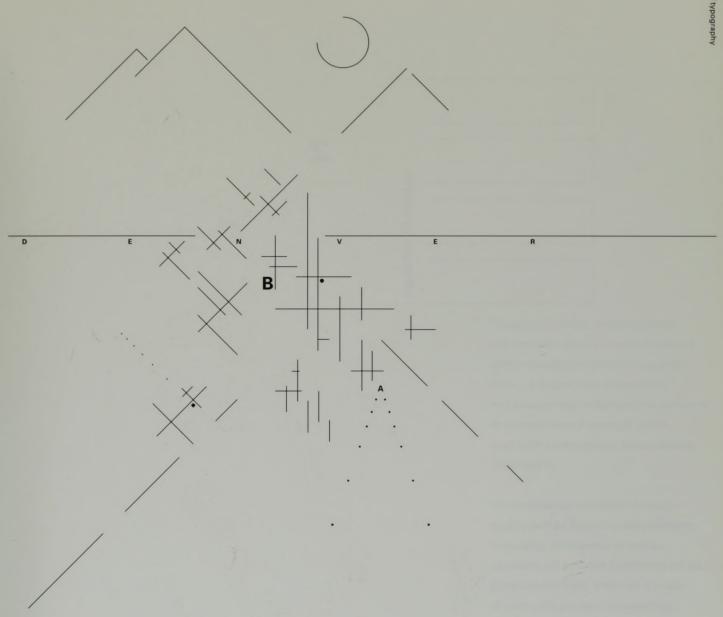








Connotative map of Union Square in New York City. A capital U combined with a black square alludes to the shape of the park. Lines and geometric elements suggest the surrounding city.



Are these examples still typography or are they graphic illustrations based on typographic elements?

The term typography becomes ambiguous at this point. Does typography ever end and transform into graphic design?

In working with typographic materials, no such distinction can, or should, be made. Every design problem must be approached as a typo-graphic one.

Lines serve as illustrative elements for a connotative map of Denver, Colorado.

	2
	2

Typographic design is both process and product – a creative combination of communication practice and aesthetic theory. It begins with the selection and arrangement of typographic elements to communicate a message, and it ends with a composition in two-dimensional space.

The established principles of typography could be likened to the principles underlying architecture or music – necessary for craft but insufficient for art. Vitruvius and Bach, although masters of their craft, possessed something unquantifiable which made their work special: lifelong commitment, unique talent, inspiration and passion.

The sensitive, accomplished typographic designer must take into account not only the purpose of any given design, but also those technical and economic conditions which simultaneously limit and realize the work.

#### Space

In typographic design, typographic elements and two-dimensional space interact with one another in a figure/ground relationship.

This relationship between typographic form and its background is fundamental to design. Equal consideration must be given to each: the interaction between them is mutual and mutable.

Space is the common ground for all elements; it provides a frame of reference and significantly affects the expressive qualities of the elements placed within it. Depending on their placement within a given space, the same elements will assume different visual aspects of weight and movement. The visual expression of space is determined by both the characteristics and the placement of elements within it.

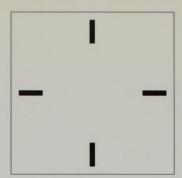
Space is visually subdivided by the tension that develops between an element and the boundaries of the space. Inherent in every text, typeset or handwritten, is a basic shape that is determined by the size, spacing, and organization of elements. The shape of the negative space always develops from the composition of these elements.

Space has two fundamental characteristics:
size and proportion. Rectangular space and
square space are delineated by two horizontals and two verticals, which determine
its size and proportion. A square, because of
its equal horizontal and vertical delineations, is visually neutral. A rectangular
space has specific visual forces – horizontal
space is passive, vertical space is active.

In most cases, the size and proportion of space are determined at the beginning of a project, and unlike the size, weight, and form of elements, are usually not changed thereafter.

In typographic design, space is defined by two horizontals and two verticals, which may be the edges of a page or a frame. Blank space contains unlimited possibilities of design.

Space is an ambiguous quantity: two or three lines form a weak space. A space loosely defined by two vertical lines appears taller than a space defined by horizontal lines. A fourth line articulates the space precisely.



Square, horizontal, and vertical spaces all have unique visual qualities. These qualities can be used to reinforce the semantic properties of the communication. A square is visually stable; horizontal and vertical space suggest expanse.







M

Space can be imagined without elements, but elements cannot exist without space. Space provides the frame of reference for typographic elements. In space, the size of elements becomes relative: two identical elements appear differently depending on the size of the space they are placed in.

The tension between the elements and the boundaries of space visually subdivides space. Depending on its placement in relation to the boundaries, a typographic element assumes different visual qualities. The visual subdivision of space is vital to all typographic design.

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The character of individual letters is pronounced when they are separated by distinct spaces. The individual character is deemphasized, once they are combined into a word.

In typography, space is the most common means of visual organization. For example, we recognize a word because of the space that groups a series of letters. Lines of type are more or less pronounced depending on the space between them. A

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Letters placed at random on a background appear as individual forms. When arranged in a particular sequence to form a word, their individual identity is subsumed. The spatial relationships between

letters is important to legibility. Too little space causes the letters to overlap, creating a cluster of forms. Too much space creates a string of individual elements that are difficult to read.

When words are grouped into sentences, they begin to form a texture,

created by the lines of type and the space between them.

The blank space between letters,
words, and lines is vital to all typographic design. Through the
slightest increase or decrease of
space between the typographic
elements, the designer determines
the visual quality of a composition.

Merely visual space is Euclidean, that is, namely, continuous, homogeneous, connected and static. This was the result of the abstraction of the visual faculty from the other senses at the moment of the phonetic alphabet – the first and

Merely visual space is Euclidean, that is, namely, continuous, homogeneous, connected and static. This was the result of the abstraction of the visual faculty from the other senses at the moment of the pho-

Merely visual space is Euclidean, that is, namely, continuous, homogeneous, connected and static. This was the result of the abstraction of the visual faculty from the other senses at the moment of the phonetic alphabet - the first and

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Merely visual space is Euclidean, that is, namely, continuous, homogeneous, connected and static. This was the result of the

Letter-, word, and interline space contribute to the legibility and readability of text. Small differences in space can make a text pleasant or difficult to read

Aspects of design

Column one: regular letterand word space: increasing interline space. Too little or too much interline space diminishes legibility.

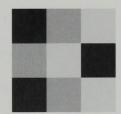
Column two: Increased letter-, word, and interline space; in all four examples the legibility is severely affected.

A space becomes visually active when it is sub-divided. The number, size and proportion of the subdivisions determine the quality of space. A space subdivided into equal units is monotonous.

When differing values are added, the spatial qualities change. Each unit appears to be on a separate visual level, advancing or receding in space.
The same visual principle applies when the grey values are created by text, photographs and other visual elements.

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Aspects of design

A space subdivided into units of different size and proportion is visually more exciting and stimulating than a space subdivided into equal units. In space subdivided into different units, the points of alignment are distinct, each unit is in a unique relationship to adjacent units. The contrast of size and proportion between the individual units makes the space more engaging and increases the attention span of

The examples shown here are only a few of the multiple possible variations based on nine units of different size and

#### Structure

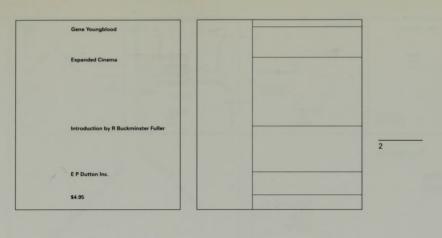
- A fundamental structure is inherent in all typography. Even a single word or line of type placed on a blank sheet of paper subdivides the space and creates a simple visual structure. Because a structure is always present to some degree, it serves as a powerful element in design.
- Typographic design can proceed from two types of structure: an optically improvised visual structure, or a predetermined structure the grid system.
- An optically improvised visual structure results from arranging typographic elements according to aesthetic criteria. The size and shape of letters, words, and lines of type determine the subdivision of space. Like building blocks, the individual elements are highly dependent on each other: if one element is changed, other elements need to be adjusted, either in placement or size, to balance the composition. Since there are virtually no limitations to the arrangement of a given set of typographic elements, this visual structure is essentially an open system.
- Typographic design based on empirical criteria is a personal expression of the designer, and demands creativity, sensitivity, intuition and judgment. To maintain design integrity, the designer must be constantly involved throughout the entire design and production process. This improvised visual approach can yield interesting and unique solutions.
- For complex, extensive assignments, a predetermined structure – the grid system – is necessary. In contrast to the optically improvised structure, the grid is a closed system that is implemented consistently once the structure has been developed.
- Modular grids consist of a series of modules separated by a consistent space and organized into columns and rows. Modules determine the dimensions and placement of graphic and typographic elements, which may include pictures, headings, text, captions, and page numbers. In this way, the grid serves as a strong organizational device, providing unity between page elements and the pages themselves, while at the same time allowing for a vast number of variations.

- The grid functions strictly as an organizational device, one that provides order but is itself invisible. Graphic and typographic elements are guided by, but never subordinated to, the grid. Although it facilitates order, using a grid does not necessarily yield unimaginative and rigid solutions. Like any systematic approach, it can lead to lively results if used with imagination and applied to the right task.
- Grid systems also make it easier for several individuals to collaborate on a large project.

  The design of a publication, for instance, is frequently a team effort, and benefits from the organized structure a grid system provides.
- Working with a grid involves two phases: developing a structure that accommodates all the elements, and organizing those elements following that structure. Each phase is equally important. When devising a grid, the designer must not only take into account the idiosyncrasies of the typographic material but also anticipate all the possible problems of working with the material, for example the cropping of photographs. For this reason, the development of a grid must always proceed from an analysis of all the visual material that will be included in the design: the more thoroughly the structure is related to the given material, the more rigorous the visual solution will be.
- During the initial phase of a project it is often more productive to rely on intuition and visual judgment. Once the basic design has been established, a calculated, rational structure may be developed that accommodates all elements originally placed visually.

Gene Youngblood
Expanded Cinema
Introduction by R Buckminster Fulle
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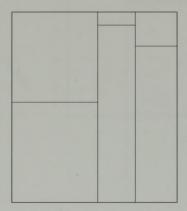
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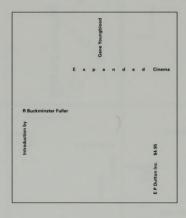
Expanded Cinema

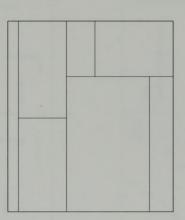
Gene Youngblood

Introduction by R Buckminster Fuller



1 Elements of information in a passive composition, with minimal differentiation between individual parts.
2 Visual structure; minimal interaction between information and space.
3 Visual structure; subdivided by different elements, space is active.
4 Visual structure with additional subdivisions of space.





An optically improvised visual structure is derived from elements of information – it can not be created a priori. Developing a visual structure is often more difficult than the result suggests. Even a few elements allow so many possibilities of arrangement that it is often difficult to decide on the best solution.

To arrive at a meaningful solution, the designer must simultaneously address the visual and communicative aspects of design. Arranging elements based on purely visual principles might yield results that are aesthetically pleasing but do not communicate clearly.

Structuring information visually is an excellent way to generate ideas in the initial phases of design.

This spontaneous working method leads to concepts that may later be converted into a modular

structure.

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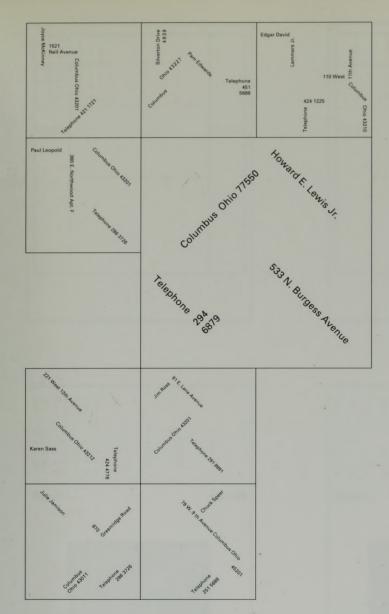
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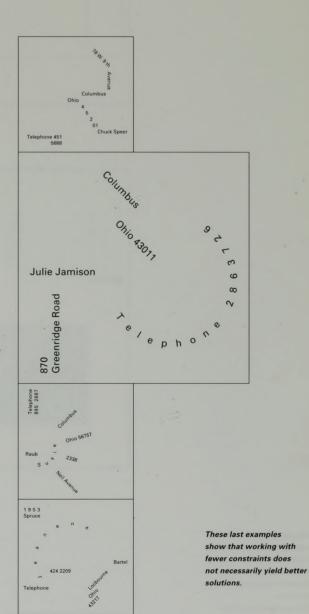
These examples from a course in introductory typography at Ohio State University demonstrate some of the many possible ways a simple set of information can be visually organized.

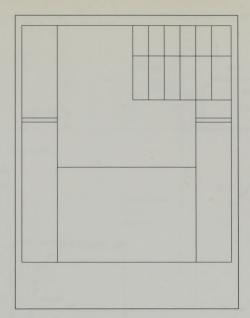
The students were asked to

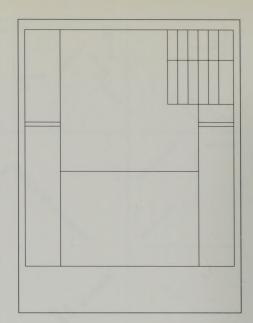
ways a simple set of information can be visually organized. The students were asked to compose their name, address, and telephone number in 14 point Univers 55. A 6x6 inch space was used to structure information based on the following constraints: a. horizontal type only. b. horizontal and vertical type combined.

c. horizontal, vertical, and diagonal type combined. d. horizontal, vertical, diagonal, and circular type combined. Through this study the students gradually became familiar with aspects of structuring space in typography. It also made them aware that even in a basic design problem a large number of plausible solutions can be generated. The study was strictly defined, allowing the students to concentrate on the arrangement of type.





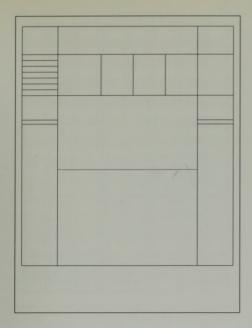


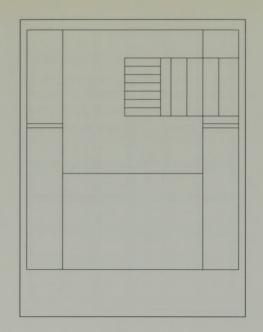






The design of this calendar, with photographs of Paris by Fredrich Cantor, is based on the combination of a predetermined and a visual structure. The arrangement of the photograph, month name, and year on each page is part of the predetermined structure, while the arrangement of the weeks and days is decided by a variable structure of visual improvisation. 9x12 in



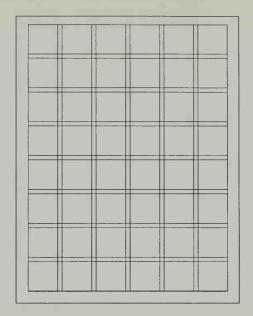


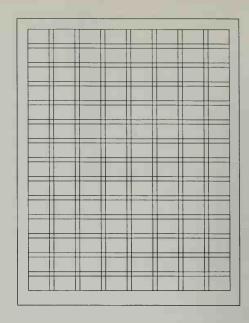




Schematic drawings show the predetermined structure and the varying structure Modular grid for course descriptions on architecture programs. 8.5 x 11 in

Modular grid for exhibition reviews. 8.5x11 in









The modular grid is always tailored to the typographic requirements and visual material of a project. Every design problem is different and therefore requires a grid structure that can accommodate its particular elements. The challenge for the designer is to develop a structure with the appropriate number of subdivisions of space: too few limit the expressiveness of the design; too many increase the difficulty of work, even though they render an often necessary fineness of detail.

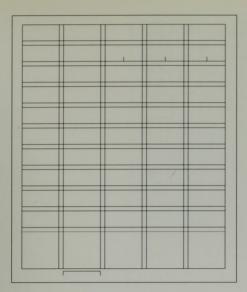
The modular grid is not just an organizational device for typographic elements. It is the key to a working method that increases efficiency in every phase of design, from selecting type size and interline space to composing the type, even to setting up templates and style sheets on the computer.

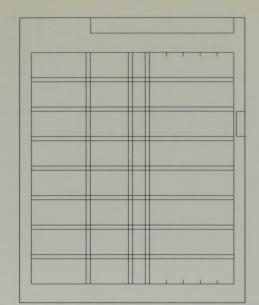
The modular grid is often blamed for stuffy, homogeneous design. In many instances, however, it is the designer who is ultimately at fault for a dull solution. The grid lends itself to use in many different

playfully free interpretation.

For sequential, highly structured information, a hierarchical grid is often more appropriate than a modular grid. With a hierarchical grid, certain structural decisions are predetermined, making it easier to accommodate the various levels of verbal and visual information.

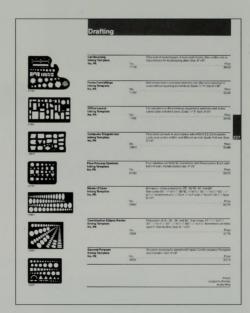
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## Introduction





Modular grid for an exhibition catalog. The three short vertical lines at the top refer to the substructure of the section openers. 8.5 x 10 in

Aspects of design

Hierarchical grid for an art supply catalog with over 1000 products. The structure is determined by the various levels of information. The four short vertical lines at the top and bottom refer to the substructure in the descriptive text. 9x11 in

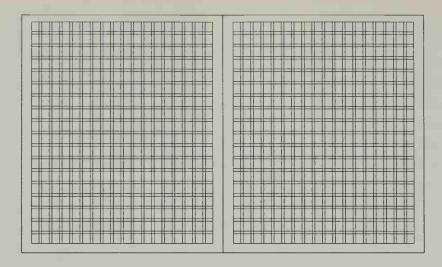
Design of Abstract, a yearly publication of studio projects and research by students of the Columbia University Graduate School of Architecture, Planning, and Preservation, NewYork. The information, such as course title, project description, and names of students and studio critics, remains essentially the same each year.

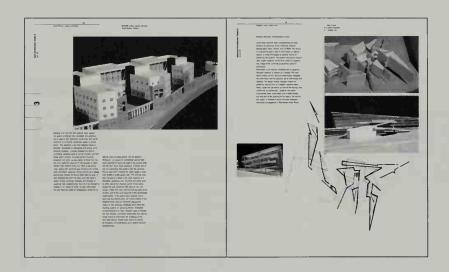
The unusually finelydetailed grid, consisting of 18x18 units, allows for many variations of information structure.

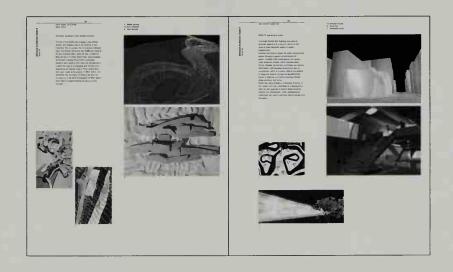
8.5 x 10 in 160 pages Black/white and four-color process

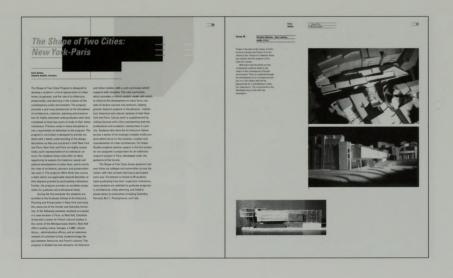
Double pages

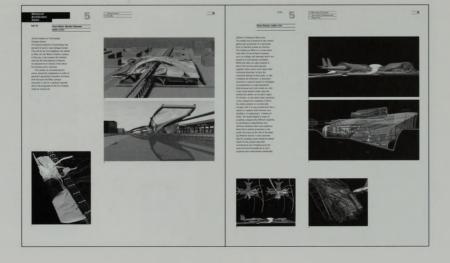
from Abstract 98-99.









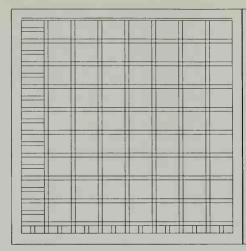


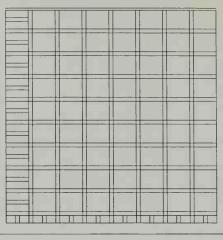
Double pages from Abstract 97-98.

Design of a monograph for Nikken Sekkei, planners, architects, and engineers, Tokyo. The book consists of three parts, each with different typographic requirements: an illustrated history of contemporary Japanese architecture; an analysis of 24 selected projects; and an extensive catalog of work by Nikken Sekkei.

The 16x19 unit grid was developed after a timeconsuming analysis of the diverse visual material. Text is set on six grid units, captions on two. On text pages, the top four units of the outside column are shifted inward two units, creating a distinct space for the page numbers. On introductory pages, which are always on the right, this single shift creates three distinct spaces for the project title, schematic drawing, and page numbers.

10x10 in 288 pages Four-color process





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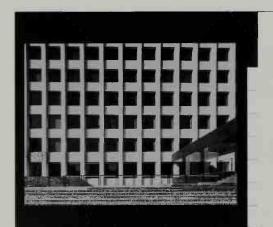




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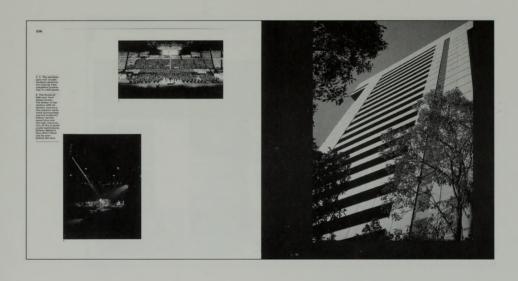
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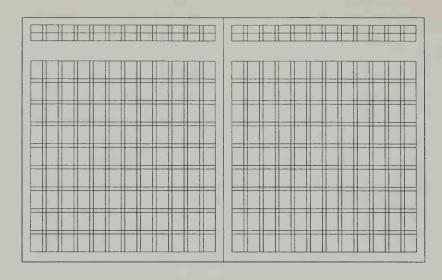




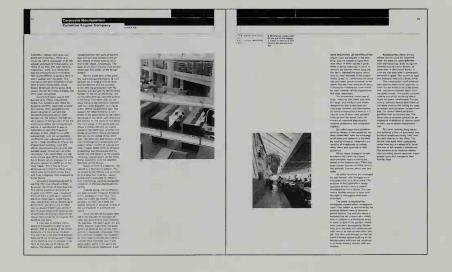
Design of Kevin Roche:
Seven Headquarters,
a book published by Office
Age for ITOKI, Tokyo.
The publication consists
of seven chapters, each
featuring a major corporate
headquarters designed by
the architect Kevin Roche.
Each chapter has four
sections: a general
description of the project;
the design process;
portfolio presentation;
and client interview.

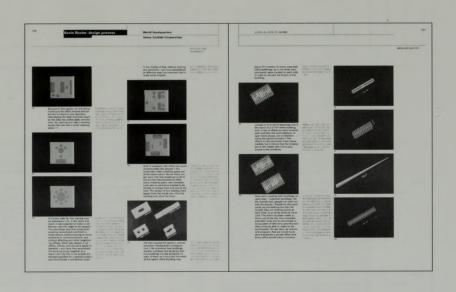
The 12x9 unit grid was developed after a thorough analysis of all visual materials, which included more than 700 four-color photographs and English/Japanese text. The typography takes advantage of the many structural possibilities inherent in this unusually finely-detailed grid.

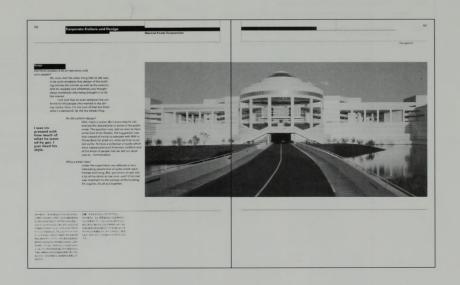
9.375 x 11.375 in 216 pages Four-color process





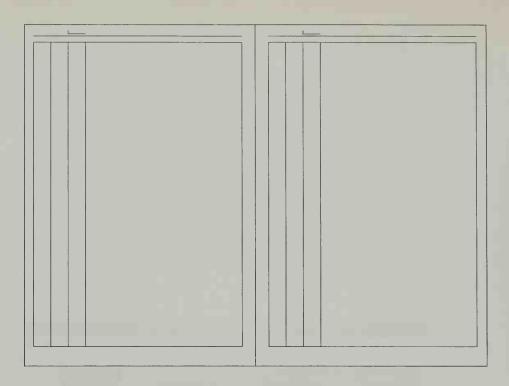


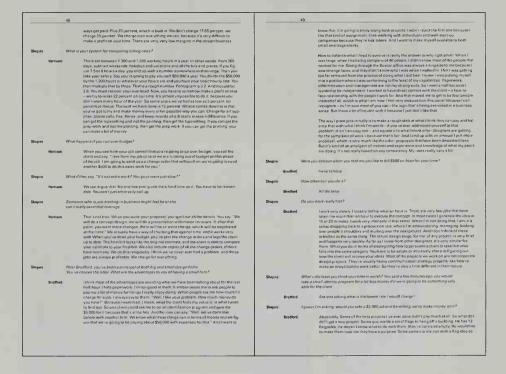


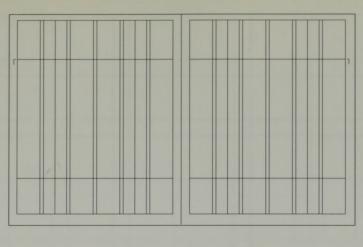


In many instances an elaborate structure is superfluous. An excess of possibilities, likewise, can be counterproductive in the layout process. A good typographic solution may require only a series of vertical alignments and horizontal flow lines to provide visual continuity from page to page.

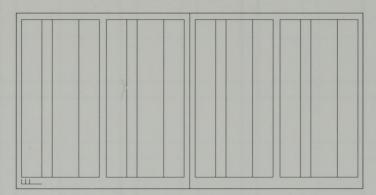
Four vertical alignments structure the information. The typographic variation follows from the nature of the text. 7.375x11 in







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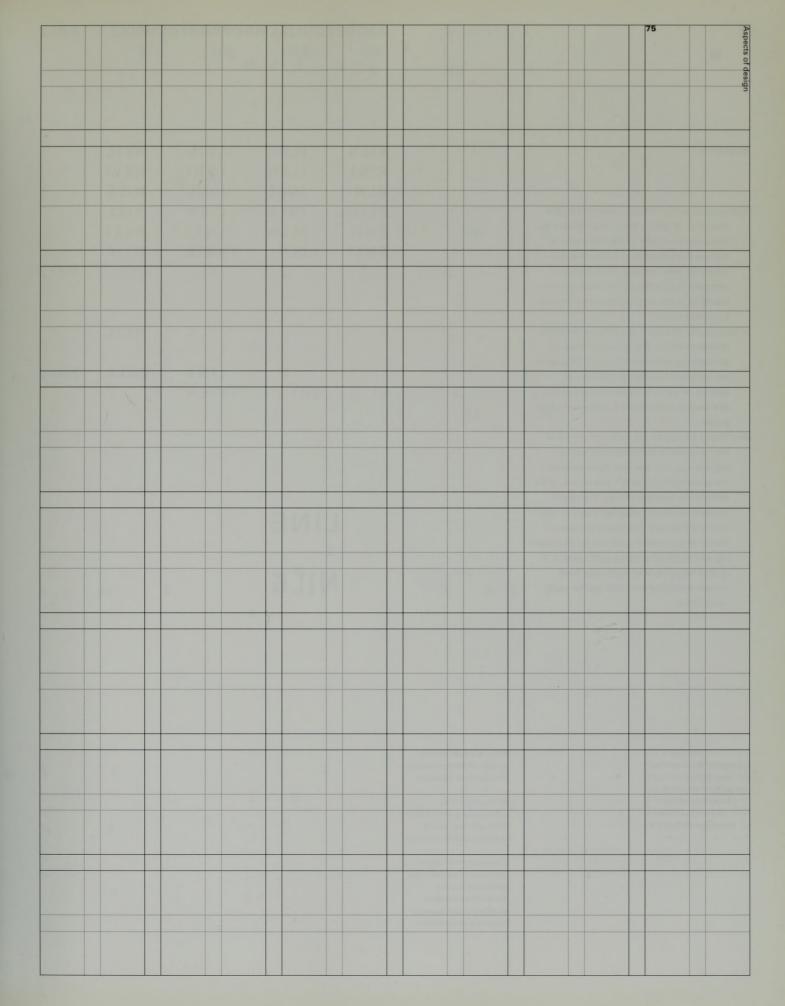
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Of the American See and American Se

1 Six columns and two horizontal flow lines structure text, subtitles, footnotes, sideheads, and running heads.
8.5x10 in

2 Three vertical alignments structure text, subtitles, and source of information. 9x9 in

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#### Sequence

Typographic communication depends on the sequence of letters, words, and sentences.

Many words consist of the same letters, but it is the sequence of letters that determines the meaning of a word. Words arranged in a particular sequence form a sentence; a sequence of numerals creates a numeric value.

In typography, the basic sequence of elements is determined by the syntactic structure of language and grammar. Latin languages are generally read left to right, top to bottom, which influences the sequence of elements and creates a particular textual pattern.

Words and sentences can, however, be more than a series of elements horizontally aligned one after another. By increasing the space between letters and words, or by shifting the baseline of type, the visual expressiveness of typography can be significantly influenced. The space between elements becomes the vehicle for manipulating and reinforcing typographic syntax. It is vital, however, that words and lines remain individual units that can be easily recognized.

EILN	ILNE	LEIN	NEIL
EINL	ILEN	LENI	NELI
ELNI	INEL	LINE	NILE
ELIN	INLE	LIEN	NIEL
ENIL	IELN	LNEI	NLEI
ENLI	IENL	LNIE	NLIE

NEIL

LINE NILE LIEN

LINE

NILE

Every word consists of a series of letters arranged in a particular sequence.

Of the 24 possible combinations of the letters EILN, only four have a specific meaning in English.

The sequence of letters also determines the visual qualities of a word.
Form and counterform of adjacent letters merge, creating a visual rhythm.

LINE LIN LI Aspects of design NE Е INE IN NE E N E Е Е NE Ν INE Е NE IN LINE LI LIN L LINE LIN LI E INE IN NE E NE E Е N N E E N 1 2 3 Changes in L Ν sequence and letterspace 1 E affect the legibility and visual expression of words. N E 4 Legibility and expression are hampered by

N

Е

4

contrived arrangements.

Texas

**Taxes** 

**EARTH** 

EARTH

EARTH

3

NIKKEN

SEKKEI

4

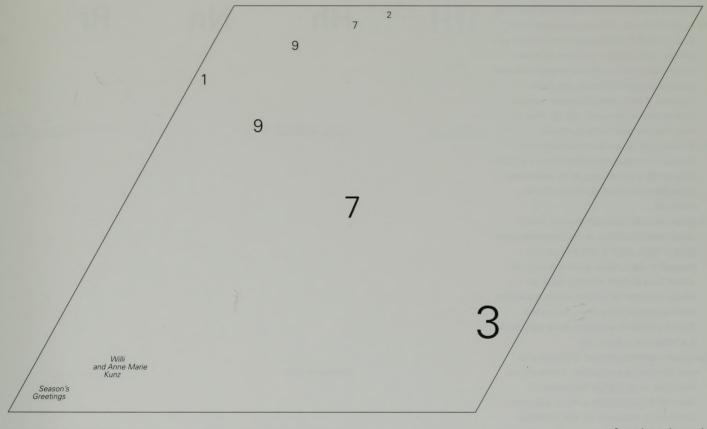
1 2 Different words, created by changing the sequence of letters. 3 A sequence of letters

3 A sequence of letters may be common to different words.

4 Every word has special idiosyncrasies. The logotype for Nikken Sekkei takes advantage of the two K's as the third and fourth letter in each word.
Arranged side by side, the two words seem to have little in common.
Stacked one upon the other, they form a unique relationship because of the sequence of letters.



Aspects of design



Season's greetings card based on the 24 possible sequences of four numbers. 8.25 x 4.125 in

Season's greetings card with numbers arranged in two different sequences, reading in two directions. The size of the numbers and the intervals between them connote time and space. The visual concept—1972 moving out, 1973 moving in—is enhanced by the card's rhombic format. 5x5 in

#### Contrast

Typographic design depends on the contrast between elements. The most elementary contrast is that between the type and the background.

Every letterform is a composition of contrasting vertical, horizontal, diagonal, and curvilinear strokes. Its counterform is defined by the contrast with surrounding space. The typographic designer works with these contrasts.

The most significant contrasts in typographic design are the contrasts of form, weight, size, texture, and direction. Contrast of form, weight, and size can be established with the smallest typographic unit – the letter.

Contrast of texture and direction encompasses several elements: words, lines of type, lines, or geometric elements.

The formal qualities of an element become more pronounced when the element is juxta-posed with a contrasting form, which then intensifies the visual qualities of both elements.

In a larger context, contrasts depend on the basic visual condition of the immediate presence of light. Light is effective only in contrast to dark, which subtracts from the visual force of light. Printing black on white, for instance, is subtractive: the added black subtracts white from the surface.

A bold letterform subtracts more light from a surface than a light one.

Typography without contrast is lifeless and dull. Contrast is expressive: it may attract, stimulate, or challenge the reader, or intensify and articulate a visual statement. Contrasting elements are like reference points: they help establish a visual hierarchy and clarify communication. To be effective, contrasts must always be clear and decisive; they depend on omitting the extraneous that distracts from the essential.

LA ON SV ax ez wb lo ye si

Aa Ee Gg Hh Nn Rr

Contrast of structure

#### Contrast of form

Letterforms vary in structure, width, slant, and face. All of these variations provide contrasts that are essential to typographic design. Structure. Every word consists of a

Structure. Every word consists of a series of letters, each with a different structure. The contrasts of structure makes each word unique. For instance, the contrasts between the structure of letters in film are weak, in keys strong.

The difference of contrasts in upper and lower case letters is important for the legibility of text. The contrast of ascenders and descenders makes text composed in lower case letters visually more active than one in upper case. Contrast between upper case and lower case also provides important syntactic clues, such as signaling the beginning of a new sentence.

HH

Contrast of slant

HH

HH

Contrast of width

Contrast of face

Width. The limitation in width makes effective contrast difficult to achieve. Univers, with its several distinct widths, is one of the few typefaces which allow effective contrast of width.

Slant. The difference between the vertical strokes in a roman face and the angled strokes in an italic face provides an effective contrast. This contrast is often used to achieve semantic differences in a text or to provide emphasis.

Face. The characteristics of a typeface are highlighted when juxtaposed with a contrasting face. When two typefaces are used for contrast, their forms must be clearly different. Because of the visual similarity of Univers and Helvetica, combining these typefaces would be senseless.

Contrast of weight between Univers 45, 55, 65, 75. AA AA AA

AA AA

AA

#### Contrast of weight

Effective typography depends on the contrast of visual values, ranging from light to dark, created by the weight of type against a background. The visual texture of the page is formed by this contrast between different values.

When used for emphasis, weight
differences must be distinct: values
of weight which are too similar
are ambiguous and ineffective.
Contrast of weight is not limited to

Contrast of weight is not limited to type; it also comes into play between rules, photographs, and other visual elements. In establishing contrast between two elements, the intervening space becomes an important factor: when separated by excessive space, comparison is hampered, the contrast weak. Size ratio 1:1.5 (6:9 pt)

exploration in communication

Size ratio 3:4 (6:8 pt)

Aspects of design

exploration

in communication

Size ratio 1:2 (6:12 pt)

exploration

in communication

Size ratio 3:5 (6:10 pt)

Contrasts of size with 6, 8, 9, 10, 12, 14 and 18 point Univers 55.

exploration

in communication

Size ratio 1:3 (6:18 pt)

exploration

in communication

Size ratio 3:7 (6:14 pt)

Contrast of size

Inherent in the range of standard type sizes (page 32) are many rational contrasts. Within a small number of type sizes, for instance 6, 8, 9, 10, 12, 14 and 18 point are ratios of 1:1.5, 1:2, 1:3, 3:4, 3:5, and 3:7, all of which are aesthetically pleasing. Consideration of the complete range of type sizes leads to many other possibilities.

Establishing contrasts based on mathematical ratios is only efficient when working with the standard size range. Arbitrary sizes,

measured in fractions of points, are difficult to relate to one another. Contrast of size then becomes a purely visual decision.

To determine contrast of size, mathematical ratios provide guidance, but do not replace sensitivity and visual judgment.

Contrast of texture

between capital letters, medium grey text, dark grey captions and line pattern.

Contrast of texture between headline, title, text, square pattern, and captions.



Once again IBJTC's Trust Department had a record-setting year. In 1983 new trusteeships and fiscal agencies reached a volume in excess of \$1.25 billion. The wide variety and complexity of the financings on which we were appointed as trustee and paying agent mirrored the innovations demanded by the marketplace. Euro-Bonds, Industrial Revenue Bonds, Pollution Control Bonds, and leveraged least financings, appeared with such embellishments as floating rates, put options and stand-by letters of credit. Once again, our clients included such stellar names as Nissan, Hitachi and Japan Air Lines.

IBJTC made significant progress in sophisticated lease arrangements during 1983 such as leveraged leasing for a wide range of industries.



Expeditious processing of this new business and the day-to-day administration of an evergrowing portfolio of accounts has kept our staff among the best informed people in the field of corporate trust services. Anticipating a natural expansion of our customers' needs into other areas of Trust, we have been re-examining and expanding our capabilities in trusteeship, custody, escrow, and related functions to assure our ability to provide the widest range of services during 1984 and beyond. We face 1984 fully equipped to meet the needs of prospective debt issuers with top quality, timely and economical services.

An International Viewpoint Intergold publishes darane, a quarterly international magazine which covers a range of opini including covers a range of opini including covers a range of opini including construction of the contrastion on intertorial construction of the contrastion of the contrast on opini including contrastion of the contrast to most present produced which concentrate on noteworthy international stories, darant sakes an international versies of the world of gold jevelry. The magazine is always illustrated with a multitude of color photography and is quibilished in Geneva on the finest stock. Jazzwa is the communication vehicle for the Gold Fashion Trends Project, an executial source of gold information and necessary reacting for anyone working with jewelry.

Aurum

is essential

reading

22

88

器

for anyone

working

with jewelry

ion about International Gold ions to Airson Corporation Limite stained 900 Third Avenue tting New York, NY 100

#### Contrast of texture

Every typographic composition can be viewed as a texture, a pattern created by the repetition of elements. Form, size, and weight contribute to the character of texture, while the space between elements determines the visual density. Textures encompass an infinitely fine gradation of visual values, from light grey to nearly black. Each texture has a specific aesthetic dimension and depth.

A light grey texture appears more integrated with the background compared to a dark texture,

which seems to separate from the background.

Every typeface has its own texture, grey value or "color." Futura Black has a very dense texture, Bodoni Regular a relatively transparent one. Through letter and interline space, the texture of a typeface can be changed. In contrast to text, single words set in a large point size display a coarse texture determined by the letterforms.

# JICA Hokkaido International Centre

Lecation:
Obstice City, Nekkaide
Site press
6,373 m²
Bailding ares:
2,132 m²
Total Tase aress:
6,400 m²
Bailding prepent:
Training facility

Residence wing and balconies viewed

uilding a Contre for International Understanding Holkadia is he second largest and most northern of the floor main status of dispars and the second second second second of contradictions, Coal weather patterns are influenced by the marine strangle of the Sease of Othorsts, Japan and the Pacific, creating many months of harsh winter offset by cool, comfortable summers. The region is home to several rate bio-emiscenters and the second of the second second forcing to the Kurho's Semings. Doziettes National Park and the mountains comprise the backbook or the Island. Sun and orch soils make the area a grominend dary and crop-barming centre, with furmer run on an arcop-barming centre, with furmer run on an Located at a latitude of 43 degrees north, the city of Obihiro is renowned for the beauty of its scener, During winter, cold air masses move down from Siberia and the temperatures drop to minus 20 degrees centigrade below zero while summer temperatures are an reach over 10 degrees centured.

Obhiro is the location of the Japan International Cooperation Apency, (JICA) that implements the programs of the Official Development Assistance office (ODA). JICA/HONALION International Centre is the 11th such ODA center and is founded on "human development, national development and unity among people". The Centre's major focus is 'technology and knowledge.

Bernard Tschumi
Dean

Columbia University
Graduate School of Architect
Planning, and Preservation

requests the pleasure
of your company for the

at Columbia University Architecture Gallerins

Buell Hall and
Avery Hall 100, 400, 500

May 15-29

#### Contrast of direction

Contrast of direction is the most explicit of contrasts. It encompasses the entire composition of elements, including their surrounding space, and can dramatically change the visual expression of a word or a line of type.

The horizontal movement of individual words or lines of type contrasts with their vertical alignment. When type is set in narrow columns, the vertical alignment becomes stronger than the horizontal movement of the individual lines.

In many instances, a word or line element set vertically becomes a structural element that subdivides space.

Typography, being dictated by reading conventions, is predominately horizontal/vertical, a schema reinforced by the parallel boundaries of the format. Introduced into this frame of reference, a diagonal element creates strong visual tension.

Contrast of direction between horizontal text and vertical title.

Contrast of direction between vertical alignment of type and angled title. Covers from a series of type specimen books for Typogram, New York. The design is based on the contrast of three type sizes: the two initial letters of the typeface featured in each book are set large; the full name of the typeface is set medium; and a listing of all typefaces in each book is set small. The underlying line structure is derived from the content's structure and suggests the precision of typesetting.

Desktop computers give the designer access to all typefaces in any size, any width of composition and any interline space. However, comparing the type size and interline space on the computer is not as accurate and convenient as it is with a good type specimen book. This page from the Typogram Univers type specimen book demonstrates how size, weight, and interline space contribute to the textural quality and grey value of type. 8.75 x 12 in





## Aspects of

## **ABCDEFGHIJKLMNOP** QRSTUVWXYZ123456 7890\$&()!?.,-;:\*""

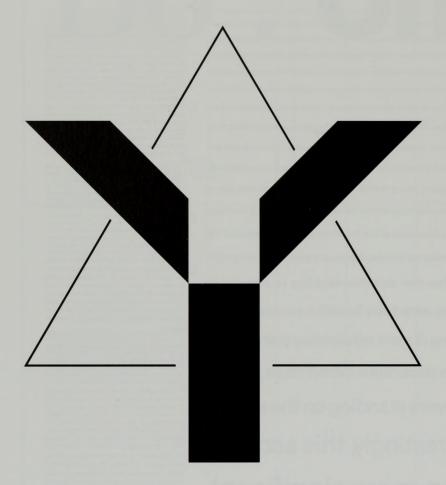
### abcdefghijkl mnopqrstuv WXYZ

5 point   The space shuttle Chellenger auc seeded today in replecing defective electronics units on the cripplind Solar Max spiellite for the first ex-
6 paint Before dawn the next morning we pulled away from Pakokku into the deserted gunmetal river and made for the anci
6.5 point When you consider the question of money, you will find that it was handled differently in each case according
7 pent Kangaroos still foll in the shade of the gum trees at the Noosa golf club, as they did when we were la
75 paint Here is another example of how human emotions can influence the course of events. Consider
Part of the problem of getting people to take cognitive mapping seriously is that it seems
8 5 point A great deal can be learned about a company by looking at their personnel and the p
The start of any innovative process must be the willingness to take risks at the e
How each man handles fear varies with his personality. I take to my bunk and
Just before the curtain falls, the Corry, our sister ship, is rocked by a hug
Anyone looking back is likely to recall the brief, euphoric afterglow o
Young Henri displayed a talent for sketching, and an acquaintance
Its prometer For young Americans of the day, study abroad was essential. Pa
After we reached that conclusion we started doing things righ
Even when clear objectives exist they are often not m
She was remarkably beautiful, celebrated for h
Nothing is more exhilarating than shared
Palms decorate a desert oasis in Sout
We were standing on the edge o
Interestingly, this accumu
Even more significant

- This paragraph is an example of type set solid. The term solid refers to any typographic composition set without space added between two or more hin so of type in visual terms, solid text provides a unitorm grey value that is esthetically pleasing but that a becomes truing to the eyes during sustained reading. However, the visual quality intended or mor. This paragraph is an example of type set with one point of leading. The term leading refers to the amount of space added between two or more lines of type. The choice of leading depends not only on the designer's intention but also on the type size, line length, characteristics of the typeface used, and the quantity of text, among other things. The integraphs is an example of type set with two.
- and the quantity of text, among other things. Their This paragraph is an example of type set with two points of feeding. By increasing the feeding, even in one point increments, the lines of type, especially in smaller sizes, start to separate into individual bands. This may inhibit the flow of reading with easy transition from one line to the next. Ultimately, the visual quality intended by the designer and the pent.
- | 15 peak | 15 p
- This paragraph is an example of type set with t wo points of leading. By increasing the leading g, even in one point increments, the lines of type, especially in smaller sizes, start to separate i nto individual bands. This may inhibit the flow of reading with easy transition from one line to the next. Ultimately, the visual quality intended
- This paragraph is an example of type set soli d. The term solid refers to any typographic or omposition set without space added betwee n two or more lines of type. In visual terms, so lid text provides a uniform grey value that is esthetically pleasing but that becomes tring to the eyes during sustained reading. Ho wever, the visual quality intended or more pr
- wever, the visual quality intended or more pr This paragraph is an example of type set wit hone point of leading. The term leading refe rs to the amount of space added between tw or more lines of type. The choice of leadin g depends not only on the designer's intent on but also on the type size, line length, char acteristics of the typeface used, and the qua ntity of text, among other things. The introd
- This paragraph is an example of type set with two points of leading. By increasing the leading, even in one point increments, the line s of type, especially in smaller sizes, start to separate into individual bands. This may inhi bit the flow of reading with easy transition fr om one line to the next. Ultimately, the visua I quality intended by the designer and the sp



This logotype for an architectural firm is based on the contrast between bold and light. A linear, light triangle behind the bold Y implies a capital A, the negative white square in the center alludes to the letter i (for Inc.).



Contrast is vital to the design of symbols and logotypes. A good symbol is characterized by strong contrasts both within itself and with its surrounding elements.

A symbol must make a clear visual statement that can be instantly recalled: its design must be strong, memorable, and enduring.

Letterforms and geometric elements are ideal basic components for the design of logotypes and symbols. They are sophisticated, ready-made elements which often need only minimal refinement.











In this logotype for a gasoline distributor, the capital M is modified to resemble a traffic sign.

This logotype for a publishing firm is based on the contrast between an angular and a curvilinear form. The rhomboid with the white letter S evokes a third dimension.

This logotype for an international industrial conglomerate is based on the contrast between the oval inner counterform and the angular outer form. The counterform of the letter G becomes the focal point.

This logotype for a group of furniture designers is based on the contrast of a two and a three dimensional letter D. The juxtaposition suggests a lounge chair.

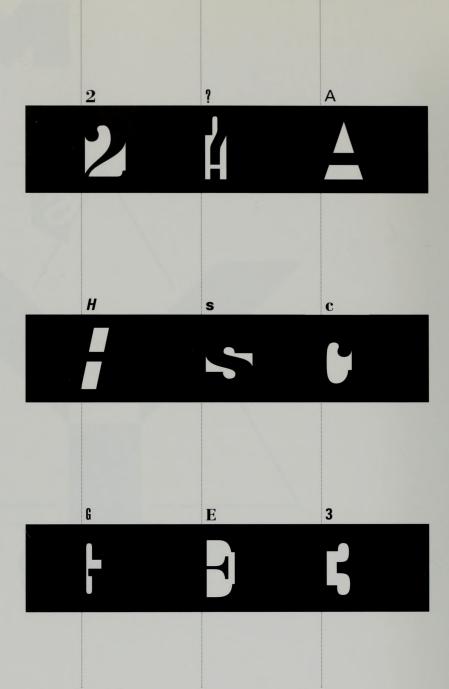
This logotype for an office park is based on the contrast between a curvilinear and an angular form. The angle of the letter K pointing into the oval C evokes the enclosure of the built space.

#### Form and counterform

The most fundamental aspect of typographic design is the interplay between letterform and background. Against its background, every letterform defines a particular counterform. Form and counterform are interdependent, reciprocal values, each integral to a letter's design. The counterform is not simply the reversal of form: it is a new entity, the part of the background that emerges through interaction with the form.

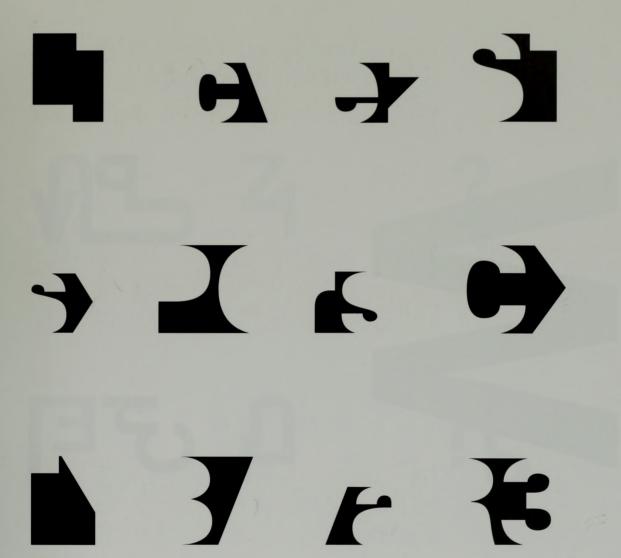
When combined, letterforms create new counterforms between them. Tight spacing intensifies the counterforms between letters, while open spacing emphasizes those in the individual letter. The counterforms created by varying line lengths, make ragged right composition visually lighter and more playful than justified type.

Typographic design depends on the synergy of form and counterform. Elements must be arranged so that counterforms are clearly defined. The qualities of the background – its size and shape – are vital for the expression of any design. In judging design, evaluations must consider not only form but also counterform.



Against its background, every letterform defines a particular counterform. This counterform is a distinct and important part of the composition.

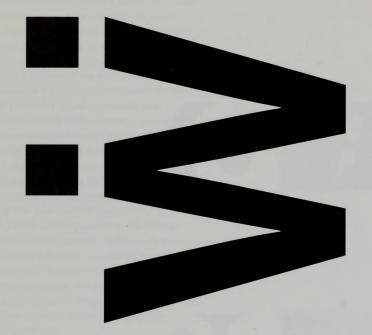
In the counterforms of letters there exists a fascinating new world of forms. Some counterforms are clear and simple, immediately revealing the character of a particular letter, while others are ambiguous or mysterious.



When letterforms are combined, new counterforms emerge between them. The background now becomes the form, as the letter's original form submerges. The counterforms between letters are a rich vocabulary of new visual signs that are ultimately determined by the structure of language and grammar.

Interesting graphic solutions for logotypes can often be discovered through experimentation with form and counterform.





**\_** 

Letterform combinations from a class in introductory typography at Ohio State University. Through free experimentation with upper case letters, numerals, and punctuation marks composed in 72 point Helvetica Medium, the students gradually became familiar with the idiosyncrasies of typographic elements - their forms, counterforms, and microaesthetic details - and furthered their awareness of how to combine common typographic elements to create new signs.



Aspects of design

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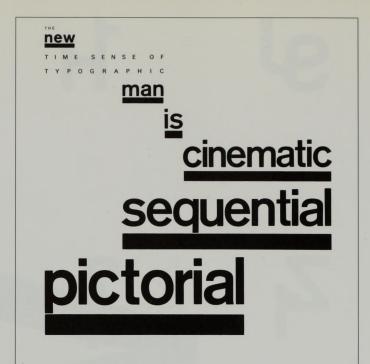
P

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Introduction by the Dean
History of the Graduate School
Faculty
Core Architectural Studies
Studies
Studies
Anywared Architectural Studies
Studies
Anywared Architectural Studies
Studies V
Studie V
Studie V
Studie V
Studie V
Studie V
Studie P
Studies P
Pepretes Studies
Pepretes S

In designing the examples on this page, equal importance was given to form and counterform.

1 The form of this quote by Marshall McLuhan was developed to suggest motion and space. The form evokes an equally interesting counterform. 11.75 x 12.5 in

2 Two black rectangles create an intense, vertical counterform that highlights the page numbers in this table of contents.
8.5×10 in

Essay by Robert A.M. Stern and Thomas Mel	lins	Public Theater	Creating and Managing Public Space in the Post-industrial Metropolis
Photography by Cervin Robinson		New York, the World's Premier Public Theater	NY

The forms and counterforms of the letters NY provide the structure for the arrangement of text on this title page of an exhibition catalog. The position of the lines of type is determined by the forms and counterforms of the letters NY. The edges of the letterforms subdivide lines of type between individual words. 9x9 in

3	

In addition to sending objective messages (effect), typographic design inevitably expresses subjective emotions (affect). Effect communicates what is cognized, affect how it is perceived.

Typographic design is realized on two aesthetic scales: macro (explicit and obvious) and micro (subtle, sophisticated, perhaps only subconsciously perceptible). While both effect and affect occur at either scale, the former predominates in macroaesthetics, the latter in microaesthetics. Macroaesthetics comprise the most basic aspects of typographic design: overall format, dominant type, basic structure, color. Macroaesthetics are obvious, a single glance suffices to take them in.

Microaesthetics, however, demand a second look, or even deeper study, to be fully appreciated, to bring to conscious awareness the variety of details and compositional complexities. Not only do microaesthetics solve a specific communication problem: equally, they reveal the aesthetic sensibilities and creative intelligence of the designer.

Typographic design can only be creatively and meaningfully practiced once we recognize that design communicates on two interrelated levels: macroaesthetic and microaesthetic.

At the macroaesthetic level, the primary visual components of a design are recognized first: size and proportion of space; form, composition, and color of key elements; the structure as a whole; and contrast between the primary components and the space around them. Macroaesthetics capture the readers' initial attention and lead them to the more complex microaesthetic level.

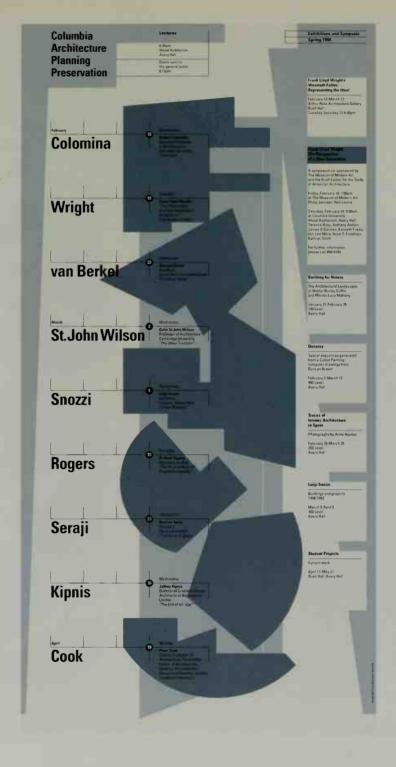
Microaesthetics encompass the form, size, weight, and relationship of secondary elements: typeface characteristics; letterforms and counterforms; and spacing between letters, words, lines, and other graphic elements. Although macroaesthetics may initially seem more important, microaesthetics play the most significant role in the quality and expression of a visual composition. A design which does not work on the microaesthetic level will often fail as an effective means of communication.

A design, whether simple or complex, must be viewed as a combination of unique, interrelated microaesthetic compositions. Though these compositions may to some extent be determined by the grammatical structure and sequence of language, it is ultimately the designer who selects and controls the arrangement of the elements.

The macro- and microaesthetic levels balance each other in a design. A simple message may be enhanced by a visually challenging macroarrangement of elements, while a highly structured and complex set of information may benefit from a microaesthetically simple solution.

Through the conscious and objective use of the macro- and microaesthetic dimensions, it is possible to devise a visual vocabulary and design methodology, a set of principles, which can be used in solving any design problem.

To the designer with a keen interest in typography, microaesthetics offer a rich and largely untapped source of creative and intelligent solutions. In developing new design directions, designers are challenged to build and expand on the basic microaesthetic qualities inherent in typography.



12×24 in

All typographic design can be viewed as an assemblage of different layers of visual information. Each layer contributes to the macroor the microaesthetic communication and is integral to the overall design. The layers of visual information are interdependent; they must be developed simultaneously. Various visual layers may be introduced for aesthetic or

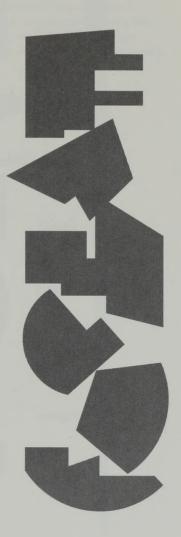
functional purposes such as attracting attention or establishing a hierarchy of information.

Interesting visual layering may result from the spatial proximity of typographic elements.

Through minimal changes in type size and weight, visual layers can be created. Some elements protrude to the foreground while others recede into the back-

ground, establishing a visual hierarchy that is essential to all typographic communication.

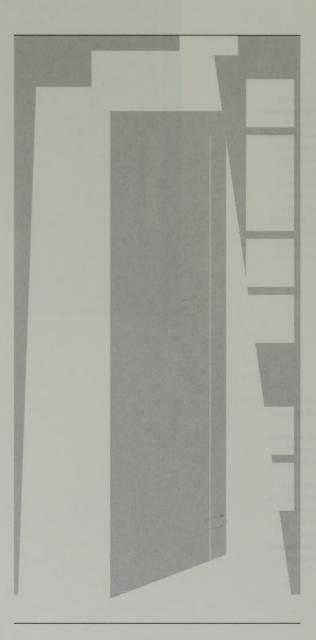
Poster for a series of lectures and exhibitions at Columbia University Graduate School of Architecture, Planning, and Preservation, New York.



The three layers of visual information from the poster on page 99. Each layer also functions as a single visual entity.

Foreground. The composition of six geometric shapes to attract attention. The shapes allude to the architectural theme of the lectures and exhibitions, and are arranged to create the illusion of motion and depth. The image communicates at the macroaesthetic level and contributes significantly to the character of the poster.





Middleground. The typographic information to announce the nine lectures and exhibitions. Its tight structure is in strong contrast to the free visual arrangement of geometric shapes. This layer of information is based on a square grid that has its own microaesthetic qualities.

Background. The geometric planes to support the typographic information and to connect the foreground and the middle-ground. During the design process, the configuration of these background shapes was repeatedly modified to accommodate changes in typographic information.

Poster announcing an exhibition of photographs. The juxtaposition of photographs is based on syntactic and semantic considerations – large, small; famous man (Marcello Mastroianni), anonymous woman. Designed in 1978, the poster has been labeled by design critics "a quintessential example of New Wave design."

Dot pattern alludes to the lights in the large photograph.
Block of large, horizontal type contrasts with small type in the vertical white band.
Block composition of date anchors type to the edge of the poster.
Diagonal title contrasts with the counterdiagonal arrangement of the two photographs.

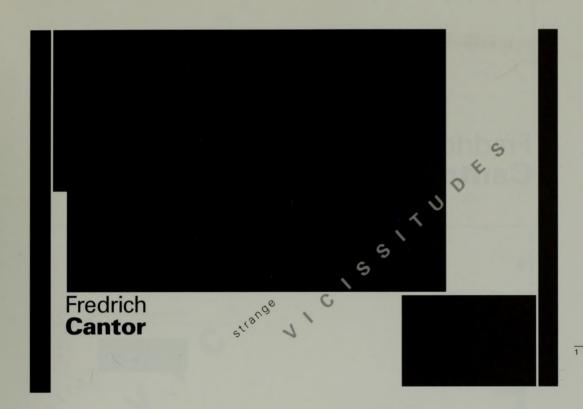
The computer is an excellent tool for exploring and refining the macroand microaesthetics of typographic design. A document can be set up so that each layer can be viewed separately.

The technical possibility of creating so many visual layers, though, sometimes obscures the question Fredrich Cantor

June 17
July 8
492 Broome Street New York, NY 10013

of how many layers are appropriate. In an optimum solution, each visual layer should be effective on its own.

0×16 in



1 The macroaesthetic components.

2 The microaesthetic components. In many instances, the design elements cannot be separated clearly. Some elements can arguably belong to either the macro- or the

microaesthetic level.

492 Broome Street New York, NY 10013

Fredrich Cantor

June 17 July 8 **78** 

Saul of Tarsus on the Road to Damascus

F

FC

8 **78** 

Details from the poster on page 102. Contrast and identity of elements at the microaesthetic level. Contrasts

horizontal:vertical large:small regular:bold

large:small angular:linear

angular:round regular:bold Contrasts

flush left:flush right

light:bold

positive:negative regular:bold

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Contrasts

small:large short:long

light:bold close:open

direction of strokes

Identities

dot texture

dot composition

dot

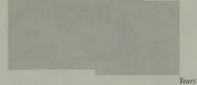
The Industrial Bank of Japan Trust Company



Annual Report 1994

8 25×11 75

Cover design for the Industrial Bank of Japan Trust Company 20th anniversary annual report. In the orthogonal design the large italic numerals suggest dynamic motion and progress.



Annual Report 1994





1 The large dynamic numerals in the foreground contrast with the static rectangular field in the background.

2 The typography corresponds with the vertical white space in the grey field.

3 The curvilinear numeral contrasts with the vertical lines.

1 2

4 The large zero draws attention to Years.

5 The short bold lines contrast with the long fine lines. The two colums refer to the columns in the financial statements.

# Anspach

Anspach Grossman Portugal Inc

6x6 in

1972

Season's greetings card for Anspach Grossman Portugal Inc.
Circular microaesthetic details, extracted from the word UNITY, are printed on two squares of clear acetate. The remaining parts of the letters and the company name are printed on white Kromekote.

The three pieces were inserted in random order into the envelope before mailing. By assembling the pieces in the proper sequence the recipient was able to create UNITY.







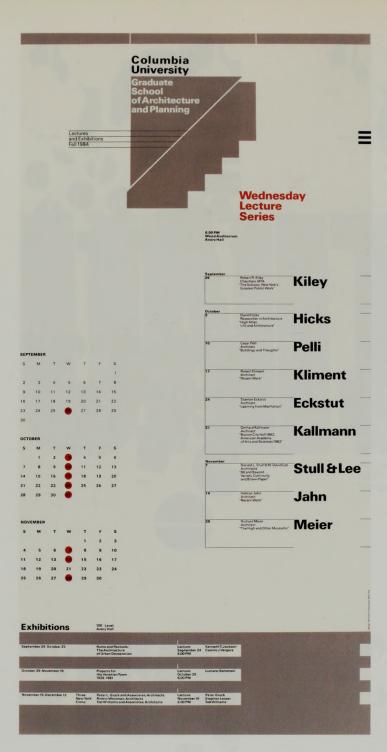






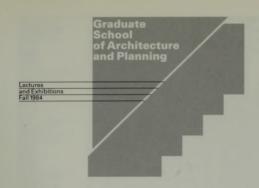


Circular shapes highlight the microaesthetic details of form and counterform for the five letters in UNITY. 1 Fragments of UNITY are printed on Kromekote. 3 5 Circular shapes are printed on clear acetate. 2 4 6 The three layers are assembled to form various permutations of the card.



12×24 in

Poster announcing a series of nine lectures and three exhibitions held over a three-month period at the Columbia University Graduate School of Architecture, Planning and Preservation. The geometric shape at the top, cut diagonally into two contrasting forms, alludes to the architectural themes of the lectures and serves as the regulating structure for the typography below. Lecture and exhibition dates are highlighted on the calendar.







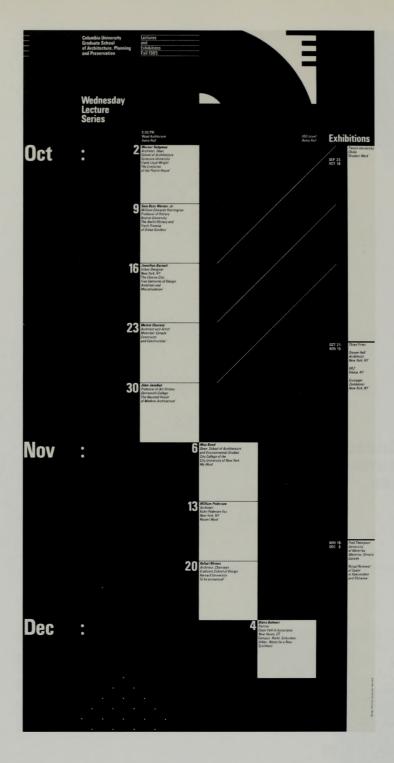
9	10	11	12	13	14	15
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23	24	25	28	27	28	29
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				1	2	3
4	5	6	0	8	9	10
11	12	13	100	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

September 26	Robert R. Kiley Chairman, MTA "The Subway: New York's Greatest Public Work"	Kiley	_
October		-	-
3	David Hicks Researcher in Architecture "High Atlas: Life and Architecture"	Hicks	_
10	Cesar Pelli Architect "Buildings and Thoughts"	Pelli	-
17	Robert Kliment Architect "Recent Work"	Kliment	_
24	Stanton Eckstut Architect "Learning from Manhattan"	Eckstut	-
		_	_

3 4

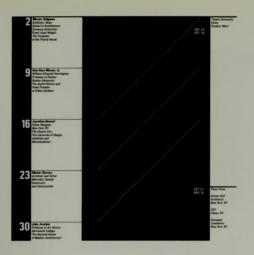
4

- 1 Horizontal lines, penetrating the diagonally cut surface, create an illusion of depth.
- 2 Three type weights differentiate individual months, and suggest a progression of time.
- 3 The regulating structure for the typography is provided by the stepped form in the square.
- 4 The line structure coordinates the lecture date, title, and lecturer's name.
- 5 Horizontal light and dark bands allude to exhibition spaces located below ground level.

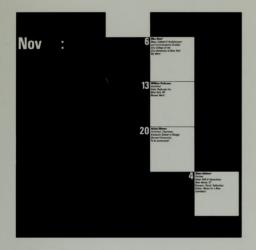


12×24 in

Poster announcing a series of nine lectures and three exhibitions held over a three-month period at the Columbia University Graduate School of Architecture, Planning and Preservation. Five lectures were given in October, three in November, and one in December. This 5:3:1 ratio determined the macroaesthetic structure, consisting of nine squares stepping from top left to bottom right.









Columbia University
Graduate School
of Architecture, Planning
and Preservation

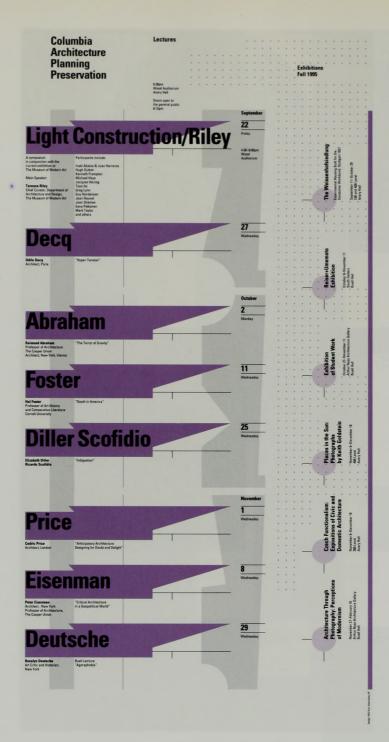
Wednesday
Lecture
Series

6.00 PM
Wood Auditorium
Avery Hall

- 1 Diagonal lines connect lectures with concurrent exhibitions.
- 2 An abstract design element alludes to the architectural theme of the lectures.
- 3 The arrangement of squares in steps from left to right suggests the progression of time.
- 4 The dot pattern echoes the graphic theme of squares.

5 The structure of the typography is determined by the macrostructure of the poster.

1 2



Poster announcing a series of eight lectures and six exhibitions held over a three-month period at the Columbia University Graduate School of Architecture, Planning and Preservation. Eight sharp geometric shapes, protruding into the format from the left, point to the lecture dates. Three free-form geometric shapes, one for each month, subdivide the format vertically into two areas: lectures on the left, exhibitions on the right.

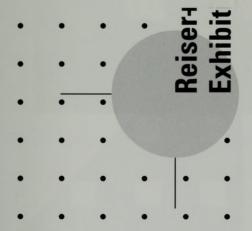


"Hyper-Tension"



**25**Wednesday

8 Wednesday



1 A sharp triangular cut in the band directs the eye to the lecture title. 2 3 4 Irregular edges

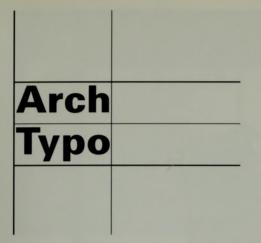
2 3 4 Irregular edges create different configurations between the geometric shapes and the arrows.

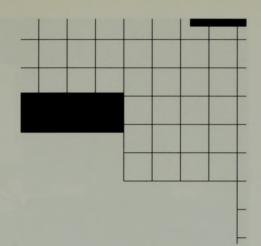
of the exhibition listings contrasts with the horizontal placement of the lectures. Each of the six exhibition titles is

anchored to a large circle which contrasts with the small dots of the background pattern.

4.125×5.75 in

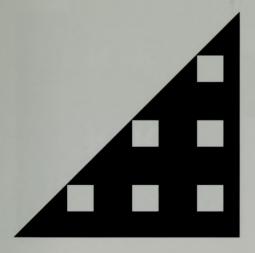
Announcement for a poster exhibition.
The design is based on typographic elements from work exhibited.



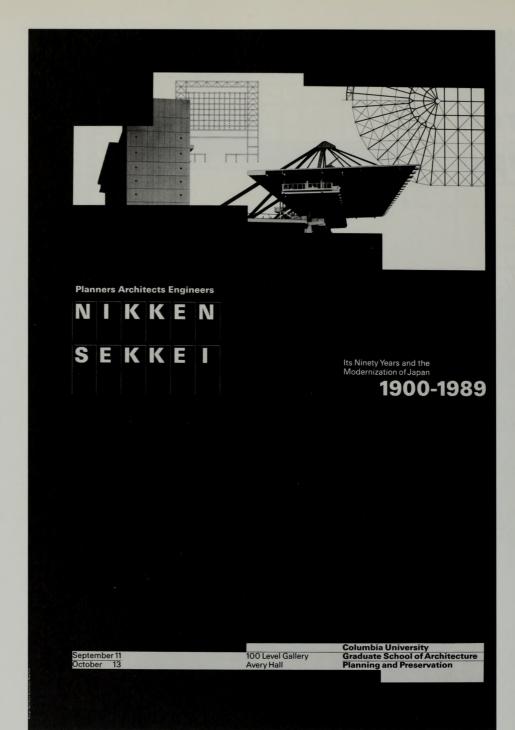


April 17 May 5





- 1 Vertical and horizontal lines highlight the first part of each word, combining them visually into the new expression ArchTypo.
- 2 A square grid determines the size and composition of typographic elements.
- 3 Forced block composition of exhibition dates conforms to orthogonal design of the card.
- 4 The white circle contrasts with the black triangular form of the letter A.
- 5 A dynamic diagonal contrasts with the composition of static squares.



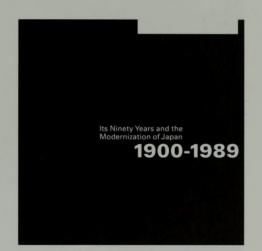
18×2

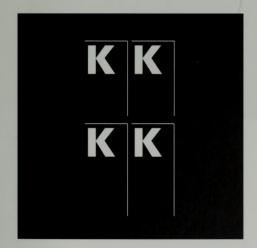
Poster for a traveling exhibition of work by Nikken Sekkei, Japan's largest planning, architecture and engineering firm. The photographs and drawings in the stepped window were chosen for their contrasting visual qualities. The window concept relates to the firm's 90th anniversary, and metaphorically expresses a simultaneous glance into the past and the future.











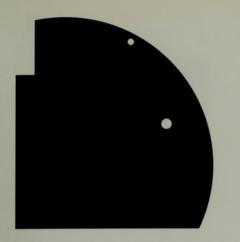
1 The stepped window coordinates the four dissimilar visual images.
2 The composition of gallery information makes visual reference to the large window.
3 5 The repeated sequence of letterforms in the two words determines the typographic composition.

4 The static blocks of type are shifted horizontally to emphasize the anniversary dates.

1 2

8x24 in

Recruitment poster for Columbia University's oneyear undergraduate study program in architecture, urban planning, and historic preservation held in New York and Paris. The primary visual elements are a circle representing the world, and six photographs of urban landscapes typical of New York and Paris. The vertical and horizontal shapes of the photographs reflect the predominant building forms of each of the two cities.





i





1 At the macroaesthetic level, a large circle with two dots represents Paris and New York as positioned on the globe.
2 The dots for "New York" and "Paris" visually establish a connection between the two cities.

3 The picture shape makes reference to the shape of the N.

3 4

4 The gradations in size of the photographs convey distance.

5 "New York" is anchored to the frame by the negative space corresponding to the letter K. Bernard Tschumi Dean

Columbia University Graduate School of Architecture, Planning, and Preservation

requests the pleasure of your company for the opening of



Columbia
University
Architecture
Galleries

May 11-31

Saturday, May 11

6:00-8:00pm

reception and viewing

Buell Hall and Avery Hall 100

400 500

Invitation for an exhibition of student projects in architecture, urban planning and historic preservation at Columbia University.

The central composition of divergent yet carefully structured elements suggests the experimental character of the work exhibited. The exhibition title seems to float behind the three transparent slanted rectangles.

4.25×6 in





N



ITI



1 2

through placement against two solid rectangles.

2 The active, rectangular letter M in the foreground contrasts with the passive circle in the background.

1 "Exhibit" is highlighted

3 The diminished type size of the upper line is determined by the relationship of the R to the vertical stroke of the N. 4 The line elements overlapping the slanted letter H at a contrasting angle evoke the impression of space.

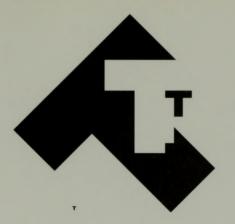
5 Through coordinated letter spacing the hyphens become dots for the l's in the lower line.

6 The size of the round dot corresponds to the space between the line elements.

Knowledge in Basic Typography is a prerequisite for this course

Poster announcing an experimental workshop in advanced typography at Ohio State University. The graphic composition with the letter T was cut in linoleum and printed together with the rest of the type in letterpress.





П

DESIGN 594 B

DESIGN 594 B

T

Knowledge in Basic Typography is a prerequisite for this course

#### DESIGN 594 B

#### Advanced Typography

An experimental workshop with typographic materials and their use in relation to color, illustration, photography and structure. Emphasizes individual exploration of areas of particular interest.

- 1 The initial design elements: three capital T's of different sizes.
- 2 Changes of letterform scale, rotation, and combination with two negative T's determined the composition.
- 3 The justified composition of the course number refers the horizontal stroke of the T.
- 4 The long line of type contrasts with the justified composition of the course number.

1 2

5 The visual structure of the typography is based on the angular composition of the letterform T.



1.75×12.5 in

Typographic interpretation of a quote by Marshall McLuhan from a series of studies in visual syntax and semantics.

Through deliberate use of type style, size, and spacing, sections of the sentence are stressed, and the semantics of individual words underscored. A strongly demarcated visual structure unifies the composition of divergent typographic elements.

### PR IN T

s p e II i n g

made bad grammar possible •

T

g

inflection OF LANGUAGES

AND

made bad grammar possible •

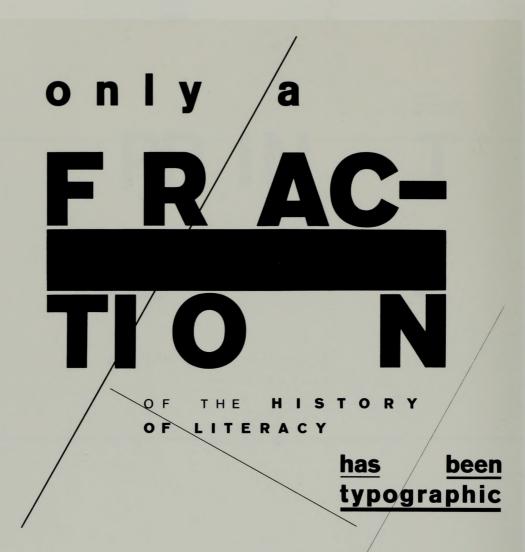
1 The angular line connects two key components of the sentence, creating a new sentence. 2 Extreme letter spacing reinforces the semantics of "spelling" – atomistic and

reinforces the semantics of "spelling" – atomistic and individual; the extremely condensed typeface of "grammar" shows it semantically as rigid and unchangeable. 3 The typographic elements are structured for contrast between one heavy and two light verticals.

1 2

4 The bold angular T and the light oval g are placed for contrast. The angular line echoes the T. 5 Contrast in form and structure between two

justified compositions.



11.75×12.5 in

Typographic interpretation of a quote by Marshall McLuhan from a series of studies in visual syntax and semantics. "Fraction" is broken apart by the horizontal band and extreme irregular letterspacing, and is thus given a semantic interpretation. Line elements are structured to intersect and divide words. Through variation in type size, weight, and composition, the sentence is subdivided into fragments of communicative statements.

N

typographic

has been typographic

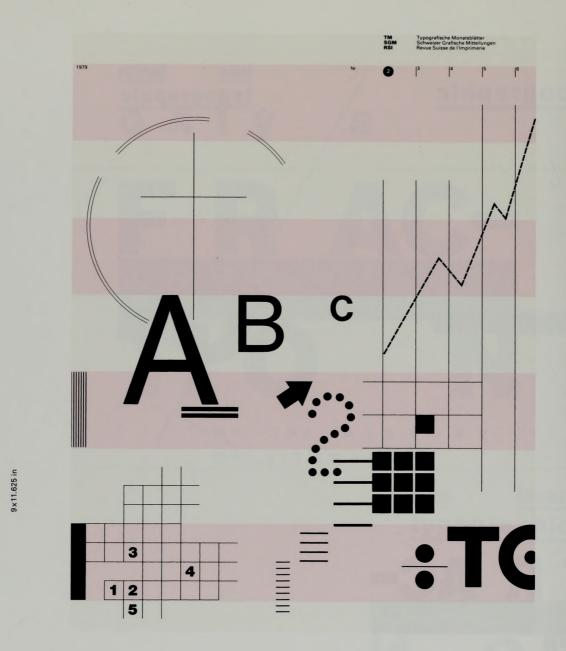


C-

## FRAC-TION

- 1 A diagonal line splits the word "typographic," reinforcing the semantics of the sentence. The line angle determines the letterspacing. 2 The negative space in the first line corresponds to the width of the letter N. 3 The line composition fractures the space of the sentence.
- 4 The combination of the letter C and the hyphen forms an arrow pointing to the left. 5 By dividing the word, the horizontal band makes clear the semantics

of "fraction".



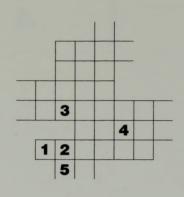
Cover design for a special issue of Typografische Monatsblätter, featuring the graphic design program of Sadlier educational publishers, New York.

The selection and composition of typographic elements refer to the four divisions of the company: religion, mathematics, economics, and social science.

## AB°









- 1 The letters ABC, diminishing in size and retreating in space, refer to different reading levels and school grades.
- 2 The sign of the Cross, merging with a triangular A, refers to the religious material published.
- 3 Economic growth is represented by bold, diagonal dashes intersecting a series of fine vertical rules.
- 4 Bold numerals within
- a grid suggest a mathematical problem. The irregular outer edge of the grid facilitates its integration with the surrounding elements.
- 5 Repetitions of line groupings, juxtaposed with a static composition of squares, evoke movement and space.

4	
•	

In typography, the first and most elusive step involves just one person – the designer – and the creation of a concept.

Highly influenced by the designer's visual sensibilities, this first step is taken on the macroaesthetic level. Later, smaller steps are taken on the microaesthetic level. Depending on the scope and scale of the project, later steps may take place at different times and places, and may involve other specialists with a variety of skills – photography, pre-press, printing, for instance.

Although designers need not be a master of all these skills, they must be aware of the requirements and limitations each specialist imposes on the project, as well as how, collectively, they contribute to the synergy required to develop and realize the original, conceptual idea. The process of typographic design is thus one of creating, refining, looping back, and synthesizing myriad demands and details; the product a synthesis of creative, administrative, and technical processes.

- For every project, the purpose of the communication must be first established, and a conceptual framework created. With these in place, typographic principles and the nature of the information provide the basis from which to explore different visual approaches.
- The difficulty is not only creating the concept but also in realizing it. This objective becomes increasingly elusive as the number of persons involved increases, each bringing his or her own objectives and biases to the problem. In evaluating designs, reasoning and judgment often become intertwined with emotion, making it difficult to reach consensus. A concept with an intellectual premise can make the process easier by offering a rationale that can be understood by everyone involved, including the intended audience. The argument for any design should be based on communication goals rather than aesthetics which of course does not mean that aesthetics are unimportant.
- Typographic principles lay the groundwork for any good design. All processes depend on a set of principles, rules, or guidelines in order to function. Traffic without laws is chaos; games cannot be played without rules. Typographic communication, as well, requires that certain basic grammatical and visual standards be followed, and that all parties share the same visual and verbal vocabulary.
- Guidelines do not have to be stifling, however. Children playing games follow the rules with serious attention, but at the same time interpret them creatively. To work on a tightly defined problem is more challenging, and more exciting, than working on a problem without constraints. What initially appear to be constraints can also lead to unexpected solutions. For instance, a poster may be required to contain an unwieldy amount of disparate information, but this disparity might create an interesting visual structure.
- When problems are too open-ended, the dazzling array of possibilities often leads to confused or chaotic results.

  A program, such as a grid system, a series of carefully selected type sizes and weights, or self-imposed

- technical or economic limitations helps channel the design process into a more productive and interesting course. The challenge is how to determine the best program for the particular situation: how much freedom, creativity, and intuition to allow. In many cases, this is determined by considerations of practicality, budget, and audience; the designer's level of experience; and whether the designer is working alone or as part of a team.
- Useful as a program is, however, it alone cannot guarantee a successful outcome. Intelligence, talent, inspiration, and hard work are also necessary, as is a thorough understanding of the information to be represented. To allow for a coherent structure, the information must be carefully analyzed. The resulting hierarchy remains fixed, but lends itself to a variety of visual representations.
- To realize the concept and meet the project's objectives, different visual approaches may be explored. This exploration gives shape to the macroaesthetics of the design, turning raw information into visual communication. Once a particular approach is chosen, further refinements take place at the microaesthetic level.
- The final stages of the design process hone the aesthetic aspects. The microaesthetic level of a design can be continually refined and affords the greatest opportunity for improving the quality and expressiveness of a visual composition. The microaesthetic level also gives the designer a certain degree of freedom to go beyond resolving only the task at hand, to express his or her own sensibilities. Ideally, the combination of macro- and microaesthetic components forms a synthesis a convincing design solution for a specific problem.
- Every project is an interplay of a myriad of ideas, opinions, requirements, and economic and technical constraints.

  While it is often impossible to precisely identify all the factors that shape a solution, one thing is certain: a good concept is always vital.

After many years of working with the computer, I still find pencil sketches the most efficient means of developing conceptual studies. Rather than transcribing an idea through the keyboard, computer, and printer, it seems to me much more natural and direct to capture my thoughts on a sheet of paper with a pencil. At the start of a project it is extremely important to spend some quality time focusing on objectives instead of getting distracted by what the computer can or must do.

The computer, however, is invaluable once the project is past the basic conceptual stage. Many design variations can be developed and edited without the waste of materials. Unintentional commands may lead to unexpected new directions. In realizing the original idea, the macro- and microaesthetics can be infinitely refined as the visual expression evolves to meet the objectives. Whatever tools are used, a successful solution must ultimately communicate its message and evoke the desired emotional response.





Selected sketches for the poster on page 136.













Poster announcing a symposium about the transformation of traditional public space into cyberspace and its deterioration into hyper-ghettos.

#### Purpose

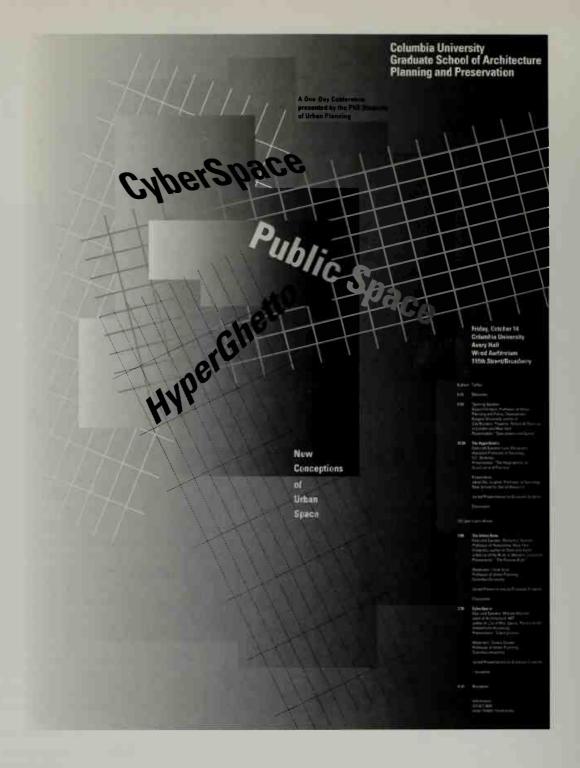
To express the hyperactive, multilayered quality of today's urban environment, and to suggest the panelists' diverse points of view.

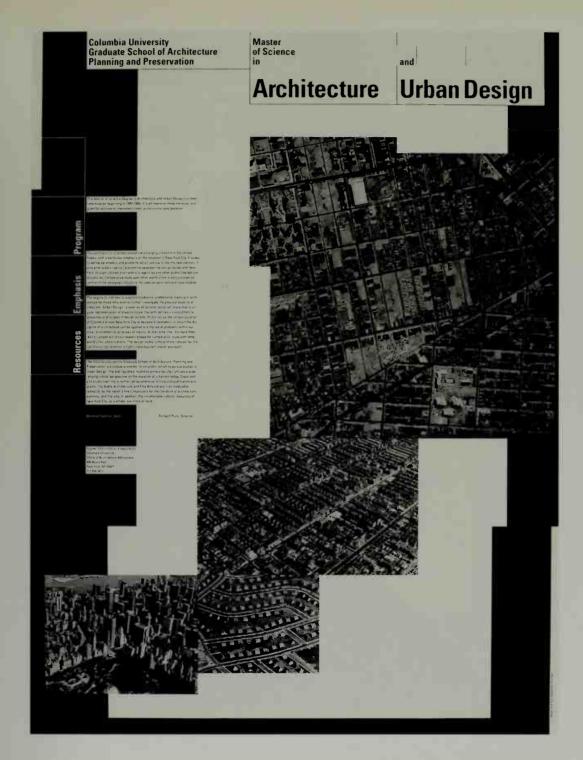
#### Macrostructure

The three symposium topics, with three layers of grids converging at different angles, provide visual depth.

#### Microaesthetics

Three layers of geometric planes of different size and shape, each gradated from light to dark, increase visual depth.





Poster announcing a program in architecture and urban design.

#### Purpose

To compare the fabric and density of city, suburb and industrial area.

#### Macrostructure

The stepped arrangement and increasing size of photographs suggest gradual expansion from city to industrial environment. The bold, irregular frame defines the format and anchors the text.

#### Microaesthetics

The line structure at the top emphasizes the two aspects of the program and connects the program title with the school name. The line structure on the left organizes the program information.

**Columbia University** Graduate School of Architecture Planning and Preservation Master of Science in Architecture and Building Design **Master of Science in Architecture and Urban Design** 

Poster announcing two programs in architecture and urban design.

#### Purpose

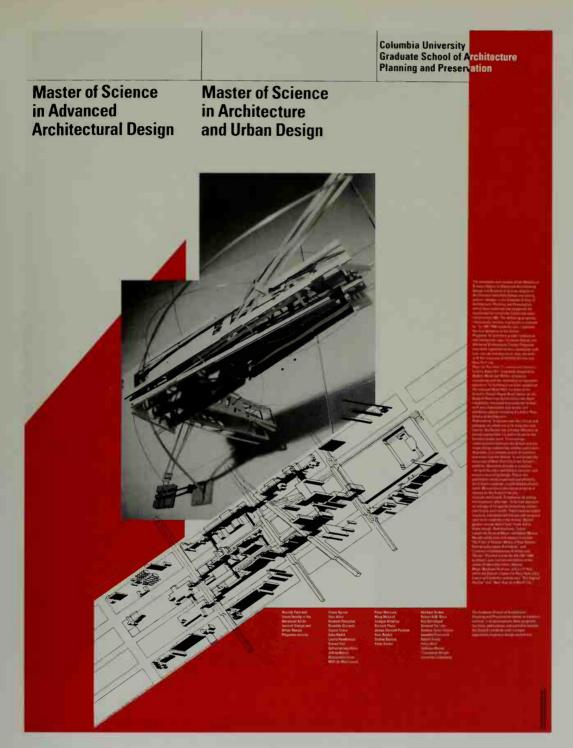
To illustrate program content through examples of students' work.

#### Macrostructure

A triangular field, punctuated by three square photographs of building models, anchors the two program titles. The two triangles along the left-hand edge point to the program titles.

#### Microaesthetics

The typography at the top is based on a fourteen-column grid. The steps in the frame at the top differentiate the text elements. Negative text in the upper left-hand corner changes to positive text, providing a transition between the frame and the visual field. The architectural drawing in the background increases visual depth.



New design of the poster on page 138.

#### Purpose

To illustrate program content through examples of students' work.

#### Macrostructure

The photograph of an architectural model forms the care of the visual composition. The diagonally cut frame anchors the text and defines the background.

The axonometric drawing creates visual depth.

#### Microaesthetics

The rectangular cut in the photograph emphasizes the placement of the program titles. The line structure at the top coordinates the program titles and school name. The change from positive to negative type at the top right facilitates the transition between frame and background.

# **Columbia University** Graduate School of Architecture Planning and Preservation Introduction to **Architecture** A Summer Studio in New York

Poster announcing an introductory course in architecture.

#### Purpose

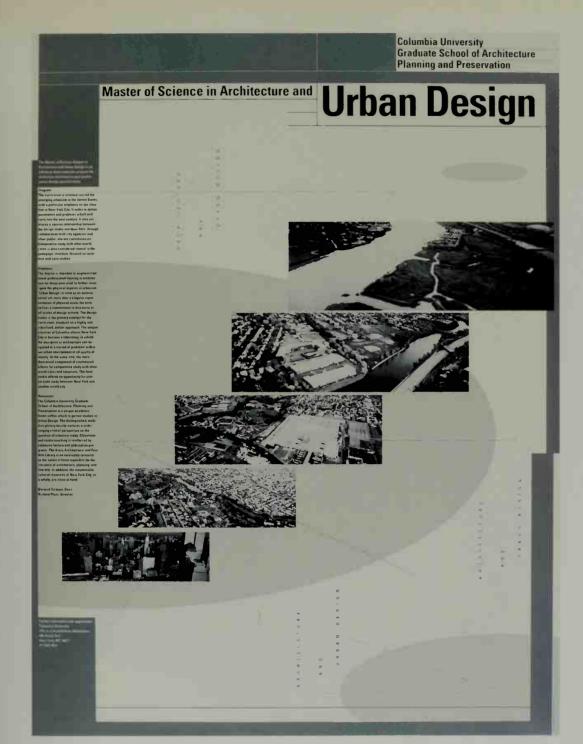
To convey to students the architectural environment, and the intensity and excitement of New York City.

#### Macrostructure

The trapezoidal photograph of midtown Manhattan and the yellow circle form the focal point. The stepped border, activated by bold diagonal lines, defines the background. The black textblocks and the three photographs at the bottom increase the visual depth.

#### Microsesthetics

The grey trapezoidal plane unifies the visual elements. The trapezoidal skewed grid, referring to the plan of Manhattan, adds visual dimension. The soft-focus edge of the photograph fuses the image to the background. The yellow color of the circle and the border suggest summer.



Poster announcing a program in architecture and urban design.

#### Purpose

To convey stages of change from the urban environment to the rural landscape.

#### Macrostructure

The stepped arrangement and increasing size of the five photographs suggest change. The title at the top right completes the stepped composition of the photographs. The active, irregular frame defines the format and anchors the text.

#### Microaesthetics

The three ovals symbolize the various degrees of urban development, and the three angles allude to possibilities of direction. The small vertical type increases visual depth.

Poster announcing a symposium about the present and the future of American cities.

#### Purpose

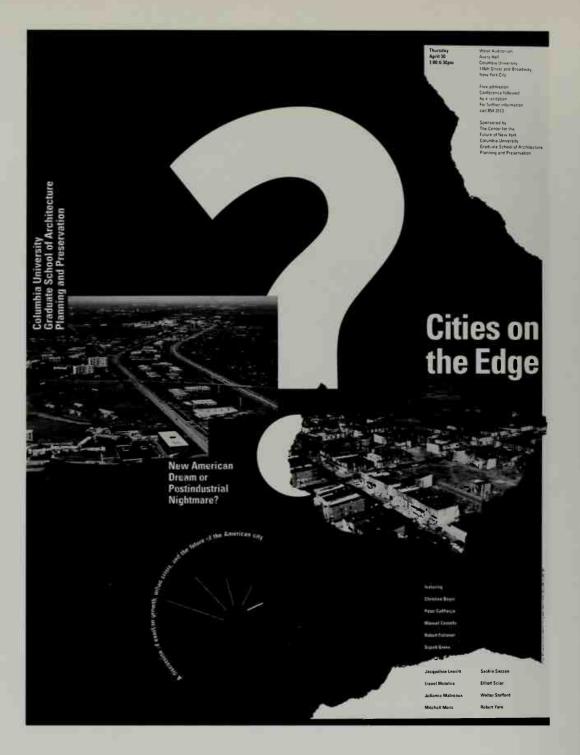
To express some of the issues, present end future, confronting today's urban environment.

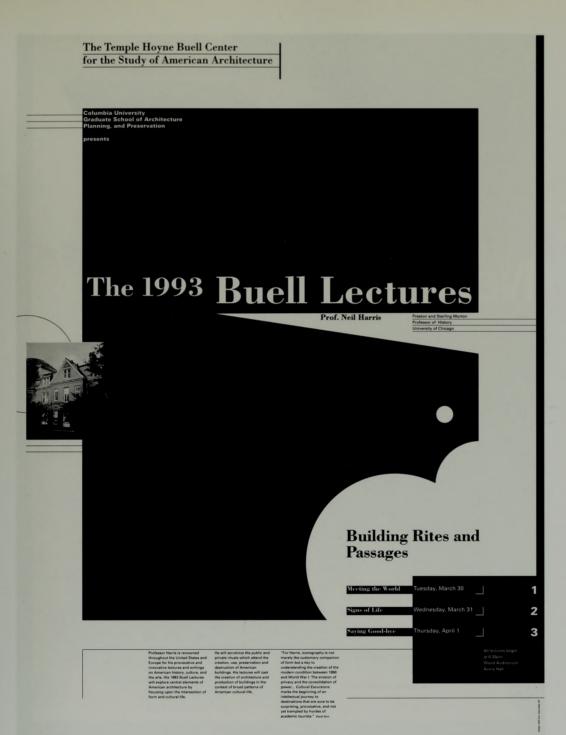
#### Macrostructure

The question mark, connecting a growing satellite city and a decaying suburb, implies the uncertain future of cities. The torn edges of the visual field allude to the erosion of the urban fabric. The symposium title placed at the right hand edge semantically reinforces the topic.

#### Microaesthetics

The photographs'edges are stepped to represent progress or torn to convey decay. The circular composition of the subtitle echoes the curves of the question mark. The radiating lines signify the passing of time.





Poster announcing a lecture series about the public and private rituals associated with buildings and construction in America.

#### Purpose

To express the mystery and ambiguity of ritual ceremony, and to underscore the lectures' role of illumination.

#### Macrostructure

The central black field reflects the mystery embodied in ritual and unifies the other visual elements. The cloudlike shape alludes to popular iconography and illuminative purpose of the lectures. The acute triangle, piercing the black field, draws attention to the information about the speaker. The photograph establishes a connection between the central concept and the lecture building.

#### Microaesthetics

The title's two type sizes increase visual depth. The small white circle acts as a transitional element between the cloudlike shapes and the acute triangle.

Poster announcing an undergraduate program in architecture, urban planning, and historic

#### Purpose

preservation.

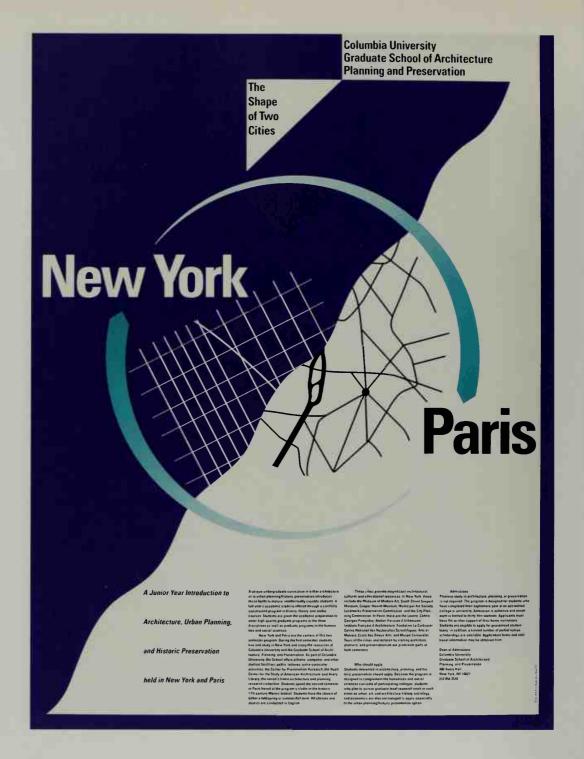
To convey the contrast between the urban fabric of New York and Paris, and to allude to the distance of travel between the two cities.

#### Macrostructure

The blue triangular field with a wavy edge symbolizes the ocean. The two tapering arcs evoke travel and distance. The juxtaposition of the two schematic maps convey the contrast between New York and Paris.

#### Microaesthetics

The change from negative to positive invites comparison of the cities through the relations of their names. The negative triangle containing the subtitle connects the school name to the central elements. The text is based on a five-column grid, which also provides the regulating structure for the title and subtitle.





The Shape of Two Cities

# New York Paris

Poster announcing an undergraduate program in architecture, urban planning, and historic preservation.

To create with some of the elements from the poster on page 144 and four photographs a new solution.

#### Macrostructure

The grey field unifies all visual components and creates depth. The three different type sizes and the stepped composition of the program title convey distance. The diagonally placed schematic maps and the trapezoidal photographs of New York and Paris invite comparison.

#### Microaesthetics

The angled subtitle connects the program title and the text. The indent in the title corresponds with the width of the text column. Elements extending outside the grey field and diverging longitudinal and latitudinal lines contribute to the impression of space.

Poster announcing an undergraduate program in architecture, urban planning, and historic

#### Purpose

preservation.

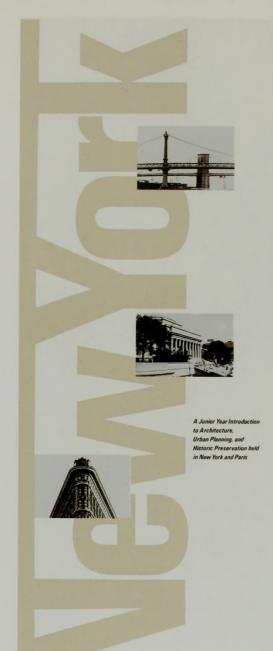
To convey the contrast between New York and Paris and to allude to the physical distance between the two cities.

#### Macrostructure

The different reading direction of New York and Paris alludes to the two parts of the program and the sequence of the course. The six photographs connect the names of the two cities.

#### Microaesthetics

The horizontal bars at the top and at the bottom edge reinforce the vertical subdivision of the background space. The width and arrangement of the text and subtitle are based on a six-column grid, which also regulates the macrostructure.



Columbia University Graduate School of Architecture Planning and Preservation

The Shape of Two Cities



A unique undergraduate curreculum on either extitection or in orben planning livatione preservation involucion liberal bits in naturo, mediarcustigi ca qualite studienti. A full year is scalement credit a offered through a certelling construction program on hotserythorar, and studies curries. Studients are given the acodimic propuestion to enter high-quality graduate purgerame in the hotse disciplines as well as graduate programs in the homometric and securities accordis.

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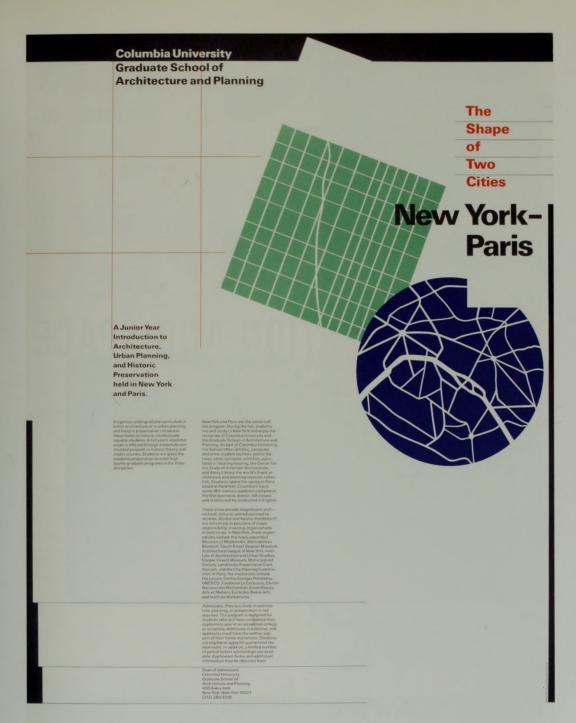
#### Who should apply

Stylents interested in architecture, planning, and historie presumation should apple. Because the program is designed to complement the humanities and social accords coveragin of participating colleges, talkednost who plan to pursue problems head research work in such areas so whom wit, and architecture hotters specially, and elevarious can also encouraged to apply expecially to the ordinar planning! historic preservation option.

#### Admissions

Previous study in excluterizine planning, or preserve tion on ant required. The program of excipaged for students who laws completed their suphremer upon an accretificat configure or university. Admission or substitute and evolutional as intend to theiry, free substitute, Suplacents must have the vertice support exclusions. Applications must have the vertice support pagin for quantitized student leave, in addition as substitute of partial trains solutionships are wealthful. Application folium and additional information may be deliment from.

Ones of Admissions
Columbia University
Graduate School of Architec
Planning, and Preservation
400 Avery RN
New York, NY 10027
(212) 280, 3510



Poster announcing an undergraduate program in architecture, urban planning, and historic preservation.

#### Purpose

To convey the basic contrast between the urban fabrics of New York and Paris.

#### Macrostructure

The square with the grid of Manhattan and the overlapping circle with the map of Paris invite the cities to be compared.

#### Microaesthetics

The rectangular cutout links "Paris" to the circle. The triangular cutout anchors the square to the horizontal band. Horizontal lines connected to a series of steps on the lower left suggest a multilayer of surfaces. The line structure at the top coordinates the typographic elements.

**Columbia University Graduate School of Architecture Planning and Preservation** Presented by Students in the PhD Program in Urban Planning

TRANSMIGRATION AND SPACE Conceptualizing the Flows of Globalization

**Invited Speakers:** 

**Terry Plater** 

Saskia Sassen

**Robert Smith** 

Poster announcing a symposium about the global shifts of world population.

#### Purpose

To express direction and movement.

#### Macrostructure

The black field, suggesting a monitor screen, contains the subtitle and list of speakers, and underlines the symposium title. The rhythmic composition of oval shapes in different sizes implies movement and depth.

#### Microaesthetics

The change from negative to positive of rules and type facilitates the transition between black field and white background. The width of the black field corresponds with the two A's left and right in the title. The typography is based on a six-column grid related to the black field.

**Linda Basch** 

**David Harvey** 

Immanuel Wallerstein

**Columbia University** Avery Hall, Wood Auditorium 116th Street/Broadway 212 854 6280

Friday, November 3, 1995

10:00-5:30pm

e-mail: BF45@columbia.edu

Free Admission

### The Origins of the Avant-garde in America

Colloquium

The Philip Johnson February 1, 2, 3 **New York City** 

The Importance of Not Being Earnest

Organized by the Canadian Centre for Architecture in conjunction with The Museum of Modern Art, New York and the Columbia University Graduate School of Architecture, Planning and Preservation

iwarzer

Poster for a colloquium on the origins of the avant-garde in America 1923-1949 Sponsored by the Canadian Center for Architecture, The Museum of Modern Art, and Columbia University.

#### Purpose

To emphasize the prominence of the speakers and the time frame of the symposium topic.

#### Macrostructure

The vertical band and the protruding capital letters emphasize the speakers' names. The light grey dates provide a visual transition from the black type in the foreground to the white background.

#### Microaesthetics

Three vertical white bands along the right-hand edge demarcate the three days of the colloquium. The two vertical rules act as transitional elements between the vertical band and the field containing the program information. The frame around each session connects the speakers to parts of the program.

Two posters announcing graduate programs in architecture and historic preservation.

#### Purpose

To convey the direction of each program through a photograph from the field of study, and to develop the typographic design for each poster following the particular image.

#### Macrostructure

The square photograph, the large triangular field at from the photograph, and school.

#### Microaesthetics

# Programs in Architecture

# Columbia University Graduate School of Architecture and Planning



the top reflecting details the vertical name of the

The stepped text columns make reference to the stairs in the photograph. The black bar at the bottom left extends the composition of the text columns. The triangle at the bottom right-contrasting with the triangle at the top left - increases the spatial impression.

# Columbia University Graduate School of Architecture and Planning



Master of Science in Historic Preservation

The adias's Lifeta behavior present with proper or provided by the proper of the committee of the proper of the pr

As year of the Endeaves Cabonel of Architecture and Planning, the historic prisocretical programs as able to draw upon the income of the mental's region to the control of the mental's region to the control of the Caster for the Capter for the Cap

Faculty members and asperienced professional preservationists assectant with the School work closely with subjects and seast than a minimal part of the subjects and seast than a finite part of the subject of the subj

Gullatie sed application forms may be obtained from: Cean of Admissams Graduate School of Architecture and Planeing 400 Avery Hall Columbia University New York, New York 10027 (272)260, 150

#### Macrostructure

The square photograph, the graphic field reflecting details from the photograph, and the vertical name of the school.

#### Microaesthetics

The undulating edge, the three negative lines, and the two circles echo similar elements in the photograph. The horizontal alignment of the text columns contrasts with the undulating edge of the graphic field. The black horizontal bars at the top and bottom reinforce the vertical space for the type. The three negative lines in the bar at the top reference the baselines of the vertical type.

A series of posters announcing lectures and exhibitions at the Columbia University Graduate School of Architecture, Planning, and Preservation.

#### Purpose

To announce the Fall and Spring semester events, and to explore the wide range of design possibilities with typographic materials. Common throughout the series are the type of information, format, typeface, and vocabulary of typographic elements. The design of the Fall and Spring semester posters of each academic year is based on a similar visual theme.

#### Macrostructure

The three geometric shapes, referring to the three months of the lecture series, subdivide the list of names. The three sharp triangles point to the exhibition titles protruding from the right.

#### Microaesthetics

The line structure on the left coordinates the lecture information, day, date, and lecturer's name. The grey vertical band and the parallel line structure stabilize the composition. The intervals between the circles anchoring the seven exhibition titles are determined by an additional structure.



Columbia

Holl

#### Macrostructure

The lecturers' names are grouped according to month. The vertically split core connects the date, day, and lecture information. The vertical band bleeding towards the right carries information about the six exhibitions.

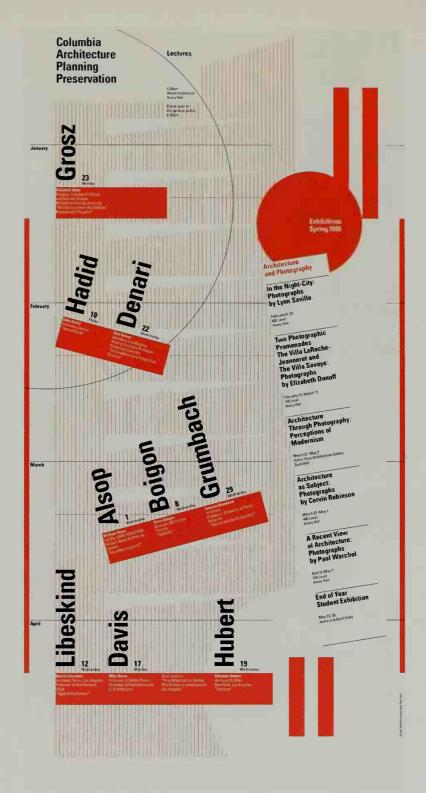
#### Microaesthetics

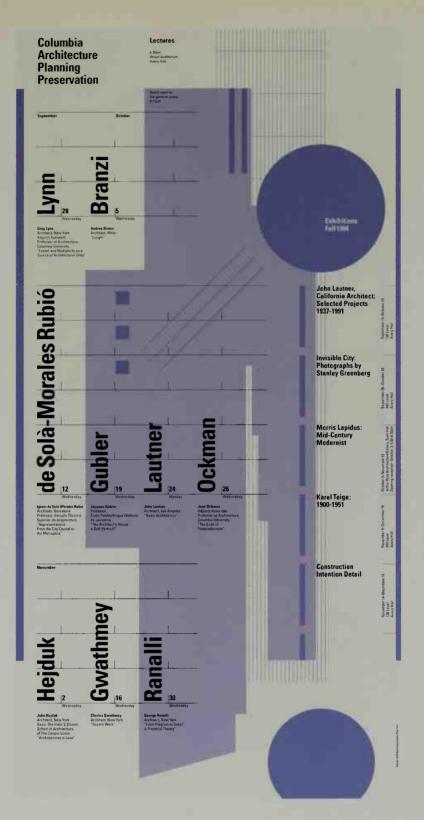
The three line structures define the space for information about the lectures. The white wedge shape, cutting into the core from the top left, intensifies the illusion of space. The thin vertical rule on the left emphasizes the speakers' initials.

The four bands with lecture information for each month are freely arranged for visual effect. The circle on the top right and the parallel vertical bands stabilize the angled column of exhibition information.

#### Microaesthetics

The vertical line pattern, punctuated by ten sharp triangular shapes and a circle, unifies the typographic elements and helps ease the eye's transition to the background.





The vertical geometric shape separates the lecture series on the left from the exhibitions on the right. Two circles of different size, suggesting depth, draw attention to the exhibitions.

#### Microaesthetics

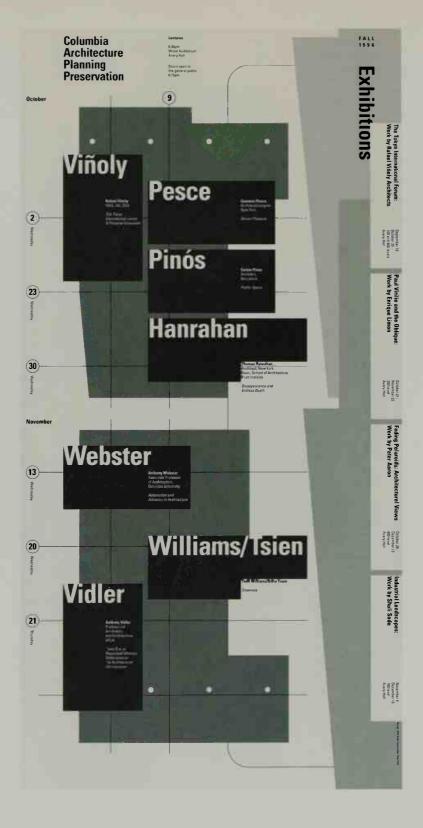
The line structure on the left unifies the lecture information, otherwise separated into three months. The subtle pattern of vertical lines facilitates the transition from the core element to the background. Three diagonal lines connect the lectures and exhibition events.

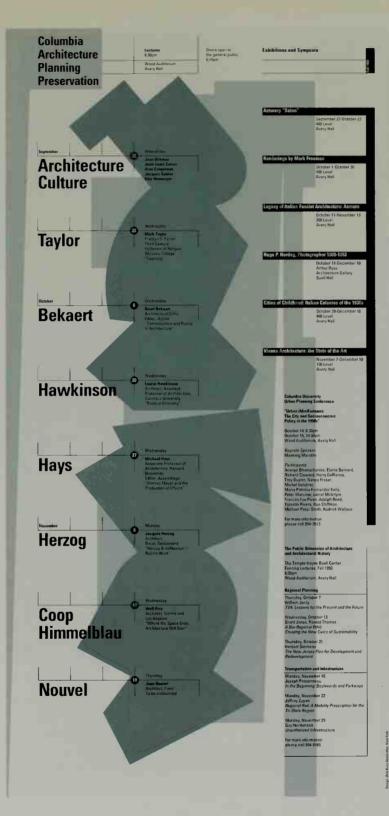
# Macrostructure The seven rectangular

The seven rectangular shapes carry the lecture information. The two geometric shapes in the background designate the months. The two layered vertical bands on the right contain information about the four exhibitions.

#### Microaesthetics

The grid structure connects the lecture information with the dates. The four white circles at the top and the three white circles at the bottom refer to the seven lectures and mark the beginning and end of the lecture series.

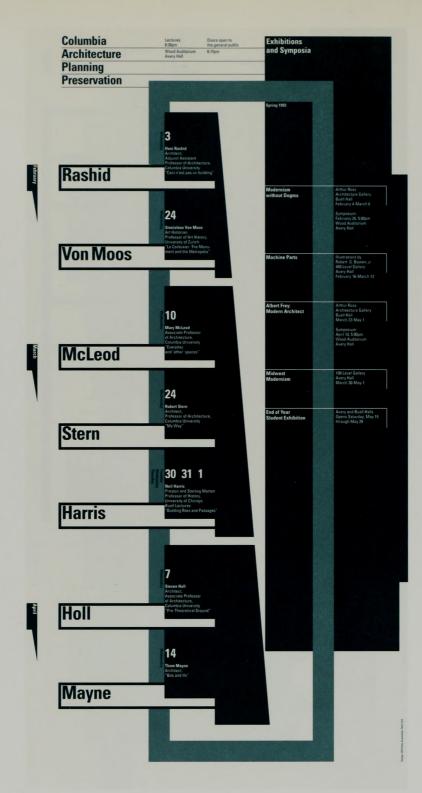




The eight merging geometric shapes refer to the eight lectures and form a strong, irregular column that serves as a core for structuring typographic information.

#### Microaesthetics

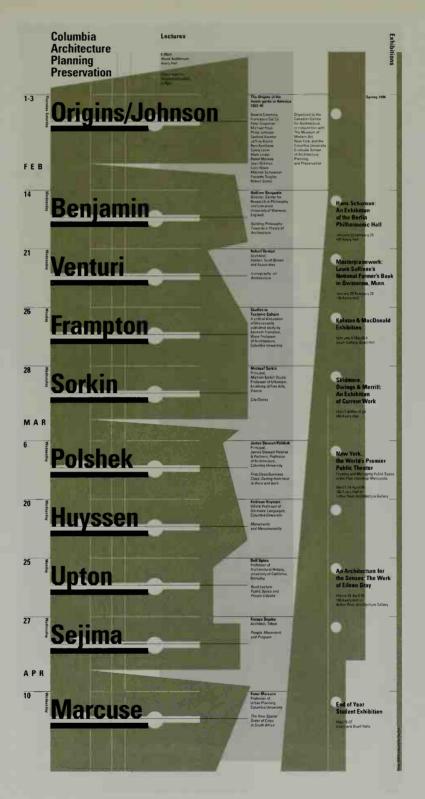
Three distinct visual textures differentiate lectures, exhibitions, and symposia. The grey geometric shape in the background links the three disparate compositions.



A central frame links the lecture information on the left and the exhibition listings on the right.

#### Microaesthetics

The contrast between solid/outline, positive/ negative, vertical/slant creates visual depth. The three elements on the left hand edge echo the negative shape between the lecture information and the exhibition listings.



The geometric shape, punctuated by circles and bold horizontal rules, co-ordinates the ten lecturers' names with the lecture information. The vertical band, tapered from top to bottom and punctuated with white dots, coordinates the exhibit information.

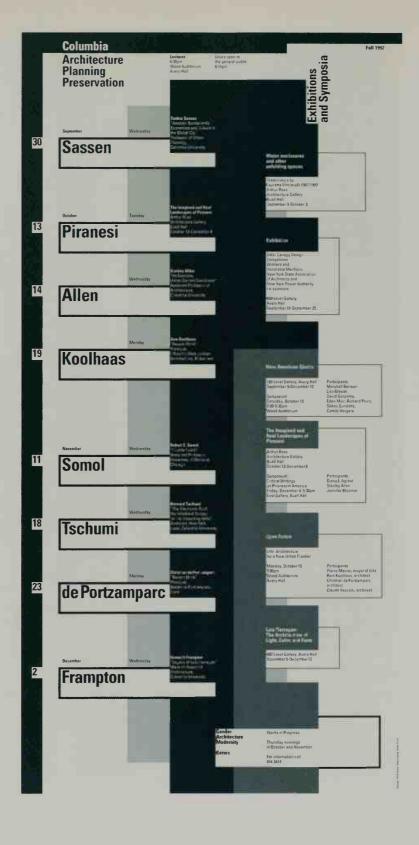
#### Microaesthetics

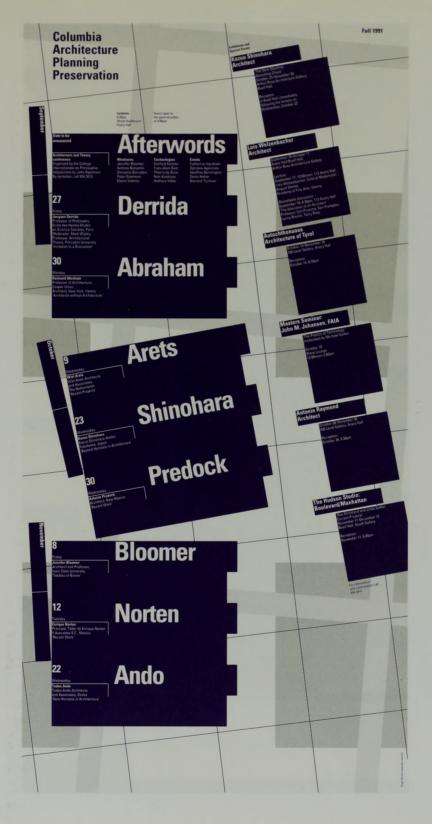
Thin horizontal lines connect the lecture information and the dates. The three sharp triangular shapes, piercing the geometric shape from the right, designate each month. The negative grid of fine lines structures the large geometric shape.

The vertical core of a geometric shape links lecture information on the left with the exhibition and symposia listings on the right.

#### Microaesthetics

The uniform composition of the lecture information on the left contrasts with the varying size of the text boxes containing exhibition and symposia information on the right.





The three squares contain information about the three-month lecture series. A slanted column consisting of six squares and rectangles contains the exhibition listings.

#### Microaesthetics

The two skewed square grids, contrasting in size and weight, further destabilize the visually loose macrostructure. The four grey rectangles in the background add visual depth.

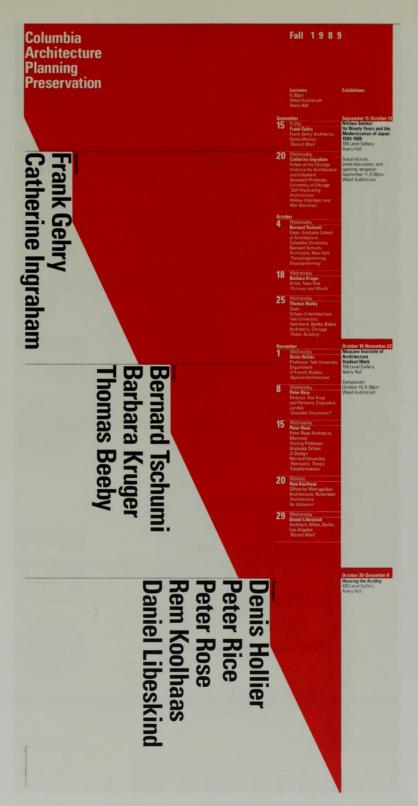
# Columbia Architecture Planning Preservation Opers open to the general public 5 15pm Jones **Ames** The hearman of the he Kurokawa Kleihues **Baudrillard** Hadid

#### Macrostructure

The vertical rectangle, containing the lecturers' names and symposium title, separates the lecture information on the left from the exhibition and tech talks information on the right. The horizontal bars containing the exhibition titles on the right contrast with the vertical rectangle.

#### Microaesthetics

The three vertical bands with different textures differentiate the tech talks. The line structures at the top and at the bottom increase the illusion of space. The four horizontal bands, shifted from the vertical rectangle, mark the three months.



The triangular field connects the lecturers' names on the left and the lecture information and exhibition listings on the right. The 2:3:5 grouping of lecturers' names is determined by the three months.

#### Microaesthetics

The fine texture of the lecture information contrasts with the heavy vertical band of the exhibit information.

# Spring 1 9 8 7 Columbia University Graduate School of Architecture Planning and Preservation Lectures **Exhibitions** 100 Level Avery Hall **Trent Schroyer** Allan Temko 11 **Malcolm Quantrill** Lin Utzon 25 José Oubrerie **Rainer Crone** Jean-Louis Cohen Zaha Hadid Herman Hertzberger Hiromi Fujii

#### Macrostructure

The vertical band coordinates the lecture dates with the lecturers' names. The four horizontal bars on the right structure the exhibition information. The circular illustrations contrast with the orthogonal overall design.

#### Microaesthetics

The vertical lines along the bottom edge mark the horizontal subdivision of space. The grid structure coordinates the different parts of the lecture information. The vertical type at the top left contrasts with the horizontally set names in the lecture calendar.



The bold horizontal rules subdivide the format into four bands containing the information about lectures and exhibitions.

#### Microaesthetics

The three vertical bands differentiate the information about the two lecture series and the exhibitions. The four negative bands at the top left refer to the four months lecture cycle. The fine horizontal rules subdivide each month into four weeks.

### ROME



Poster for an exhibition of photographs based on the city of Rome.

#### Purpose

To reinforce photographic content with typography. The photograph of Roman ruins in Ostia Antica near Rome was chosen for its structure and diversity of architectural elements.

#### Macrostructure

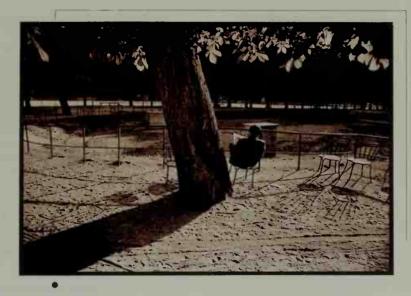
The centrally placed photograph determines the selection, size and placement of the typographic elements, which echo the columns, recesses, and curve of the amphitheater.

#### Microaesthetics

The title ROME continues the diagonal movement of the typographic elements starting at the bottom left. The asymmetric typography contrasts with the visual composition of graphic elements. The bold initials FC draw attention to the photographer's name. The square composition of the exhibition date relates to the square forms of the visual elements.

Photographs by Fredrich Cantor

July 10 August 5 1979 Sheldon Memorial Art Gallery University of Nebraska Lincoln, Nebraska



## PARIS

Photographs by Fredrich Cantor

Marcuse Pfeifer Gallery 825 Madison Avenue New York Poster for an exhibition of photographs based on the city of Paris.

#### Purpose

To reinforce photographic content with typography. The photograph of the Jardin de Luxembourg was chosen for its rich forms and interesting composition.

#### Macrostructure

The centrally placed photograph determines the selection and placement of the typographic elements. The italic title PARIS relates to the slant of the tree. The wavy shape at the bottom left leads from the title to the exhibition information.

#### Microaesthetics

The four vertical lines continue the rhythm of the fence posts. The detached i-dot echoes the sitting figure and its relationship to the tree's shadow. The texture of the wavy shape on the bottom left alludes to the sand in the photograph. The angled line adds further visual depth to the photograph.

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#### Recommended reading

Sulgen, Switzerland: Verlag Niggli AG

1988

1959

Kandinsky, Wassily

Punkt und Linie zu Fläche

Bern, Switzerland: Benteli Verlag

A	Aicher, Otl		Kepes, Gyorgy	S	Spencer, Herbert
^	Туродгарну		Language of vision		Pioneers of modern typography
	Berlin: Ernst & Sohn Verlag		Chicago: Paul Theobald		New York: Hastings House Publishers
	1988		1944		1970
8	Bosshard, Hans Rudolf		Kinross, Robin	T	Tschichold, Jan
	Technische Grundlagen zur		Modern typography		Asymmetric typography
	Satzherstellung Sulgen, Switzerland: Verlag Niggli AG 1980		London: Hyphen Press 1992		New York: Reinhold Publishing 1967
		M	McLean, Ruari		Tschichold, Jan
	Bosshard, Hans Rudolf		The Thames and Hudson		The new typography
	Typografie Schrift Lesbarkeit		manual of typography		Berkley: University of California Press
	Sulgen, Switzerland: Verlag Niggli AG		London: Thames and Hudson Ltd.		1995
	1996		1980		Tschichold, Jan
	Bringhurst, Robert		Meggs, Philip		The form of the book
	The elements of typographic style		A history of graphic design		Vancouver, BC: Hartley & Marx
	Vancouver BC: Hartley & Marks 1991		New York: Van Nostrand Reinhold 1992		1991
				W	Wichmann, Hans
D	Dowding, Geoffrey		Moholy-Nagy, László		Armin Hofmann:
	Finer points in the spacing and		The new vision		His work, quest and philosophy
	arrangement of type Vancouver BC: Hartley & Marks		New York: George Wittenborn Inc. 1947		Basel, Switzerland: Birkhäuser Verlag 1989
	1995				
G	Contract Variation		Moholy-Nagy, László		Wittgenstein, Ludwig
	Gerstner, Karl Designing programs		Vision in motion Chicago: Paul Theobald and Company		Tractatus logico-philosophicus London: Routledge
	Teufen, Switzerland: Arthur Niggli Ltd.		1969		1981
	1964		Morison, Stanley	<u>z</u>	Zwimpfer, Moritz
	Gerstner, Karl		First principles of typography	_	Visual perception
	Compendium for literates		New York: The Macmillan Company		Sulgen, Switzerland: Verlag Niggli AG
	Cambridge MA: MIT Press		1936		1994
			Müller-Brockmann, Josef		
	Gill, Eric		Grid systems		
	An essay on typography Boston: David R. Godine, Publisher 1988		Sulgen, Switzerland: Verlag Niggli AG 1988		
		R	Rand, Paul		
1	Hiebert, Kenneth		Thoughts on design		
	Graphic design process		New York: Van Nostrand Reinhold		
	New York: Van Nostrand Reinhold 1992		1970		
			Rand, Paul		
	Hochuli, Jost		A designer's art		
	Das Detail in der Typografie		New Haven: Yale University Press		
	München: Deutscher Kunstverlag 1990		1985		
			Rand, Paul		
	Hofmann, Armin		Design, form and chaos		
	Graphic design manual		New Haven: Yale University Press		
	Sulgan Switzerland: Varlag Niggli AG		1002		

1993

1988

Ruder, Emil

Typography

Sulgen, Switzerland: Verlag Niggli AG



Willi Kunz Designer/theorist. American citizen, born and educated in Switzerland. Apprenticeship as a typographer. Postgraduate degree in typographic design, Kunstgewerbeschule Zürich. 1970 moved to the United States. Teacher of typographic design at the Ohio State University, and the School of Design, Basel, Switzerland. Principal of Willi Kunz Associates, New York, a design firm specializing in print communications, visual identity, and architectural graphics.

Winner of more than two hundred national and international awards; exhibitions and publications in the United States, Japan, and Europe. Works included in the collection of the Museum of Modern Art, New York; the Cooper-Hewitt National Design Museum, New York; the Getty Museum, Los Angeles; Museum für Gestaltung, Zürich, Switzerland; Kunstsammlungen Cottbus, Germany, and important private collections in the United States. Member of Alliance Graphique Internationale (AGI).

