Typefaces

Socialist TV Typeface Videtur Finally Freed

In the 1980s, the German Democratic Republic's state television broadcasting service commissioned Axel Bertram to develop a custom typeface. The result was "Videtur," a remarkably independent serif design that was intended to define the on-screen graphics of East German television for years to come. But by the beginning of the 1990s, the GDR no longer existed. With it went its state broadcasting service – and Videtur, too. Another 20 years in the now reunified Germany would have to pass by before Andreas Frohloff could finally help bring a modernized FF Videtur to market.

Original Videtur onscreen

Whenever a particularly unique type design challenge arose in the eastern half of divided Germany, it wasn't long before eyes began to fall on Axel Bertram. Already when it had come to the design of magazines and book covers, he had refused to be satisfied with the limited range of typefaces available in the socialist state. Unlike many of his colleagues, who simply copied western models, he drew new type and lettering commissions according to his own ideas:

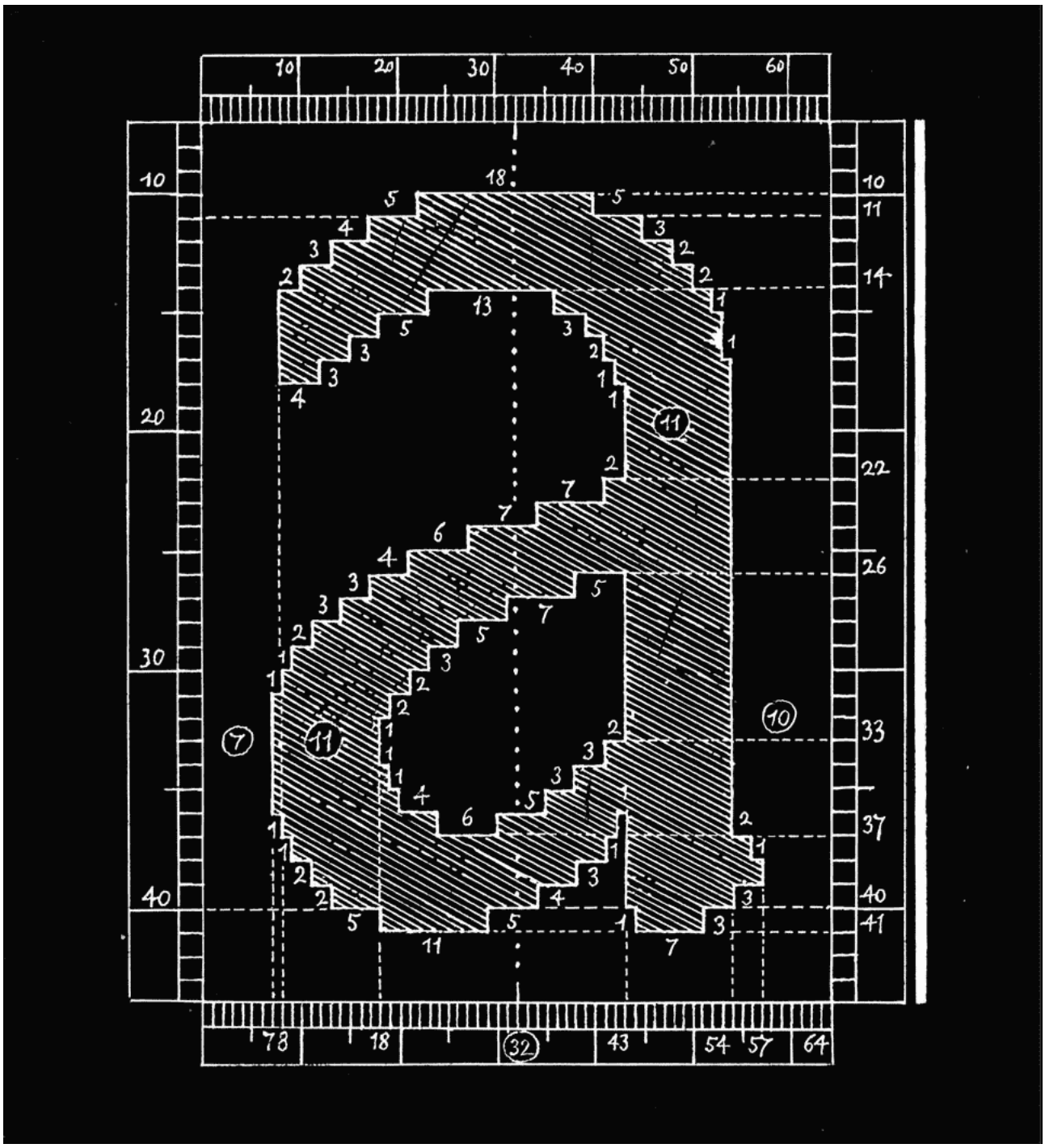
"The typefaces that came from the west were often photographed; then their letters would be rearranged. I always drew everything myself, however. The results looked more original that way. All that practice made my letter-drawing skills better."

The requirements for Videtur were very specific. In order to meet the medium's needs, Axel Bertram initiated a broad series of experiments with the 625-line television screen's display conditions. He summarizes his findings into three points:

1. Serif letterforms are easier to recognize than those in monolinear sans serif typefaces.
2. Compact serifs stabilize letterforms and improve the reading movement along a line of text.
3. An alternating stroke contrast leads to easier differentiation between letters.

During Videtur's design phase, all three findings were kept in mind and refined with the most advanced technology available at the time. After the typeface had been precisely drawn in four different sizes, it was photographed with an electronic camera and projected onto the screen.

"The letters' height was adapted to the number of lines on the television screen and were justified pixel by pixel with the Chyron font generator. The point size was practically determined by the number of lines available. I experimented with the serif-forms a lot; the result was something that I named the 'balled knot' at the time."



Original ‘a’ sketch

Aside from electronic display technology, text for television graphics in the 1980s was often set with rub-down letters. In East Germany, these sheets were produced a by company named Typofix. Both of these typesetting methods (electronic on-screen typesetting and rub-down letters) were technologies that – at least in his GDR days – Axel Bertram only had access to during his work on the Videtur project.

Oldstyle-inspired letterforms, short ascenders and descenders, low stroke contrast and the “balled knots” form the basis of this extraordinary typeface’s design. In order to transfer these characteristics into the new millennium in a contemporary way, it was necessary for

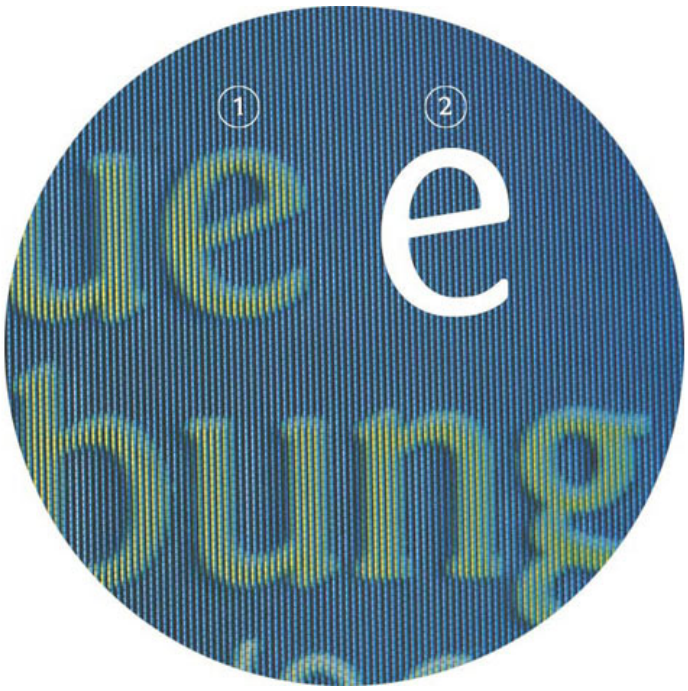
Axel Bertram to find a competent helping hand; someone with a particular attention to detail. He found the man he was looking for in Andreas Frohloff, a former student and now Head of the Type Department at FontFont. Or rather, Frohloff found him. Frohloff proved to be the impetus for redesigning Videtur in the first place, as Bertram had long considered a Videtur-revival to be out of the question. Frohloff managed to change Bertram's mind through something of a "pirate" method:

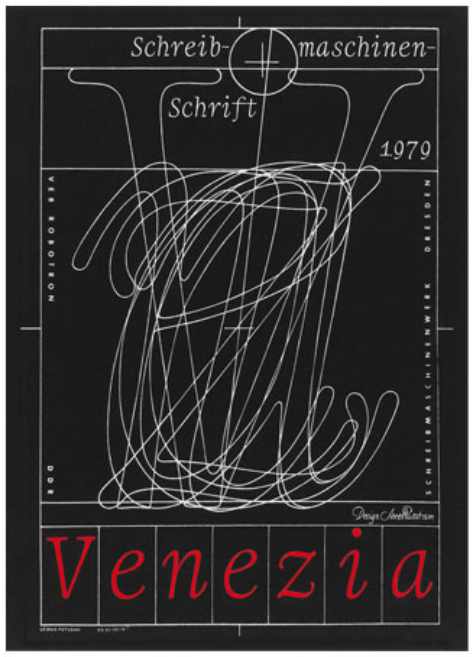
"I told him that I'd really like to have an image of the old Videtur typeface. After he found one for me, I scanned it in and made a pretty raw digital version of my own. I changed the proportions a little bit, too. My results managed to convince him, and our collaboration really took off."

More original screenshots of Videtur

It was clear to both of them that, in the age of HD-TV and retina displays, Videtur couldn't be re-digitized as is. Even the old serif-form would appear quaint in a high-resolution environment. The "balled knots" were gently and prudently modeled into a triangular form – more pointy, but still rounded. Adjustments were also made to the vertical proportions; shorter ascenders and descenders were adequate for old television graphics, but needed to be extended a bit for optimal comfort in today's reading conditions. Of course, the two designers also revised the basic shapes of the letters – when returning to a typeface after such a long time, it is only natural to take advantage of the opportunity to incorporate lessons learned. More subtleties are possible today, as Andreas Frohloff explains with the example of one detail:

"We tempered the rather oblique diagonal stroke on the lowercase 'e.' In the original Videtur, the diagonal was so extreme because its angle could minimize flickering on the screens of the time – the so-called 'St. Elmo's fire' on corners and edges appeared less frequently this way. Now the bar appears softer, and it fits into a contemporary text typeface better."





Left: Original ‘e’ versus new ‘e’; right: Venezia by Axel Bertram

Although the letters were revised, particular attention was paid to keep the stroke contrast moderate but still noticeable – less than is usual in humanist typefaces – in order to retain the design’s original vigor.

Because of its television screen background, FF Videtur remains a technical typeface, but it does have recognizable humanist features in its blood. This isn’t surprising, as both of the typeface’s creators are calligraphers. Already in the design for an earlier custom typeface for the high-circulation weekly magazine *NBI-Wochenzeitschrift* (Neue Berliner Illustrierte, 1963), the influence of Eric Gill and Edward Johnston on Axel Bertram is quite recognizable. After so many years, his opinion on the humanist letterform remains unchanged:

“The highest development for typefaces, in terms of legibility, was reached during the Renaissance. It doesn’t get any better than that!”

Left: Rabenau by Axel Bertram & Andreas Frohloff; right: Lutezia by Axel Bertram

Salomo by Axel Bertram

In comparison with the typefaces from the last decade, FF Videtur stands out. Similarities are more likely to be found in printing types from the 1980s, such as Karl-Heinz Lange's

Minima, or ITC Weidemann, whose similarity stunned Axel Bertram's former student Andreas Frohloff:

"We were talking about Videtur one day while I was in design school, and I happened to have an issue of Graphics magazine with me. ITC Weidemann was presented in that issue; although at the time, the typeface was still called 'Biblica.' I couldn't believe the resemblance at first, but a closer inspection allowed us to breathe easy again. This was one of those famous coincidences: a similar task – good legibility, little space available – and at that time, one apparently had similar conceptions of design."

At the same time, Videtur's humanist approach also managed to help distinguish GDR-TV from competing West German television channels. During the 1980s, on-screen graphics from 'that other side of the Wall' were more often set with neoclassical-style typefaces.

Thanks to its 21st century revision, FF Videtur isn't limited to the television screen or to just four point sizes. Numerous tests prove that it easily fits into any media. Today, FontFont typefaces are used in more environments than ever before – in print, on websites, with mobile devices, etc. – and Axel Bertram is thrilled to see how designers will use his modernized typeface:

"I work with the fonts myself. I love writing with them, and I've tried the typeface out in my own correspondence. The design is objective and has an attitude."

Andreas Frohloff especially appreciates FF Videtur's warmth: "Its objectivity, combined with its rather warm humanist forms, gives the typeface an impressive range of possibilities. I'm not surprised that it works well on-screen. It has a static quality that combines well with the dynamic of the moving image, even under adverse conditions."

FF Videtur is already the second collaboration between these two type designers. Rabenau, their neoclassical serif family, also had a long development process before it was

finally published by Linotype in 2011. Axel Bertram and Andreas Frohloff each work with precision and share a common attention to detail, as Frohloff emphasizes:

“It’s nice when two designers can work on the same wavelength. I studied under Axel Bertram, but I don’t feel occupied by his opinions. In between our frequent meetings, we often came to similar conclusions in our work. Afterwards, we could constructively continue down the same path.”

With the release of FF Videtur, their cooperation hasn’t reached its end. Each of them has ideas as to how the never-before-designed italic for FF Videtur could look. While Axel Bertram isn’t even sure if an italic is necessary, Andreas Frohloff already has a vague concept for the extension:

“If it comes to that, the italic should have a dynamic form that would combine with the very objective-natured upright members of the family. I think that the contrast between these two styles would be charming.”

We’re sure he’ll find the right way to convince Axel Bertram this time, too!

Universal Grotesk

I remember looking at this book cover every evening before falling asleep. I was perhaps 13 or 14, and I didn’t really know who Franz Kafka was, but this book with the weird ‘f’ on the spine caught my attention.

These kinds of details continued to catch my eye, and as I became more aware of letter shapes and of typography, I realized that this descending ‘f’ was rather common. In particular, this typeface, Universal Grotesk, was used everywhere throughout communist Czechoslovakia, appearing on everything from posters to road signs, from packaging to newspaper headlines, from our local version of transfer letters (*Propisot*) to instruction manuals of all kinds (perhaps its most fitting use).

NÁVOD

K POUŽÍVÁNÍ VÝTAHU ŘÍZENÉHO SAMOOBSLUHOU

1. SAMOSTATNĚ POUŽÍVATI A ŘÍDITI VÝTAH SMĚJÍ OSOBY STARŠÍ 10-TI LET MLADŠÍ POUZE V JEJICH DOPROVODU.
2. DOPRAVOVATI VE VÝTAHU VĚTŠÍ BŘEMENA, jako části nábytku, dětské kočárky a pod., JE DOVOLENO POUZE OSOBÁM DOSPĚLÝM.
3. Výtah se uvádí do chodu po uzavření ša-

Examples of Universal Grotesk in use: All **elevators** in Czechoslovakia included operation instructions set in Universal Grotesk. The typeface had been used on the traffic **signage** as a normative typeface for Czechoslovakia, and then in both Czech Republic and Slovakia in the 1990s. Until recently, it had been the standard typeface for highways signage in Slovakia; from 2014, it is being replaced by Tern, designed by the Austrian-based International Institute for Information Design. A random selection of **books** using Universal Grotesk, all these books come from the 1960s to 1980s. After the arrival of digital technologies Universal Grotesk has virtually disappeared.

Despite its name, which was a slight nod to Bauhaus' *Universalschrift*, its shapes were far from being universal. It was a quirky geometric sans, uneven and full of idiosyncratic details, such as the spurless 'u' and 'b'; descending 'f', uneven text colour and odd proportions (for example, the very wide, circular 'e' and 'b'). Still, it was such an omnipresent part of daily life that I began to consider the descending 'f' and spurless 'u' normal, and all other forms strange, and it is not surprising that Fedra Sans (2001) also

sports a descending ‘f’, not a direct reference to Universal Grotesk, but a sign of unconscious influences from my childhood.

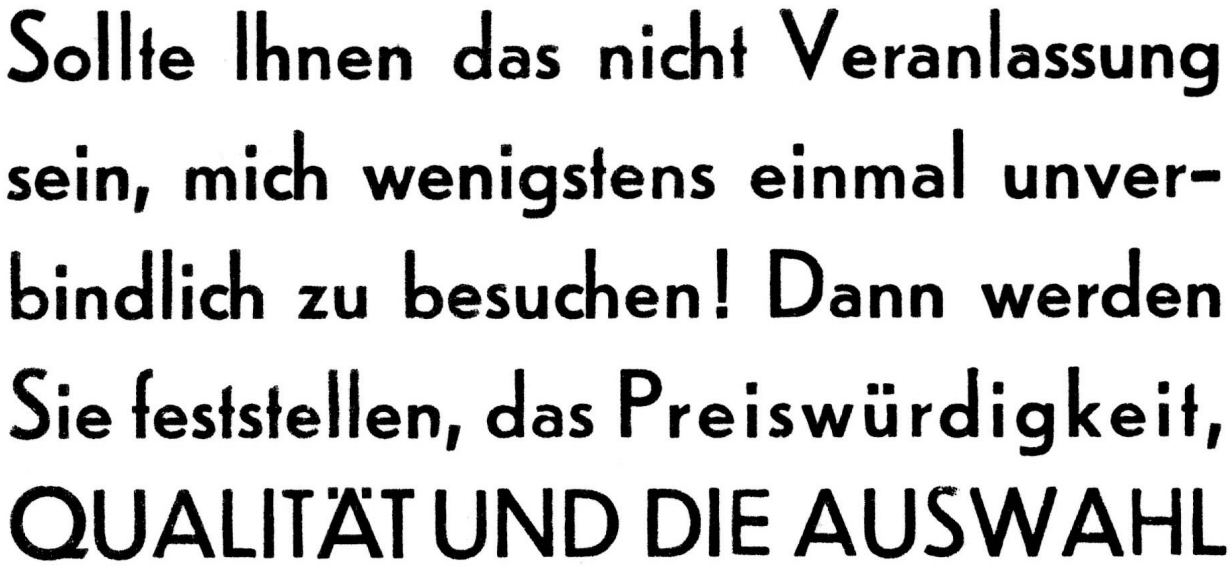
UNIVERSAL GROTESK

Undated Grafotechna type specimen presenting Universal Grotesk.

Awkward as it may be, it still holds a place in my heart, and I felt that a deft adaptation could be a useful addition to the modern repertoire, so I started to do some research,

expecting that a font this ubiquitous must surely have been well documented. Surprisingly, however, very little is known about it. It was distributed by Grafotechna, a conglomerate Czechoslovak type foundry established in 1951, but the shapes of Universal point to much earlier origins. In Grafotechna's catalogues there is no mention of the original designer's name, nor the date of publication. The only information I could find about Universal Grotesk was in Jaspert, Berry & Johnson's *Encyclopaedia of Typefaces*, which dates the design to 1922. That would make it the first geometric sans. Who designed it? When? Where? Why?

The Grafotechna type specimens in my library were of no help, so I asked the design historian Otakar Karlas, who is a walking encyclopaedia of Czech typography, but he had no definite information either. I checked with other older Czech type designers like František Štorm and Jan Solpera, all of whom obviously knew the typeface intimately, but had no idea about its origins. Karlas speculated that it might not have been a Czechoslovak design at all, but a German design that somehow ended up at Grafotechna, since it bears a marked similarity to Erbar-Grotesk, (Ludwig & Mayer type foundry, 1926), which also was used on street signs in Germany. An early printed specimen supports this claim, as the Czech diacritics are poorly constructed.



Erbar-Grotesk is the first geometric sans-serif typeface produced by Ludwig & Mayer, and designed by Jakob Erbar in 1922.

I decided to follow the German trail and emailed Indra Kupferschmid, who replied just minutes later. 'This looks like Kristall-Grotesk by one of my favorite confusing foundries Wagner,' she wrote, and in fact Universal Grotesk looks just like Kristall-Grotesk, with the exception of a few alternate glyphs.

According to Indra Kupferschmid, ‘Universal Grotesk is based on matrices by Wagner & Schmidt, Leipzig, cast and sold by Norddeutsche Schriftgießerei, Berlin, and other type foundries such as J. John Söhne in Hamburg or C. E. Weber in Stuttgart.’ After 1945, the remains of Wagner & Schmidt, Leipzig, were merged into East Germany’s Typoart foundry. Czechoslovakia’s Grafotechna must have gotten the matrices from them at some point in the 1950s. After so many years, I finally had my answer!

Kristall-Grotesk

fett

JOHANNES WAGNER GmbH, Schriftgießerei und Messinglinienfabrik
Ingolstadt/Donau, Römerstraße 35/37 / Fernruf (Ortskennzahl 08 41) 24 47
Telegramme: Hartschrift Ingolstadtdonau

Hausschnitt

Geschnitten in 6 8 10 12 14 16 20 24 28 36 48 60 und 72 p

WEITERE GARNITUREN

mager
Buchschrift
halbfett
schmalfett
eng halbfett
halbfett kursiv
lichte Versalien

Entgoß im Jahre 1937/38
Signatur: Normal
Zifferndicke: Bildweite

KLASSIFIKATION

Ziffernhöhe: H123H m456m

Drucktypenverzeichnis

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Übersetzer ab 20 p

Buchstabenzähler für Zeilenlänge: 6 8 12 16 20 24 28 Cicero

p	Anzahl der Gemeinen						
6	22	29	44	59	70	90	103
8	17	23	36	48	59	72	84
10	14	19	28	38	48	56	67
12	12	15	23	31	40	48	55
14	10	14	21	27	34	41	48
16	9	12	18	24	30	37	42

Verwendung der Schriften nur gemäß den Lieferbedingungen der Schriftgießerei. Nachbildung verboten.
Schriftmuster-Karteikarte nach DIN 16517

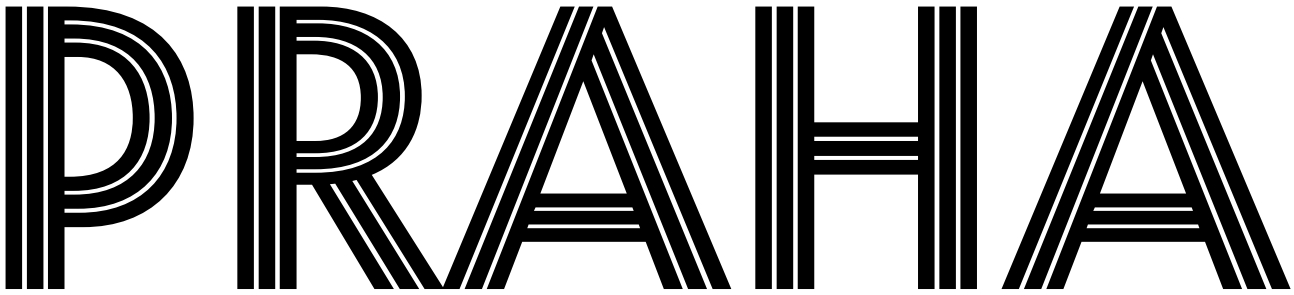
Kristall-Grotesk produced by Wagner & Schmidt in 1936–37 in Leipzig. The same design was released in different markets under the names Polar, Rund Grotesk, Saxo, and Predilecta.

In 2013, I asked Hrvoje Živčić to digitise scans of Universal Grotesk from the 1960s Gratotechna specimens. That, however, was only the beginning of the project. Typefaces of that era didn't come in well planned families of fonts designed to work smoothly together, and Universal Grotesk was no exception. In Light, for example, the x-height is too small, increasing dramatically in darker weights, and the Italics seem to come from a different, uncredited design unrelated to the upright styles. The Condensed version is probably the most useful addition to the family, quite different from the Standard style of Universal Grotesk in the design of letters such as b, G and W, and with more refined details and optical corrections.

It was clear that Universal would require extensive adjustments, and after experimenting with the proportions, we decided to increase the x-height of the lighter cuts. And not only did I have to adjust the proportions of nearly all the individual letters, I also had to work to establish more systematic connections between all the styles.

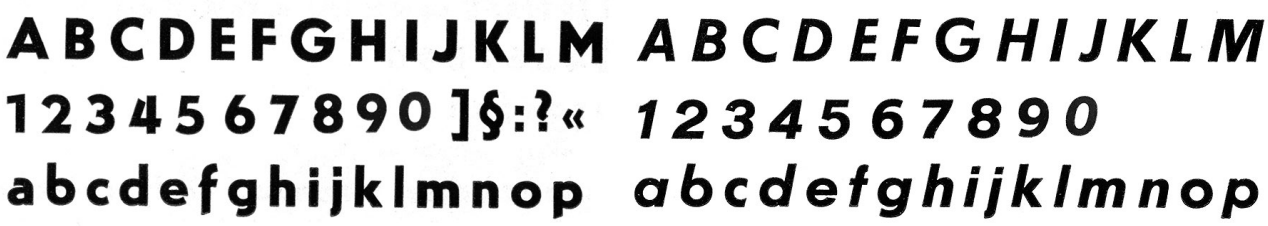
Original cuts of Universal Grotesk (below) ranged widely in proportions. Digital version of Uni Grotesk creates optical relationships between weights and width.

As usual, I worked with Nikola Djurek in the final design stages, and together we also designed a Display version loosely based on the capitals-only version of Kristall-Grotesk (lichtfetter Versalien).



Uni Grotesk Display.

Neither Universal or Kristall-Grotesk had suitable Italic versions, so Uni Grotesk Italic is a completely new design based on the upright styles.



Italic version of Universal Grotesk uses different weight, different proportions and different constructions of numbers and some letters. For example, compare capital M, or the numbers 2 and 4.

As ubiquitous as Universal Grotesk was, it disappeared, never making the transition from metal to digital type. Our new Uni Grotesk is a refinement of the typeface and well suited for contemporary use, with its particularly Central European flavour of early 20th century geometric sans. Uni Grotesk is a new typeface with a purpose and function, with geometric

structure and elementary letterforms, *and* with flavorful details that lend this sans its unique character.

Uni Grotesk and Uni Grotesk Condensed from Typotheque, 2016.

A note about the typeface name: *Inspired by musical composition, where assigned Opus number indicates the chronological order of the composer's production, I also number my typefaces. Since 1995, I've been naming them alphabetically, so I have Eureka (1995), Fedra (2001), Greta (2007), History (2008), Irma (2009), Julien (2010), Karloff (2012), Lava (2013). The next one should logically start with a 'M'. Just like some composers selectively number their pieces, leaving their early work, experiments, or unpublished compositions, I left out some experiment such as Bodytype (2011), and I am leaving out Uni Grotesk, which is not my original design.*

Toronto Subway Font

The Toronto subway has a typeface all its own. You can compare it to a few other fonts, but no other face is exactly the same. And, for 50 years, pretty much the only place you found it was on permanent, virtually indestructible wall signage.

The typeface, in its original form, is a geometric sansserif in upper case only, with ten numerals, ampersand, period, and apostrophe, and an arrow (though a few other arrows are found on period signage).

Features:

- Near-perfect circles for C, G, O, and Q.
- Similarity of upper and lower bowls of B.
- Near symmetry of E and F along a horizontal midline.
- An X that looks like a multiplication sign (clearly an incorrect form).
- A Futura-like S made of two hooks.
- Strokes that tend toward straight lines (even the stem of the distinctive low-waist R) and terminate at right angles.
- Spiky corners on M, N, V, and W that descend below the baseline or project above the cap height.

The typeface is often misidentified at Gill Sans, a typeface that will later become important in TTC typographic history. Even highly expert designers have misidentified the face as Gill. Vaguely comparable typefaces are Verlag, Bernhard Gothic, Metro, Neutraface, and Eagle.


ABCDE
FGHIJK
REVISIONS
TORONTO TRANSIT COMMISSION
SUBWAY CONSTRUCTION
SUBWAY DESIGN STANDARDS
6" ALPHABET LETTERS A-K
CONTRACT
DWG. NO.
01-A-6


LMNO
PQRST
REVISIONS
TORONTO TRANSIT COMMISSION
SUBWAY CONSTRUCTION
SUBWAY DESIGN STANDARDS
6" ALPHABET LETTERS L-T
CONTRACT
DWG. NO.
01-A-7

Making Type

Reviving Caslon

Part 1: The snare of authenticity

How much should a revival of a typeface look like the original? Well, just as with performing an old song—an analogy Matthew Carter has made—there is something you have to like in the original in order want to revive it. And you can't depart from the original too much, or you lose the charm of the old song that appealed to you in the first place. But if it is too much like the old versions, it might be stale and dated, irrelevant. So what do you keep and what do you change? And change in what way? That's the challenge every revivalist faces.

In the process of working on my own revival of Caslon—Williams Caslon—I came to two conclusions about revivals generally. First, the pursuit of authenticity is a snare and a trap. Don't go there. Second, particularly if it's an old typeface, it's going to be harder than you imagined, and you can lose your way in the process. So you'd better start with a very clear goal for your revival, and stick to it.

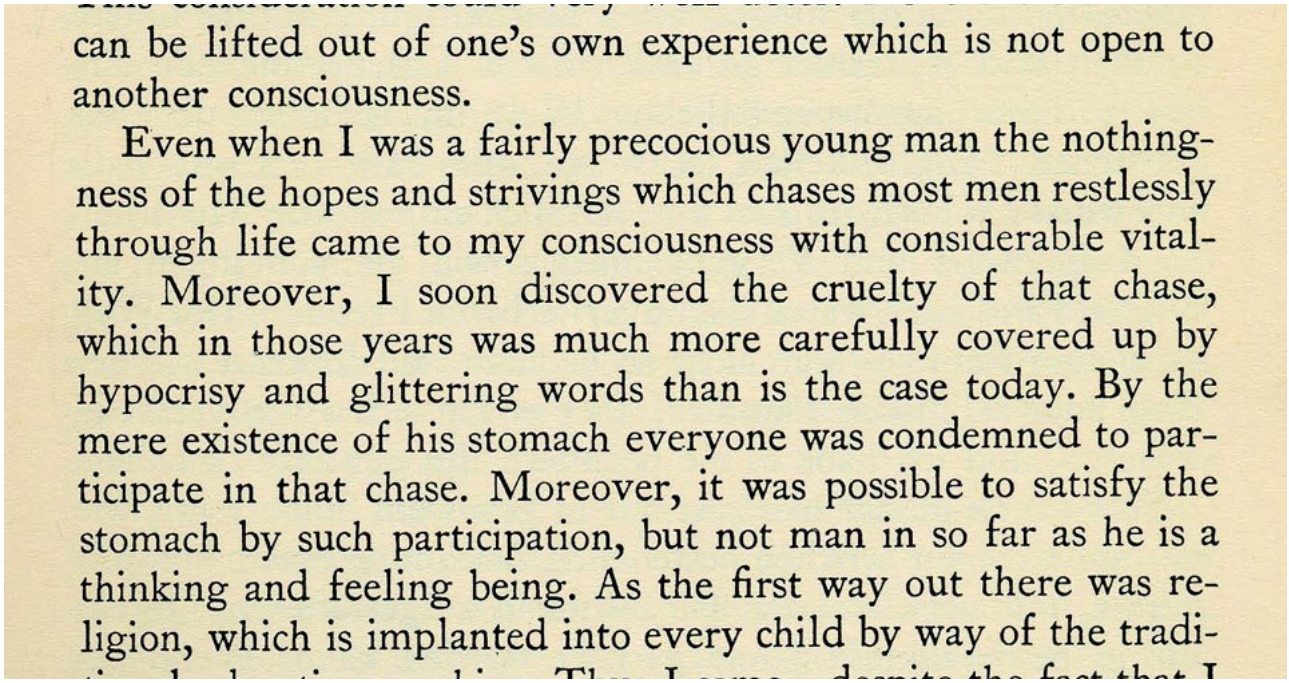
Here's the experience that led me to those conclusions.

It all started with an argument with the usual suspects at Typophile.com over the merits of Caslon—or lack of them. At one point type designer John Hudson wrote, "Sadly, Adobe

Caslon is the only version that is suited to a wide range of typographic application, but it doesn't look like Caslon, so what's the point?"

At this point, a little bell went off in my head. I remembered reading Einstein's 'Autobiographical Notes' back in my student days, and of course had to ID the typeface—fortunately, on "i love typography" I don't have to explain why! The typeface was Mergenthaler Linotype Caslon Old Face, 12 point. And it always stuck in my head as having a distinct charm and readability that I never found quite matched in another typeface.

With a warning that visual impression at size in print and on screen are very different, here's a bit of the Einstein autobiography:



can be lifted out of one's own experience which is not open to another consciousness.

Even when I was a fairly precocious young man the nothingness of the hopes and strivings which chases most men restlessly through life came to my consciousness with considerable vitality. Moreover, I soon discovered the cruelty of that chase, which in those years was much more carefully covered up by hypocrisy and glittering words than is the case today. By the mere existence of his stomach everyone was condemned to participate in that chase. Moreover, it was possible to satisfy the stomach by such participation, but not man in so far as he is a thinking and feeling being. As the first way out there was religion, which is implanted into every child by way of the tradi-

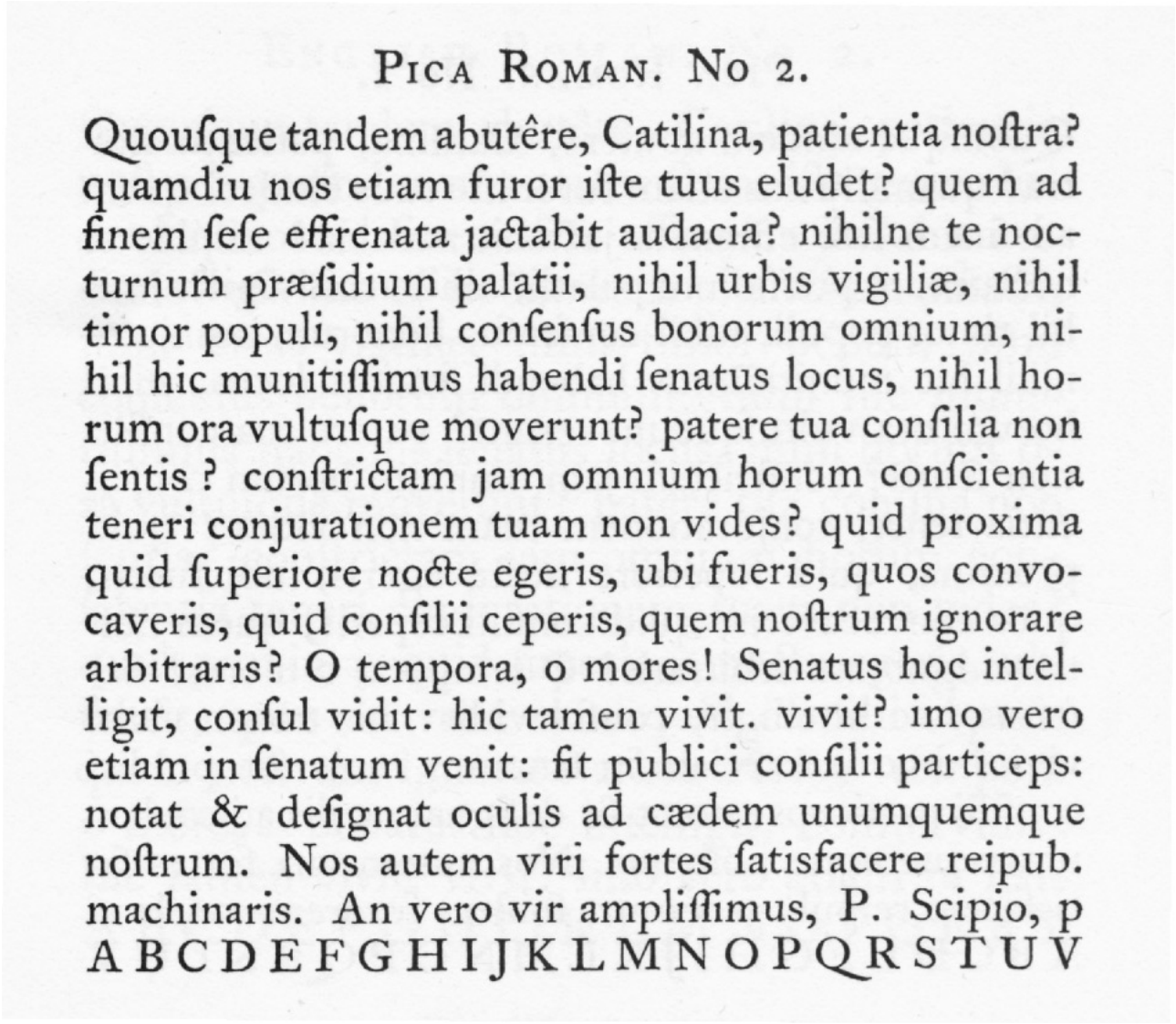
So when Hudson wrote about how Adobe Caslon didn't quite do it, I thought: maybe I can capture what I so liked in that Caslon.

So I started drawing, and meanwhile started researching Caslon. Along the way, I got the facsimile of the big 1766 specimen book of Caslon—originally published just before William Caslon the 1st died—edited with notes by James Mosley. I also got to talk with Mosley, and got hold of a number of other specimens.

The first thing I learned, which was a little startling, was that there is no such thing as a typeface called "Caslon." Caslon was, in fact, the person to produce a full range of roman and italic faces at all sizes. But he was working in the 18th century, and had no concept that different sizes had to match in design. —That idea only became established in the

late 19th century. Furthermore, he was a kind of revivalist himself, taking as his models faces from different Dutch and English punch cutters.

So his different sizes have quite different designs. For example, here is his Pica 2 (12 point):

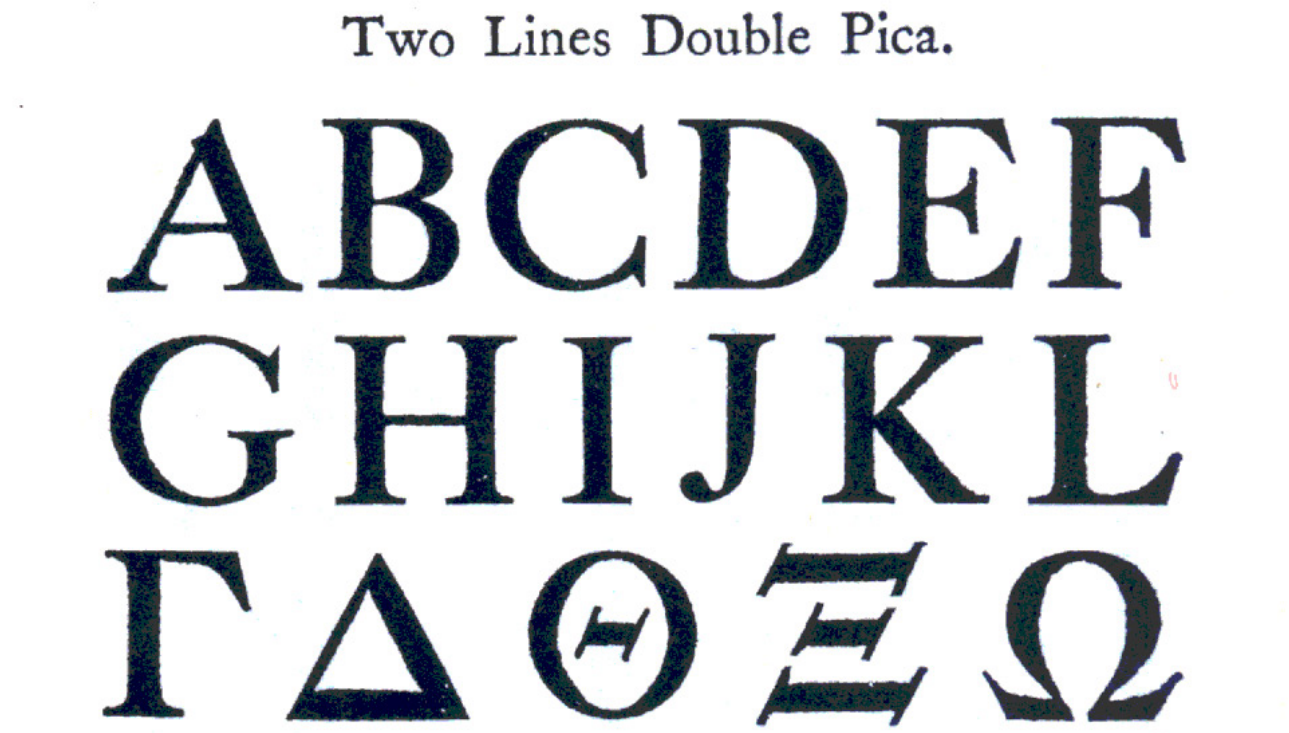


PICA ROMAN. NO 2.

Quouſque tandem abutêre, Catilina, patientia noſtra? quamdiu nos etiam furor iſte tuus eludet? quem ad finem ſeſe effrenata jactabit audacia? nihilne te nocturnum præſidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil conſenſus bonorum omnium, nihil hic munitiſſimus habendi ſenatus locus, nihil horum ora vultuſque moverunt? patere tua conſilia non ſentis? conſtrictam jam omnium horum conſcientia teneri conjurationem tuam non vides? quid proxima quid ſuperiore nocte egeris, ubi fueris, quos convocaveris, quid conſilii ceperis, quem noſtrum ignorare arbitraris? O tempora, o mores! Senatus hoc intelligit, conſul vidit: hic tamen vivit. vivit? imo vero etiam in ſenatum venit: fit publici conſilii particeps: notat & deſignat oculis ad cædem unumquemque noſtrum. Nos autem viri fortes ſatisfacere reipub. machinaris. An vero vir ampliſſimus, P. Scipio, p

A B C D E F G H I J K L M N O P Q R S T U V

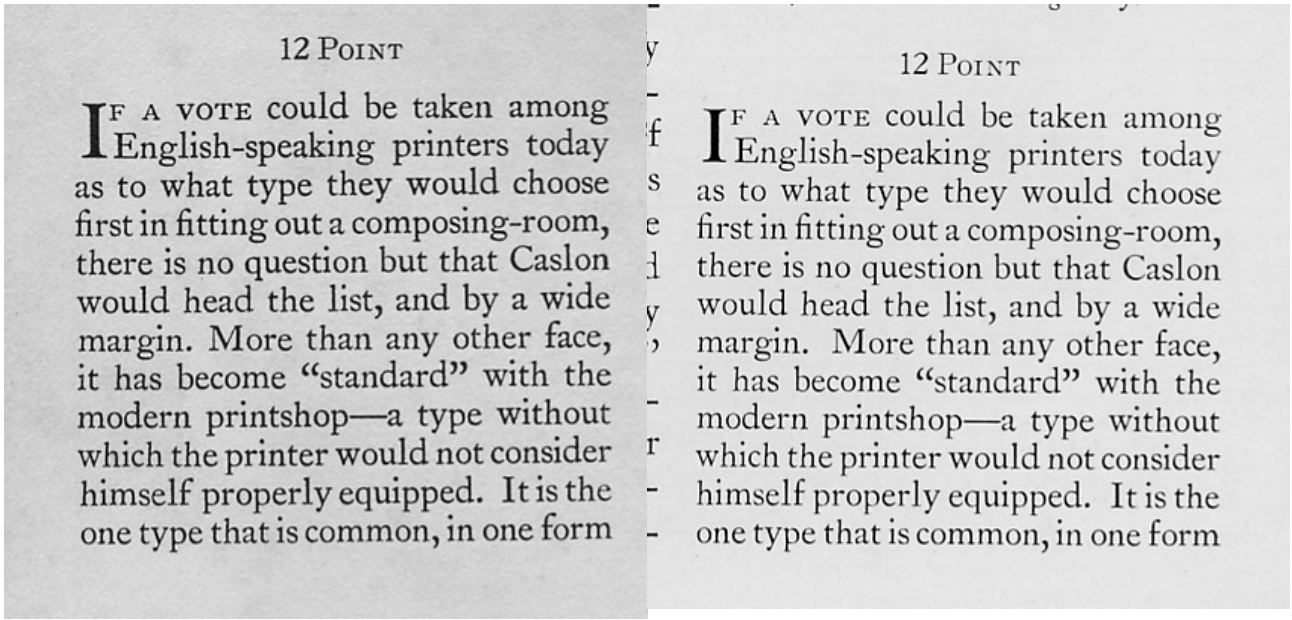
And here is a large size that Caslon did, the caps about 42 pt:



The serifs on these large characters are pretty heavily bracketed, and rather pointed, while the Pica 2 has very little bracketing, and blunt ends. The H is narrow here and wide in the Pica 2, and the C has two spurs, whereas the Pica 2 has one, and on and on. Essentially these are two different typefaces, by modern standards. And indeed, ATF's Caslon 540 is a beautifully conceived revival of some of the larger size Caslon designs. And Matthew Carter's Big Caslon is an elegant interpretation of the very largest, highest contrast sizes. However, my interest was in the high readability and charm of the text size. And here it gets even more complicated, to the point where the name "Caslon" becomes almost more of a Rorschach test than the name of a clearly identifiable design.

The letters on the left are blown up from the type in the 1766 Caslon specimen book. The letters on the right are from the Mergenthaler Linotype Caslon Old Face specimen book of 1928. Both are of the Pica size, and probably the Lino is based on the original Pica 2.

There are several differences of interest here. First the arches in mnh are all different. Which is "Caslon"? One way to get around this problem is to try to copy each one exactly, to be "authentic." More about this strategy shortly. A second obvious difference is that the ink spread is much heavier in the 18th century printing than the early 20th century. This is further complicated by the fact that even in the 20th century, with letterpress, rough or smooth paper makes a big difference. Here from the 1928 specimen book is an illustration of the difference. The same text with the same typeface printed on rough and smooth paper:



12 POINT

IF A VOTE could be taken among English-speaking printers today as to what type they would choose first in fitting out a composing-room, there is no question but that Caslon would head the list, and by a wide margin. More than any other face, it has become "standard" with the modern printshop—a type without which the printer would not consider himself properly equipped. It is the one type that is common, in one form

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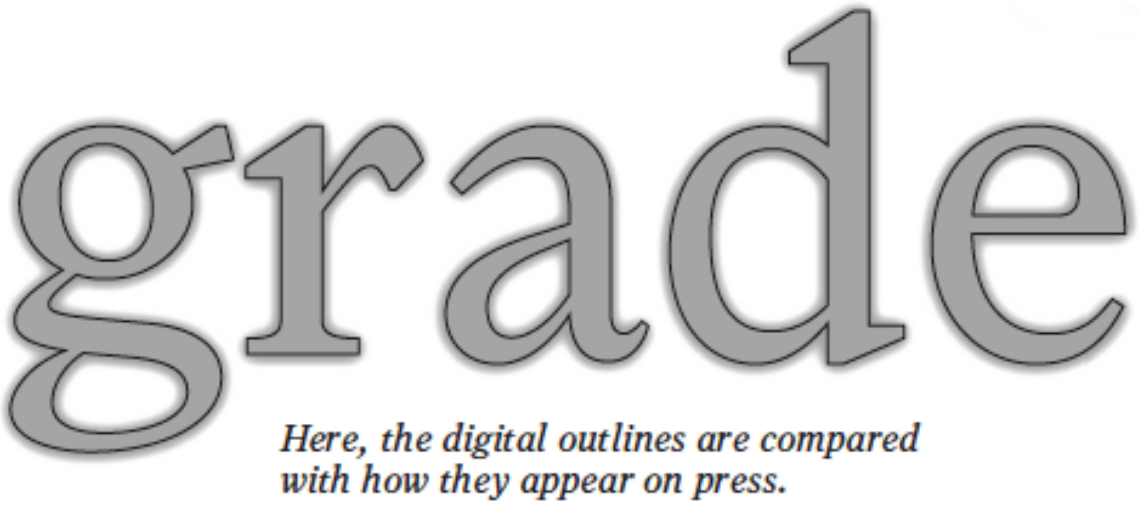
So which is "authentic"? Is it rough or smooth paper? Or should the original metal foundry type be seen as "authentic" and the digital form imitate that?

The late Justin Howes decided to do an "authentic" digital revival, and his strategy was to find old foundry type and print a wide range of sizes anew, then scan the printed letters, and digitize the outlines. The result is very impressive, particularly at large sizes, but it is not "authentic". This we can see in the following illustration.

Here we can see the comparison between Justin Howes' 12 point ITC Founders Caslon, in the center, with the original printed in the 18th century (left), and the early 20th century version, on rough paper (right). The point is that the digital version that tried so hard to be authentic in the '90s is accurate to neither the original printing of Caslon—with coarse-grained ink on dampened paper—nor to the "hot metal" letterpress of Linotype. It clearly shows that it is a product of the 1990s.

However, this is not the only issue where authenticity is not achieved. If you look above, you see that Howes used the same damaged "h" for his model that Linotype used! But it is not authentic. In the original, shown above (left), the left stem leans forward, but is not bent under at the bottom, nor does it have a mangled left serif. Furthermore, there is a big problem with the italic. As James Mosley first noticed, some characters in the italic were recut sometime in the latter half of the 19th century. And in fact, at least in the 12 point size, they were completely recut, changing the slope angles. The Caslon company said this was all original and authentic in its 1924 specimen book, but they were not telling the truth. Thus the Howes' "authentic" Caslon is partly a copy of a 19th century recutting.

Do these variations from the original or the hot metal printed versions matter at all? Well, I think the answer is, "Yes." The reason for this is that weight and contrast of the 'normal' or 'regular' weight of a font at text sizes is a key factor affecting both the readability and the aesthetics of a font. The magical powers that Caslon was ascribed in the last part of the 19th century and first part of the 20th century applied to the kind of weight and contrast in the right example: letter press with relatively fine grained ink, on rough paper.



The ink spread or "gain" is actually a key factor here, because it operated in letter press as a kind of automatic "optical correction" for smaller sizes. As you can see above, what happens in letterpress is that ink spread added what in digital terms is a "stroke" around

the letter. It is in effect a uniform addition to the thickness of all the stokes. But the stokes are not uniform in thickness. Adding a few thousandths of an inch to a fine stoke may double or triple its thickness, and while making only a slight percentage difference in a thick stem.

The graphic is from an illustration for Christian Schwartz's Houston, a newspaper face. So that ink gain is for a modern high speed newspaper web press. The old letter press ink gain is more, and more irregular, as you go back in history.

The story goes on—though I won't—as far as the irregularities that would have been involved in old printing. But the most important point is that the irregularity that was involved in Caslon's work today looks distressed, antique, or antiquarian. If that is what you want, then ITC Founders Caslon is fabulous at larger sizes, and a bit too light but still fascinating to the eye at smaller ones. But the reality is that just doesn't look good today as a font for regular use in books and magazines.

To go back to the analogy of the performance of an old song or old music score, the situation reminds me of what Ira Gershwin said when he heard Ella Fitzgerald's recording of the Gershwin song book. "I never knew we were so good until I heard Ella sing our songs." There is an "authentic" version, by the way, with George and Ira's sister singing with George at the piano. I'd be interested in hearing it, but for listening pleasure, I'm sure it doesn't hold a candle to Ella Fitzgerald.

Having labored in the Caslon vineyard for some years, I have great sympathy for Justin Howes (who died tragically young) and admiration for his monumental effort. But I think his effort proves that the goal of authenticity is misguided. What is most desirable today is not "authentic" but "classic." And in order for a classic to look classic today it needs to be changed.

The need for changes is particularly true for Caslon, which has over the centuries been controversial, with many publishers, authors and readers adoring it, and type designers and connoisseurs slamming it.

The reality is that Caslon was himself a revivalist, and in his rush to create his huge output—a cornucopia of glyphs for non-latin scripts and a full range of latin sizes—and get it out to the world there was a lot of sloppiness by modern standards. In fact, he was sloppy even by comparison with some continental type founders working at the same time. And yet, there is a magic in some of Caslon's sizes, and interesting work in all of them. There is no doubt that he had a rare gift.

Here is my late Uncle Ben Lieberman, in his *Types of Typefaces* (1967) summing up views of Caslon:

> *"[Caslon] is perhaps the most controversial face in history. Some persons consider it the greatest type ever (they have popularized a motto, 'When in doubt, use Caslon') and others think it overrated, a collection of mistakes, elusively out of keeping with everything. But—it works, is highly readable, alive, with warmth and open dignity that has no pretense whatsoever. Caslon is the prime example of a typeface in which the individual letters are nothing, but the total effect is strong and honest—the reverse of an all-star performance in which each letter has such perfection that it competes to be noticed."*

Lieberman was writing on the cusp of the change to photo type, which in twenty years was to be replaced yet again by digital type. And the magical "total effect" that he wrote about didn't, in my view, survive the transition. My effort to recover that total effect in text is what I'll write about in part II.

Part 2: Readability, affability, authority

When their words are put into print, writers want the text to be inviting and welcoming, so that readers will read what they have written. And they also want the text to have an aura of credibility, so it will be taken seriously and maybe even accepted.

When I read Einstein's Autobiography many years ago, as both a writer and a lover of type I noticed and remembered that the font it was printed in seemed extraordinarily approachable and easy to read—even while projecting strength and authority. James Mosley reports that printers used to say, "You can't tell a lie in Caslon." And then he adds wryly: or is it that you won't get caught? When I started my revival of Caslon, I set out to revive these qualities I had seen in its letter press Linotype Caslon Old Face: readability, affability, and authority.

I. Readability

What does it mean for a text to be "readable"? In English some have made a distinction between *legibility* and *readability*:

> *"Legibility" is based on the ease with which one letter can be told from the other. "Readability" is the ease with which the eye can absorb the message and move along the line."*
> *—Types of Typefaces (1967) p. 84-5.*

The same distinction is discussed by Walter Tracy:

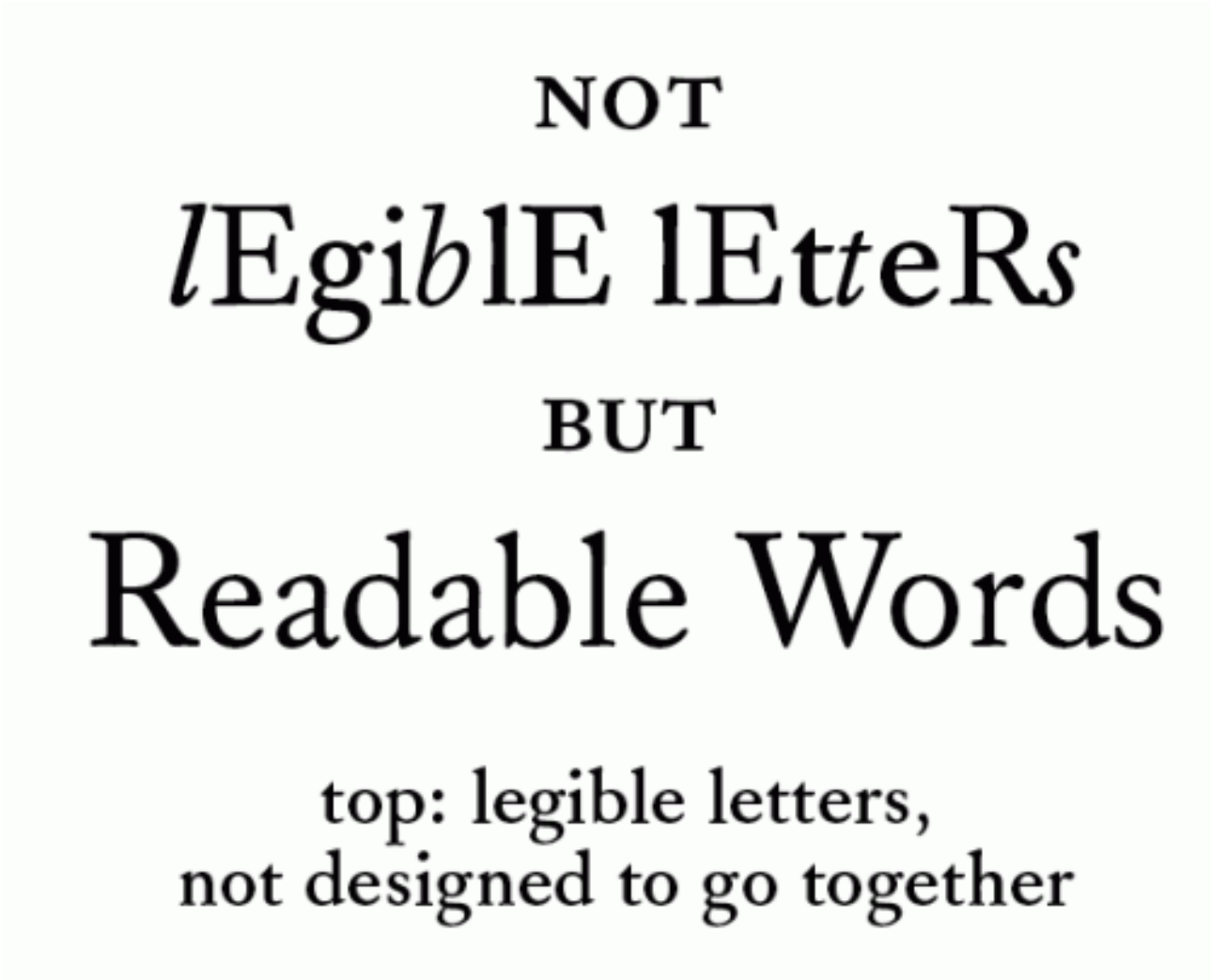
> *[Readability] describes the quality of visual comfort—an important requirement in the comprehension of long stretches of text, but, paradoxically, not so important in such things as telephone directories or air-line timetables, where the reader … is searching for a single item of information [and where legibility is most important].*
> —*Letters of Credit (1986), p. 31.*

My main goal in my revival was maximizing this quality of "visual comfort."

What qualities of a typeface make for visual comfort? Here there is no consensus but raging debate, including even over whether the concept is valid. I will not go into the debate here, but just relate my own ideas on reading comfort that I have in effect tested in creating my revival. (For the debate see the survey paper by reading psychologist Kevin Larson, and this Typophile thread.)

A. THEORY

We can see in the following graphic that legibility of individual letters is indeed different from the readability of whole words:



All of the letters in “legible letters,” above can make easily readable words when they are used to form words with their mates in the same style and weight. However, when letters with different weights and styles are mixed, the words can only be read slowly, with difficulty. What this shows is that the design of individual letters is not enough to make for readability. Some kind of harmony among the letters is needed for our brain to be able to capture and process either individual letter parts, or whole letters, or both, so that we can quickly identify words.

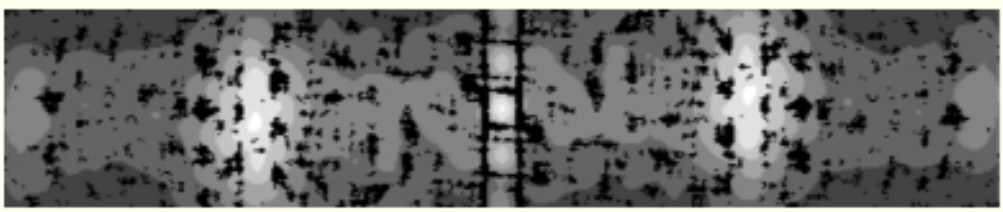
This illustration suggests that the brain is putting some kind of grid or matrix over the word, and that it identifies letters and words by how the black and white fall within that matrix. This idea also accounts for two of the qualities that are prized in text type: regular rhythm and even color.

bad rhythm

Here, readability noticeably deteriorates with irregular spacing. Readability also suffers when rhythm is disrupted by irregular widths of characters:

bad rhythm

Indeed, with a “Fourier transform,” which mathematically shows the regularity of variations of black, text fonts show a fairly, but not completely regular pattern:



Here the white bands show the frequency of the black running across the page, with the distance between the whites I believe being about the width of the n. (Thanks to Peter Enneson for the graphic.)

Both the evident regularity and the deviations from total regularity are, I think, characteristic of good type. The regularity enables the brain to lay the grid over the type, and the deviations from total regularity are what we "read" as the message. Uneven color (density of black) also harms readability:

A plausible explanation of the need for even color is that too much variation in light or dark constitutes "noise" that interferes with the "signal" to the brain from the different parts of the word.

In addition to even color and rhythm, there are two more factors that seem to be critical to ease and comfort in reading. One of these is the overall blackness of the type. In fact, bold type is almost never used in extended text; it seems fatiguing to the eye. And if the type is too light, the contrast with the paper is too little, and the text is hard to read.

The roughly ideal stem width was already traditionally specified by scribes, with the x-height being between four and a half and five widths of the nib of the pen.

Nib widths — source.

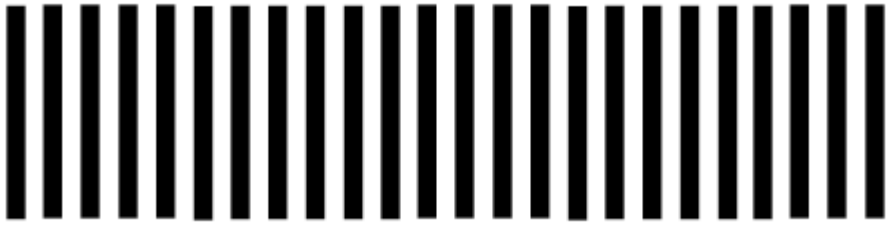
The great type designer Adrian Frutiger has written:

> *It is a quite specific ratio of black to which gives the x-height band of a typeset line a grey value which the reader finds to be "normal". These proportions are perceived with astonishing sensitivity … An average value … is a theoretical band of 5 stroke thicknesses. The grey value is composed of 2/7 surface*

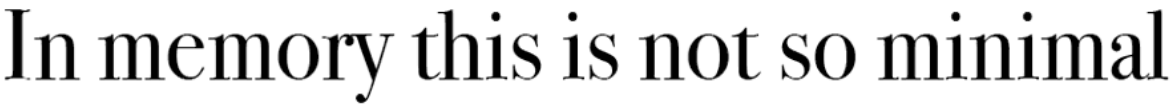
> *coverage and 5/7 white space, corresponding to a density of rather less than 30 per cent.*

In testing James Montalbano's Clearview Highway typeface for road signs, researchers found that with the stroke ratio near the traditional 1:5, viewers could read the signs sooner and farther away than with bolder weights. While signs and extended text are not the same, the corroboration of this ratio is striking. The advantage of the total white being roughly twice the black, as Frutiger pointed out, may relate to the eye needing a clear figure-ground distinction. It may also relate to the advantage of having the counters (white space within letters) big enough—a factor that showed up in other tests of Clearview Highway.

A final factor in readability relates to a special problem of latin type, which is its vulnerability to the "picket fence" or "zebra" effect, which causes that type to "dazzle." If you look at a line of black pickets against white, they dazzle:



Similarly, because of the need for regular rhythm, this dazzle is always threatening to happen to roman type, the most common complaint being about the "dazzle" of Bodoni:



So a typeface designed for reading comfort will also try to avoid this 'picket fence' and the associated dazzle.

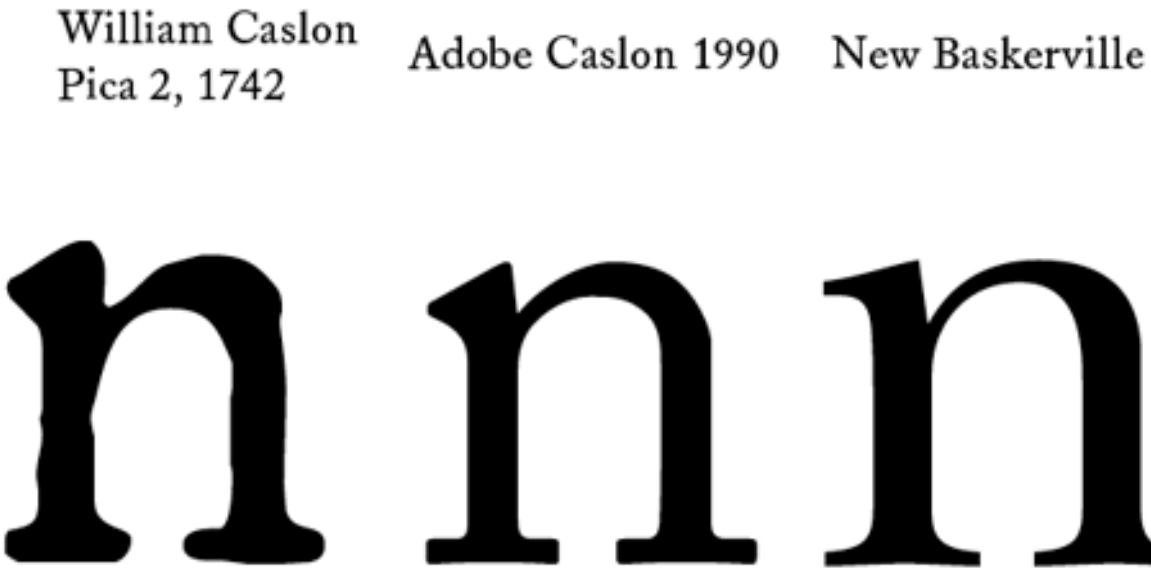
B. PRACTICE

Given the constraints of even rhythm and color, and a narrow range for the weight of stems and the ratio of black to white, how different can one good text font be from another? Erik Spiekermann has said that there can only be a 5% difference, and that may be true.

Because I had found the letterpress 12 pt Linotype Caslon Old Face particularly comfortable and inviting, I took as my working hypothesis that there is some ideal in

proportions, the weighting and modulation of strokes, and spacing, and that Caslon's Pica 2—and the Lino revival of it—had somehow hit nearer the mark in some ways than other faces. Further, my feeling was that even though it might not make a huge difference to reading speed and comprehension, hitting the ideal would communicate itself visually to the reader as a feeling of ease and welcome—and then would of course be in fact an effortless read.

So I set out by trial and error, with variations, to see what would work. And I triangulated between scans of the original and close copies—letterpress Lino Caslon and Founders Caslon—on one hand—and Adobe Caslon on the other. Adobe Caslon is a very well drawn face by a superb designer, Carol Twombly, but for me didn't have the magic of the metal versions. Why? What was missing?



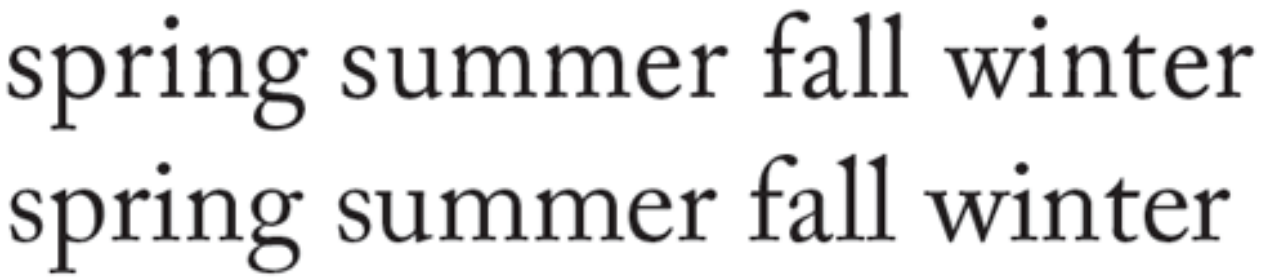
When we compare Adobe Caslon, the original, and Baskerville, we can see that it is kind of a "Caskerville", looking like it's morphing from Caslon to Baskerville.

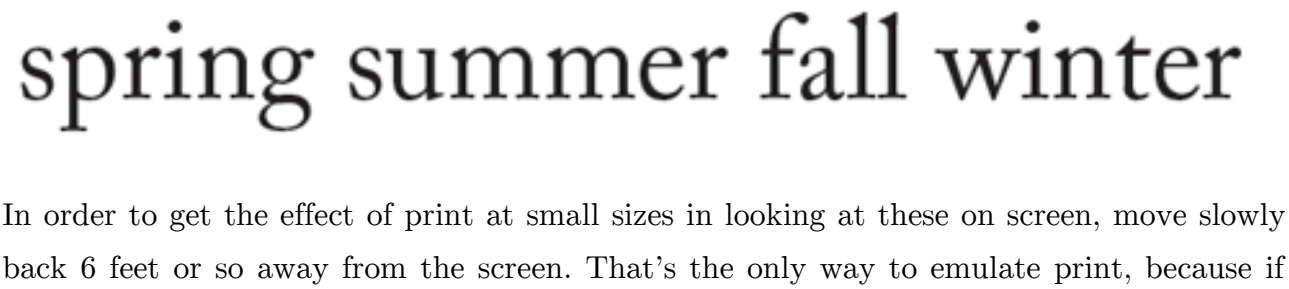
As I have said, deciding what is "essential" in Caslon is somewhat of a Rorschach test. I tested a lot of variations, and two things I noticed first: Adobe Caslon "n" is wider, and the top arch is thinner and differently shaped than the original.

Both of these turn out to be important to the "dark but open" look that I think is attractive in Caslon.

The width of a typeface is one of the basic features of the "DNA" that give it its look, its texture on the page. Other basic features affecting rhythm are the spacing between letters,

and the thickness of the stems. Together, these give a characteristic rhythm to the text. I gave my characters about the same stem width as letterpress printed Lino Caslon Old Face, and Adobe Caslon, as this suits modern printing. However, I made them slightly narrower than Adobe Caslon, matching the original Caslon Pica 2, and spaced them a little looser—a little more "air" between letters. The result it that they take about the same space, but Williams Caslon text (above) has more of an open feel than Adobe Caslon (below) at equal x-heights:





In order to get the effect of print at small sizes in looking at these on screen, move slowly back 6 feet or so away from the screen. That's the only way to emulate print, because if you make text small on the screen, you get artefacts from low resolution (96 dpi screen vs 2500 dpi print), and it doesn't look like 8-12 point print. And if you make text large on the screen, and look at normal screen distance, you don't get the optical effects that happen at small sizes. The critical variable according to psychologists is the visual angle spanned. With larger type on the screen, walk slowly backing away from the screen, and you get a pretty good emulation of print. Try it, you'll see!

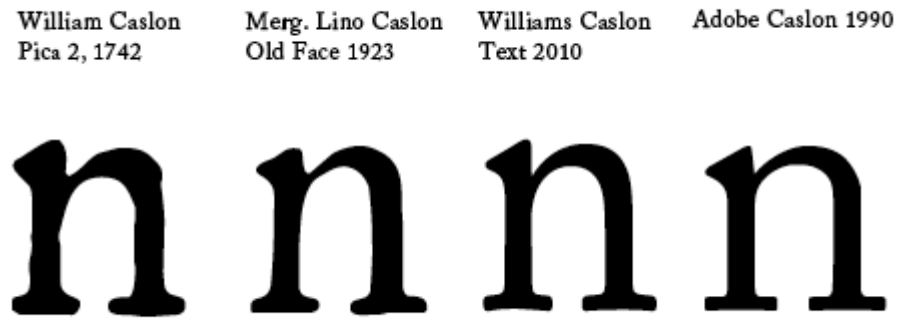
Two special visual effects operate at text sizes. The first, and most well known, is that the spaces between letters appear tighter. In order to have a readable rhythm, the text sizes need more letter space than at larger, display sizes. In my view, many types today, including Adobe Caslon, and especially Times New Roman, are a little too tight. Just a little more "air" between the letters makes for a more comfortable read, to my eyes; so I have given Williams Caslon Text a hair looser spacing than most types today. The spacing is not a separate matter from design, though, as the width and design of the characters need to be "tuned" to the spacing to get the overall effect.

A second effect is that as the characters shrink in size, the "thins" get thinner visually faster than the "thicks" get thinner. This is why traditionally at very small sizes, 8 points and below, contrast between thick and thin is reduced for the sake of readability. And in letter press printing, an additional reduction in contrast was caused automatically by ink spread, as I explained in Part 1 of this essay. That is why the initial practice of basing

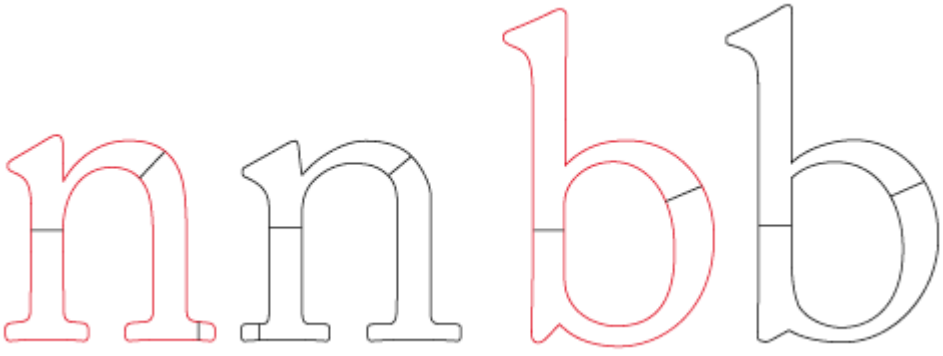
digital versions of old typefaces on the 14 pt outlines, as I have heard, resulted in anaemic looking and less readable text type.

The adjustment for text size is, however, not simply a matter of increasing the thins by a fixed amount. It turns out that the eye responds differently to changes in horizontals, verticals, diagonals, and joins. So thickening is a matter of sensitive modelling of the arches so that the whole character appears 'dark', but does not become 'clunky' at the intended size—a fault of some contemporary "dutch" style types, to my eyes.

So here is a comparison of the modelling I did on Williams Caslon Text with the original, Lino Caslon Old Face, and Adobe Caslon:



The Williams Caslon Text regularizes the original, rejecting the leftward lean of the stem, and smoothing the arch. But it follows the way the weight is modulated through the shoulder. At the same time, the stems are as light as Adobe Caslon, and even lighter in the baseline-to-x-height region, as they have a "waist" in that region, following the original. Williams Caslon Text in red, Adobe Caslon in black.



The result is, as we can see in the previous graphic (viewed from a distance), and more so in extended printed text, that Williams Caslon Text looks both darker and more open at the same time.

The “waisting” also helps break the picket fence, so that the letters do not assault with dazzle, but rest invitingly on the page. Here are Williams Caslon (above) and Adobe Caslon (below) with a challenging word (move away from the screen again!):

minimum

minimum

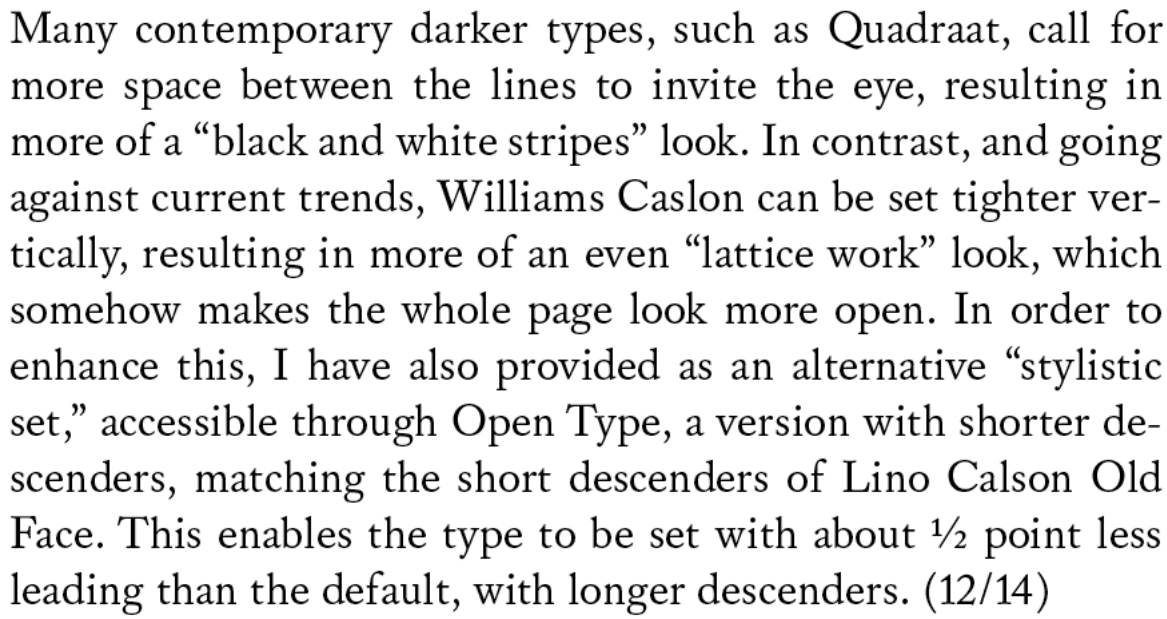
And Adobe Caslon is already better than many fonts in avoiding the “picket fence”, because of its old style serifs.

There are other features designed for both even color and to have a “dance” of varying shapes across the page, particularly at x-height. Here is the result, as seen in Boston Magazine:

II. Affability and Authority

The same features that promote readability contribute to the affability of Caslon: its welcoming and unpretentious look. The most important part of that is probably just the ease with which it can be read. In addition, Caslon has a hand-molded look which has a human touch that conveys more warmth than sharp geometry. Caslon's sturdy serifs also give a message of reassuring solidity. The rounding of the serifs that comes from ink spread is also a softer, more relaxed and comfortable feeling than faces with sharp serifs. However, filled-in joins simply look clotted and ugly, so here I have not followed the ink-spread look. Clotted joins would look antiquarian or nostalgic, while the sharp joins look clean and contemporary.

The "dark but open" look affects not only words, but the text block. Because of the open look, Williams Caslon Text can be set with relatively less leading, and still be readable. Many contemporary darker types, such as Quadraat, call for more space between the lines to invite the eye, resulting in more of a "black and white stripes" look. In contrast, and going against current trends, Williams Caslon can be set tighter vertically, resulting in more of an even "lattice work" look, which somehow makes the whole page look more open. In order to enhance this, I have also provided as an alternative "stylistic set," accessible through Open Type, a version with shorter descenders, matching the short descenders of Lino Caslon Old Face. This enables the type to be set with about 1/2 point less leading.



The feeling of authority of the metal Caslons comes, I believe, primarily from its assertive caps. Caps are an essentially different alphabet, encompassing more white space than their

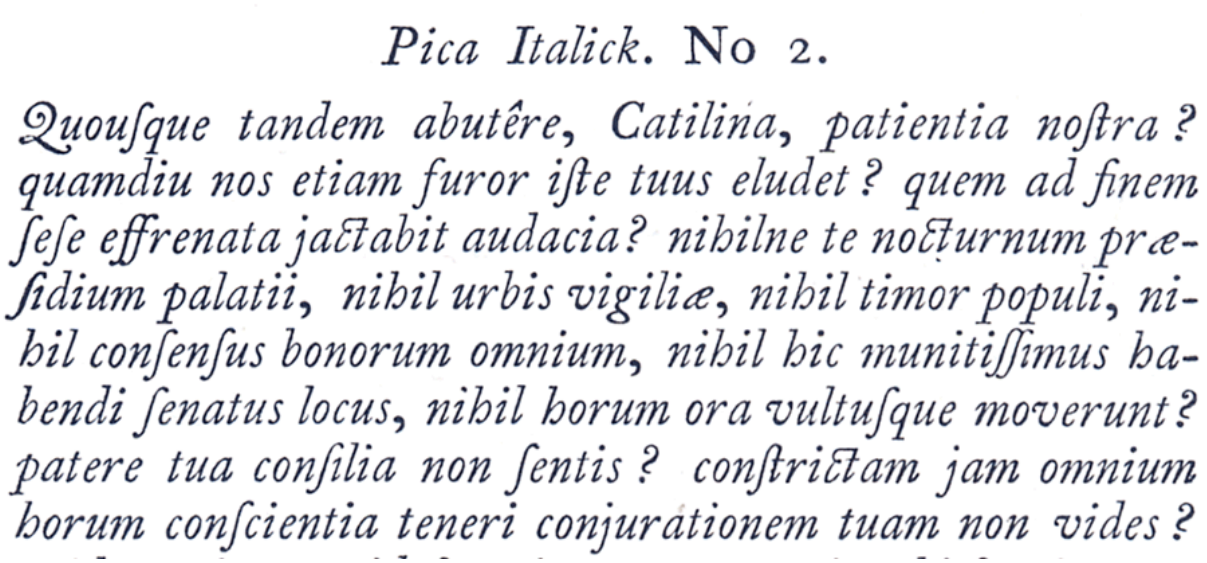
lower case companions. Since they serve as "markers" of a sentence beginning, or a proper name, the difference in look offers an opportunity that can be taken advantage of, rather than minimized. While caps that more match the color of the lower case are a valid choice, the traditional more dominant caps can work aesthetically, and in this case add considerable strength to the look of the face.

In Adobe Caslon, the caps were made assertive by making them tall—taller than they are in the original, while they are lighter, and more tapered inward. My approach was rather to keep them the original height and make them straight sided—which I think looks stronger—and the serifs more beefy, as with the lower case. Williams Caslon Text thus has waisted stems on the lower case and straight ones on the upper, whereas Adobe Caslon is the other way around.

Finally I should say that a key to both the aesthetics and the readability of the font has been looking at the letters printed out at size. Caslon has always been a "workhorse" rather than a "showhorse." Its sturdy serifs were a choice to put readability and reassuring strength over the elegance of a Garamond. On the screen, large, Williams Caslon Text looks too clunky, whereas printed at text size, to my eyes it hits the right weight and contrast for comfortable reading, and is aesthetically appealing.

III. The Italic

The original italics of Caslon Pica 2 are to my eyes just not that good, and would probably have never been revived except for the qualities of the roman.


Pica Italick. No 2.

Quouſque tandem abutêre, Catilina, patientia noſtra? quamdiu nos etiam furor iſte tuus eludet? quem ad finem ſeſe effrenata jactabit audacia? nihilne te nocturnum præſidium palatii, nihil urbis vigiliæ, nihil timor populi, nihil conſenſus bonorum omnium, nihil hic munitiſſimus habendi ſenatus locus, nihil horum ora vultuſque moverunt? patere tua conſilia non ſentis? conſtrictam jam omnium horum conſcientia teneri conjurationem tuam non vides?

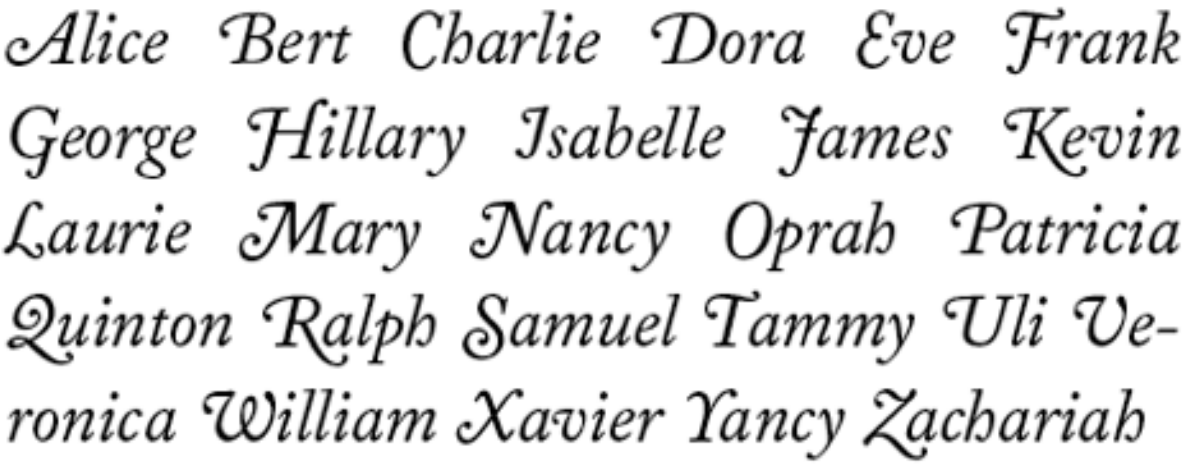
And in fact, in the 19th century, this seems to have been completely recut, and the 20th century revivals based on the recuttings. To my eyes the biggest problem is that it is too narrow for decent readability. Even though companion italics don't have to be so readable

as the roman, the original starts to be a barrier to anything more than a few words. Evidently, Carol Twombly felt the same way, as she widened the italic considerably. As I wanted it to be able to set several lines, e.g. of poetry as well, I also widened it, and made it a bit more upright as well.

Making it more upright turned out to be more complicated than I thought, because I wanted to preserve the variation in angle of the stems, which is an old style feature that was abandoned in the 19th century recuttings, and also in Adobe Caslon. But I did discover a systematic visual logic in the variations, and I reproduced that in a more upright version.

But O, that deep romantic chasm which slanted
Down the green hill athwart a cedarn cover!
A savage place! as holy and enchanted
As e'er beneath a waning moon was haunted
By a woman wailing for her demon-lover!

Finally, there was the question of swashes. The original Caslon had only swash caps for JQTY. Various additional ones were added in the nineteenth century. Now, the tendency is to add swashes for all the alphabet, though some work better than others. Swash caps are an interesting hybrid, because they are a cross between slanted rigid roman caps, and script. That tension or contradiction between rigidity and exuberance gives them a happy, show-off quality.



IV. The Character Set

Williams Caslon Text is one of the first of the new "Premium Open Type" fonts from Font Bureau, with small caps, both roman and italic, Central European characters, and many other different features, such as six different styles of numbers. And everything is kerned to its mates. For example, swash caps are kerned to italic small caps, an attractive and unusual combination. While most of the thought went into how the lower case roman should look, most of the work went into the 3,000 characters and 16,000 kerning pairs. In addition to readability, affability and authority, the font needed a comprehensive character set, and functionality to match, to work effortlessly and enjoyably for designers and readers.

William Berkson is a writer and type designer. Information about his new book, to be published in October, is here, and his new revival of Caslon can be found here.

Brim Narrow – making a chromatic typeface

Brim Narrow is a chromatic typeface. It has eight type styles, designed to stack together. Combining particular styles and assigning each a color produces a huge variety of visual effects.

While producing Brim, I met a number of technical challenges and discovered some fascinating quirks that are peculiar to chromatic type. Adhering to conventional methods for constructing its various styles would have left it compromised or possibly even discarded. However, an innovative solution saved it and saw it evolve into a more functional and thoroughly digital design.

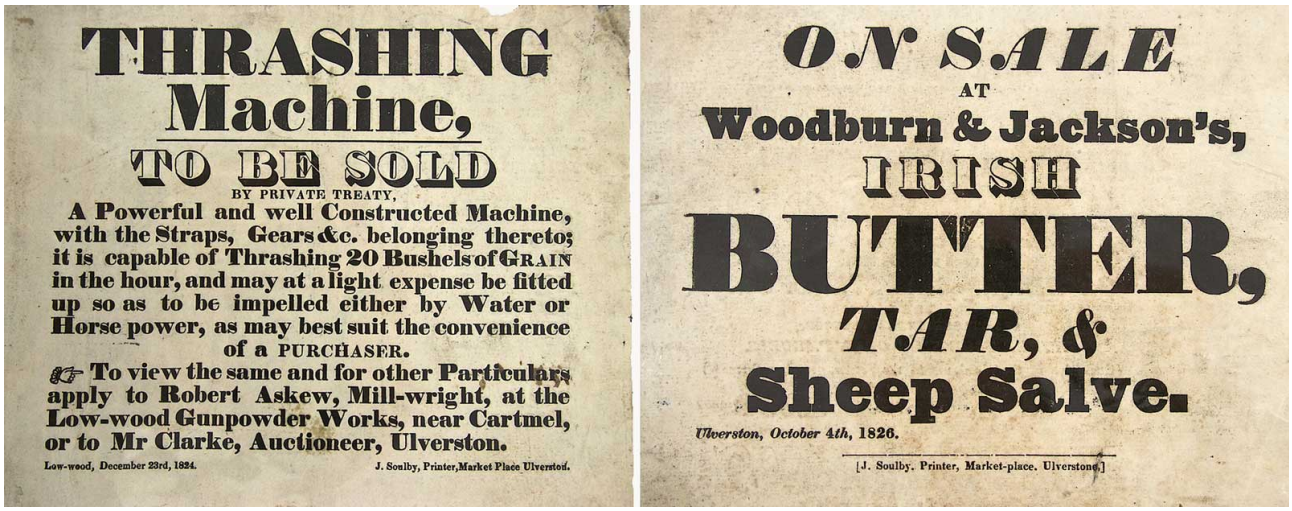
About chromatic type

When each character in a typeface is multi-coloured or polychromatic, it is commonly referred to as chromatic, or layered type. Chromatic type became popular in the second half of the nineteenth century as improvements in printing technology permitted greater creative freedom. It was achieved by printing two or more corresponding type styles on top of one another in different colors. Areas were cut away from the individual styles so that their colors might abut each other or overlap to create a third color. Since this type was generally made for display use, it was frequently large and therefore typically made from wood.

Examples of ornamented chromatic type from the now famous Specimens of Chromatic Wood Type, Borders, etc., manufactured by Wm. H. Page & Co. 1874. Note the double extrude. Courtesy of Columbia University Libraries.

Brim's structure differs from that of traditional printing type in two significant ways. Firstly, all of its font styles are solid shapes, without cut-away areas. On a computer, light colors can be placed on top of dark colors allowing for more style combinations. Secondly, its extrude styles (also know as a shade) are allowed to overlap with that of the following character. This eliminates the need for looser spacing often associated with layered type.

Although Brim's layer architecture is a digital adaptation, its characters borrow their warm, tactile appearance from wood type from the first half of the 19th century. My references were various examples of fat face designs by London foundries of the time such as Fann Street (Thorne, Thorowgood), Figgins and Fry.



Fat face examples from printer, John Soulby of Ulverston, UK. Thrashing Machine 1924 and Irish Butter 1926. "Butter" is set in Robert Thorne's fat face design (credited as the

original), Five-line pica No.5, Published after his death by Thorowgood, 1821. The University of Reading Collection. (Source: Michael Hochleitner)

From the other side of the Atlantic, the American wood type shown in Rob Roy Kelly's book, *American Wood Type 1828-1900*, was also an influence.

Roman. First shown by Darius Wells in his 1828 specimens, displaying the first wood type to be produced in the United States. American Wood Type: 1828-1900, Rob Roy Kelly.

The typeface started out as a handful of letters forming a fictional logo that I'd designed as part of a self-initiated packaging project. The lettering was to compliment some very ornate Pouchée inspired Ampersands.

The original use of my lettering was to extend the Victorian feel of the packaging through to the logo. Used here alongside Sentinel from Hoefler & Co.

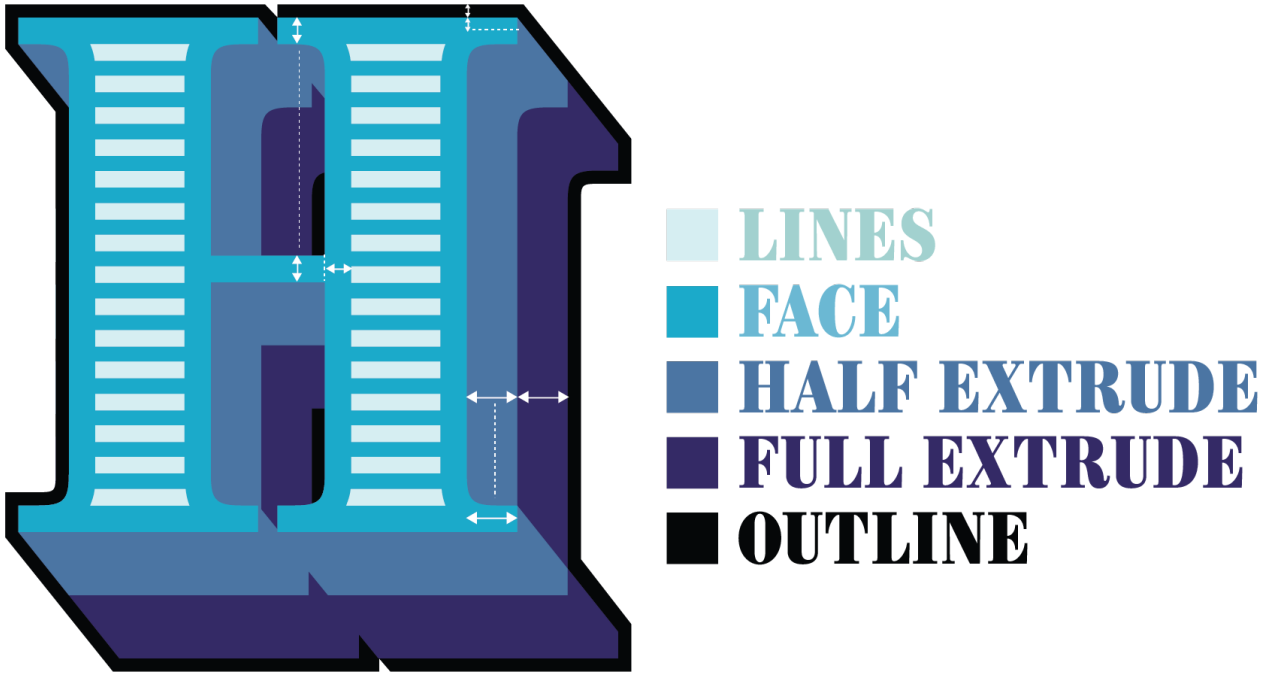
From Lettering to Type

I'd drawn my original nine characters, ALBERT & ROSE, in Glyphs and then added decorative effects using Adobe Illustrator. Despite initially starting a wide version, I decided to focus on a narrow design, which was more versatile for longer headlines. Once the lettering was complete, I was compelled to explore how it might work as a complete typeface. Having the lettering to emulate was critical in making Brim, and it guided my steps throughout production. The key features were that the letters were tall and tightly spaced (in hindsight, perhaps too tightly). The serifs were bracketed slightly and the face had a deep extrude. This extrude was split into two colors (inspired by a double shadow I'd seen on the W. H. Page specimen, above) and its angle was steeper than the traditional 45°, to further emphasize the narrow design. I liked the way that the extruded areas overlapped each other, creating a solid platform from which the main face could jump out. Both the face and its extrude were outlined, which unified the whole stack.

Fig 1. My original 'sketch' in Illustrator showing the style combinations that served as a guide. Note the issue of the clipped inner lines.

I was determined that the font family would not only replicate the lettering effects but also produce the broadest variety of style combinations with the least number of font styles. I wanted the family to be easy to comprehend and simple to use. I'd read somewhere that the average number of things a brain can hold at once is seven[1] so I aimed to come in under this "magic" number.

Recreating the various layer styles in Glyphs was reasonably straightforward,[2] though it took some time. Transferring the shapes from Illustrator wasn't a practical option as fonts require a higher lever of curve accuracy and coordinate precision. I also adjusted Brim's proportions to produce various alignments and symmetry between the Face and each of its styles.



The proportional relationship between the Face and its decorative styles

The widths of Brim's thin strokes vary slightly for optical reasons, but they are all roughly equal to the depth of the serifs. The length of the serifs is double their depth and equal to the Half Extrude's size (this relationship allows the Half Extrude to neatly align with the

ends of the serifs). The Full Extrude's depth is double that of the Half Extrude's and the Outline size is half the depth of the serifs.

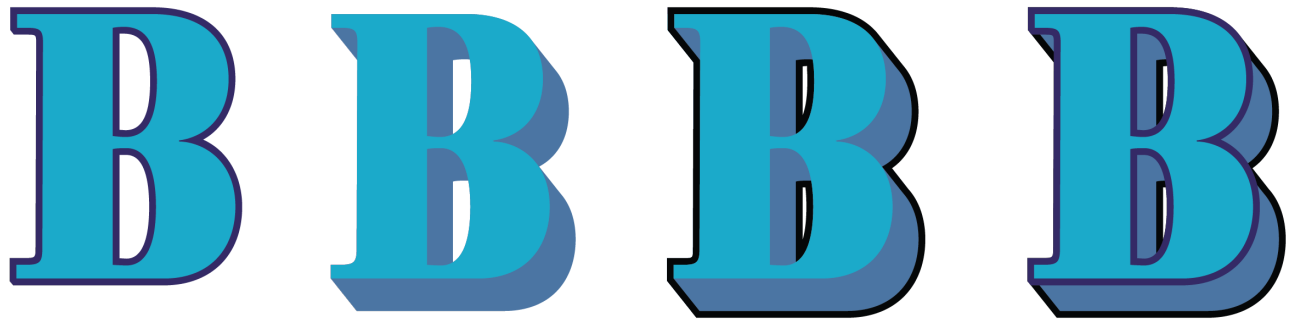
Making the Extrudes and inner Lines

Creating the extrude shapes was straightforward enough, though labor intensive. FontLab Studio has a 3D extrusion tool that would have sped this up, but I made them by hand. Various adjustments were required to ensure their uniformity, but nothing like the amount needed for the decorative lines. Originally, these were produced roughly in Illustrator by masking a block of horizontal lines with a path that was offset from the Face. Often, this clipped lines at the top and bottom of characters making them thinner, or it resulted in awkward shapes that required simplification (see figure 1). In the end almost all of the inner contours were redrawn, especially those of smaller glyphs like the punctuation and accents. The lines were then distributed evenly within each area, with occasional refinement to the depth of the lines.

Customized line shapes.

Outlines

The Outlines proved to be the trickiest to create and were eventually the catalyst for Brim's radical restructure. Ensuring that the layers were as modular as possible I envisaged the following combinations, with or without decorative lines:



My original planned combinations

In my lettering, the outlines were simply strokes applied around the Face and the Extrudes in Illustrator. In Glyphs, this could be achieved by offsetting the path of each shape; however, this highlighted a complication: I would need to chamfer the right angle corners of the Face where they connected to the Extrudes, so that they would align.

Right angled corner points of Face offset combined with obtuse angles of Extrude offset

Chamferd corners of Face offset aligning with Extrude corner points

Merged Face and Extrude offsets

Face and Extrude offsets as outlines on character

Chamfering corners

This is a laborious manual job and would mean that the overall shape of the Face's outline would be compromised when used on its own. I came to the conclusion that if users wanted to apply an outline to the Face they would simply apply a stroke in Illustrator or InDesign and that there was no point duplicating these easy effects. Following this logic, I decided that if the Face Outline on its own was redundant, I could reduce the number of layers by creating one unified Outline style around both the Face and Extrude. This would also negate the need to manually chamfer the corners.

Expanding the character set

Once I was satisfied that I could produce all these styles in Glyphs, I began to expand on my initial nine glyphs. Keeping the adjusted proportions in mind, I drew the uppercase with European diacritical marks (accents), lining figures and some basic punctuation.[3]

I then sent a test font to three industry friends for feedback, together with screenshots of how I saw the layer styles behaving. Dave Foster, Toshi Omagari and Terrance Weinzierl, all highly awarded type designers, gave me invaluable feedback that steered the design of the characters and the diacritics. Terrance, who had previously won a Type Directors Club award for his chromatic typeface, Pizza Press, also gave helpful suggestions on the layer styles.

Brim Narrow's final character set

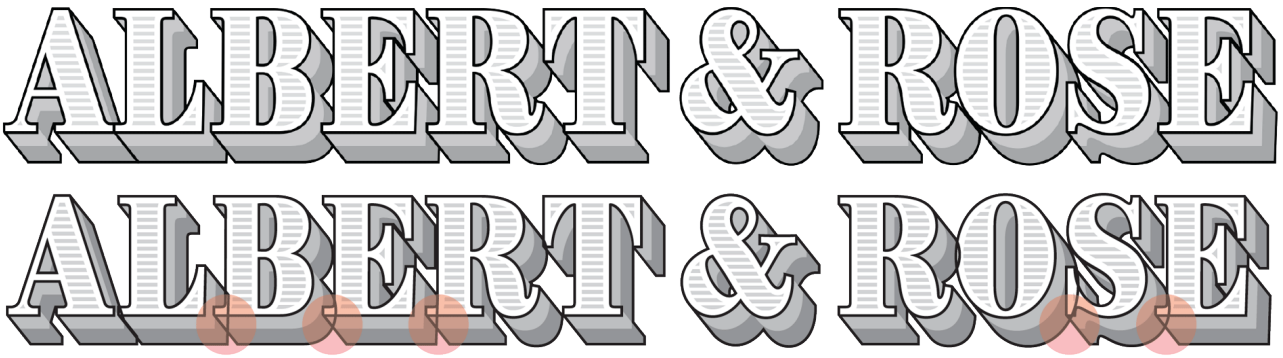
To overlap or not to overlap

There was some division over whether or not I should create overlaps, like built-in trapping, between the layers. This traditional measure aims to ensure that no gaps appear between printed layers that abut each other. Toshi made the point that any overlap would be too large or too small in most situations and, to operate effectively, any overlap would need to be consistent with the size of the printed typeface. Secondly, it would be impossible to know which layer style the overlap should be on, as this would depend on the layer order and color value when printed. All of these possibilities are out of the type designer's control; moreover, design software provides various methods of trapping. Therefore, I decided not to make any overlaps. Happily, because of Brim's final overlapping structure, this issue became moot. However, at certain sizes, when light layers are stacked over dark layers, a faint outline can sometimes appear where edges abut. After much experimenting, I established that this is a screen rendering issue in certain applications, and that these 'ghost lines' don't appear to print.

The mistake that made the font

Once I'd finished refining my letterforms, I exported my font to make a few more layer tests in Illustrator and InDesign. It didn't take long to figure that there was an error in my layer structure. When setting chromatic type in Adobe InDesign or Illustrator, each style of text is in a separate layer; you simply add some text, duplicate the layer and then change the font style and color in the overlapping layer. In Glyphs however, each individual character with all of its associated styles is grouped together. This means that each character's group of styles overlaps the adjacent character's group. On export the true behavior of the layer design was revealed: The unified Outline style, designed to go

around the Face and neatly stack above the Extrude layers dissected the Extrudes of the following character.



Top: screenshot from Glyphs. Bottom: true behavior with issues highlighted.

In hindsight, I should have realized this much sooner. However, I didn't have a solution. I couldn't simply move the unified Outline onto a lower layer because the Extrudes would mask the outline around the Face. Increasing the letter spacing so that the Extrudes were clear of each other would destroy the overall design. I also didn't want to create a whole load of extra font layers for every conceivable combination. The goal was the least number of layers to achieve the largest variety of style combinations.

I reasoned that if I separated the outlines, then I'd need to chamfer the Face outline and its sole purpose would then be to interlock with an Extrude outline. This would be fine but it would create another layer and add to the complexity of the font family. In response to this I mused that if I merged the half- and full-extrudes with their own outlines, the unified version would do the job of two layers. I was onto something here. I then realized that dedicated outlines for the face and each extrude would allow for far more combinations than I had originally anticipated. This was the more modular structure I was striving for!

Instantly the new layer structure felt more logical; the Lines would sit on top of the Face and the Extrudes beneath it. It was then that I realized there was no point in subtracting the Face shape from its accompanying style. The result would be simpler shapes with fewer nodes, likely resulting in a smaller file size,[4] which is significant if loading multiple font styles for a web page.

The final, individual layer styles without cut away areas

Special d

With the design fixed, I pushed ahead with the production process. There were still a few quirks awaiting me: I found several visual anomalies while chamfering the Face outline, which were fixed by eye rather than trigonometry, but most interesting was the special d.

As you'd expect, for each layer to stack precisely on top of another, certain numerical values must correlate across all styles. The horizontal values were logical. Glyphs automatically adjusted the right side-bearing of each character's styles to keep each layer's spacing value consistent. However, the vertical values were less logical. A guide on the Glyphs website revealed a little known peculiarity in the way that Adobe Illustrator vertically aligns text used in text boxes. In short, Illustrator tries to be smart about finding a vertical measurement to position the first baseline in your text box. Surprisingly, it measures the lowercase d, and uses its ascender height as an offset for the first line. Basically, it means that if the height of the lowercase d isn't the same across all styles, then Illustrator will position them at different heights, causing misalignment of styles and much confusion and frustration to the typographer. Other than educating users about this anomaly, a solution is to add a tiny, one unit dot[5] (an alignment marker) to the highest position matched on all layers of the lowercase d. Then, when Illustrator measures them it will find them the same height and position them accordingly. So, although Brim is an uppercase only typeface, the lowercase letters all reference their uppercase equivalents with the exception of the lowercase d, which has a virtually invisible alignment marker on some of its layers.

The result

The final version of Brim evolved beyond my original expectations. They say that necessity is the mother of invention and this was certainly true in the production of this typeface. Having a clear vision, in the form of my lettering, to steer decisions by was essential and forced me to rethink the traditional methods of layer creation.

Each of the combination above is unique. With the addition of color, Brim produces an almost unlimited array of options. For a guide to the various combinations take a look at the specimen document at *MyFonts*.

The shapes became simpler, more logical to use, and produce combinations that Illustrator effects can't elegantly replicate. In throwing off the limitations of older technology, Brim firmly positions itself as a digital product tempered by the character of pre-Victorian type. Terrance Weinzierl described it as having a "quirky, antique feeling to it. Not too much, but enough to make it warm, casual. Like a proper British pub."

Footnotes:

Brim Narrow can be purchased at MyFonts or used via Adobe Typekit.

[1] Millers Law: "The Magical Number Seven, Plus or Minus Two: Some Limits on Our Capacity for Processing Information."

[2] Gylphs includes specific functionality for making chromatic fonts together with an excellent tutorial on the Glyphs website.

[3] The character set was expanded before release to be more comprehensive.

[4] In tests, the file size for the extrude layers was reduced by just over 20%.

[5] Brim was designed on a grid of 1000 UPM (Units per Em).

Making Grifo

Grifo, the Portuguese word for griffin, a mythical creature with the head and wings of an eagle and the body of a lion. We can imagine how threatening this creature might appear, and would probably want to stay well clear of its sharp claws and beak. Grifo the typeface also has sharp serifs and terminals. It's full of talon shapes, like the **c**, **e**, the bottom curve of the **t**, and, most obviously, in the commas and quotes. The name of such a hybrid creature like the griffin felt appropriate for a typeface that is itself a hybrid, both in terms of its letterforms and function. Grifo's design draws on the rationality and extreme high stroke contrast of the neoclassic types, but has bracketed serifs and sharp triangular terminals, instead of ball terminals. Some serifs in the lowercase letters were removed, therefore **a**, **d**, and **u** are a mix of sans serif and serif forms. Moreover, because Grifo comprises different optical sizes, its suitable for both display and text settings.

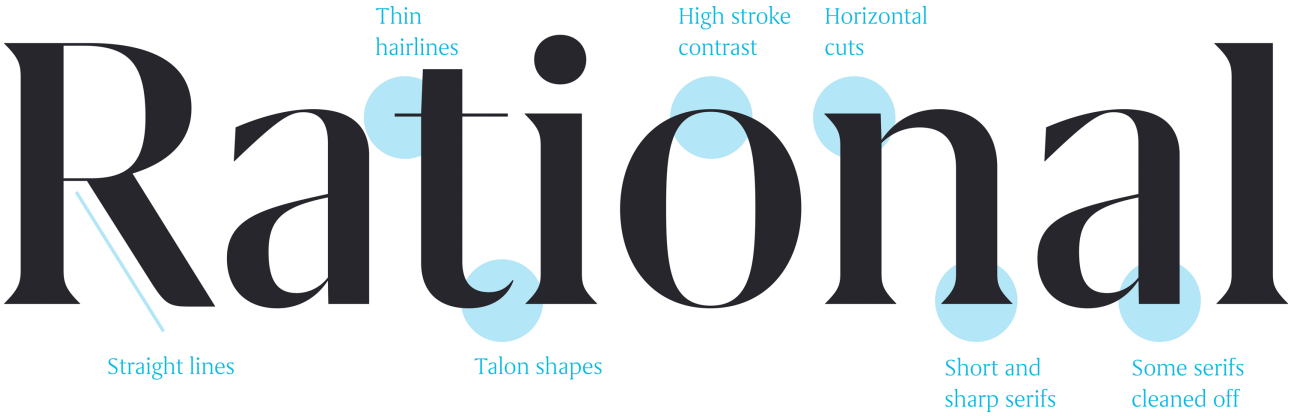
Origins

It all started as a redesign of Catacumba, a typeface from 2008, inspired by the painted inscriptions of the Igreja de São Francisco church’s catacombs in Porto. The idea was to make a contemporary text face by cleaning up an old design, making it less clumsy, less decorative, and, so to speak, stripping it of its Victorian “clothing.” The design then steadily evolved into a completely new typeface with barely a trace of the old Catacumba design visible. Shapes became more and more rationalized, the curved lines of the slightly flared stems became straight lines, and for consistency, bowls, stems, serifs, and joints, were all made uniform. Eventually, letters transitioned from being hand-drawn, to being cut with a scalpel. All stems were cut horizontally both at baseline and x-height to give the alphabet a harder and simplified edge.

This meant that all hand-made qualities were replaced by a precise handling of the outline nodes, and that brought some difficulties to the process, exacerbated by the addition of an

optical axis so that some of its design features might be translated to display sizes. The typeface grew into a family of 30 styles; 22 of them interpolated from 8 masters (4 romans & 4 italics). In the past I've kept myself away from designing such large families. One reason being that I could never allow myself not to manually correct problems that result from the rounding of point coordinates to integers, among other issues related to interpolation, in every single one of the interpolated fonts. In typefaces where preciseness and rationality are design features, it is important that, for instance, stems or white spaces that should have the same width, have exactly the same width. In Sans families this is easier because you practically only have to check stems and white spaces, and AFDK's Stemhist is a great aid to that. In Grifo, however, it gets more complicated because many serifs also have to have the same exact construction, and no inconsistencies from coordinate rounding can be permitted.

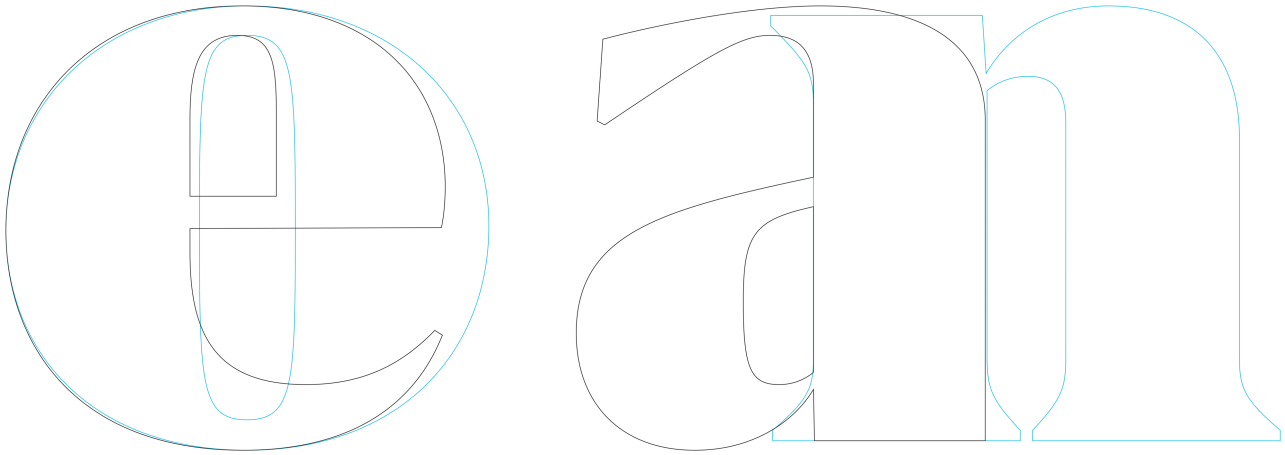
Grifo would then have to be built in ways that would make the task of correcting the interpolated fonts a lot easier and more manageable.



Fortunately with Glyphs App's amazing corner components you can have your serifs as a separate component and simply attach it to the corners of your stems. This guarantees not only that serifs are equal in the master fonts, but that they will also be consistent in interpolated instances, because the serif is interpolated as a separate object.

Letters built with components

Stems and other parts of the letters were also components repeated in different letters. This allowed me to make sure that in the interpolated fonts, stems have the correct measurements. Consequently, the typeface became almost modular, but not quite. Some stems and many serifs are intentionally different for optical reasons, so variation itself, whether in stems, round strokes, or serifs became increasingly rationalized and deliberate. I guess I can say I couldn't have made Grifo without Glyphs App.



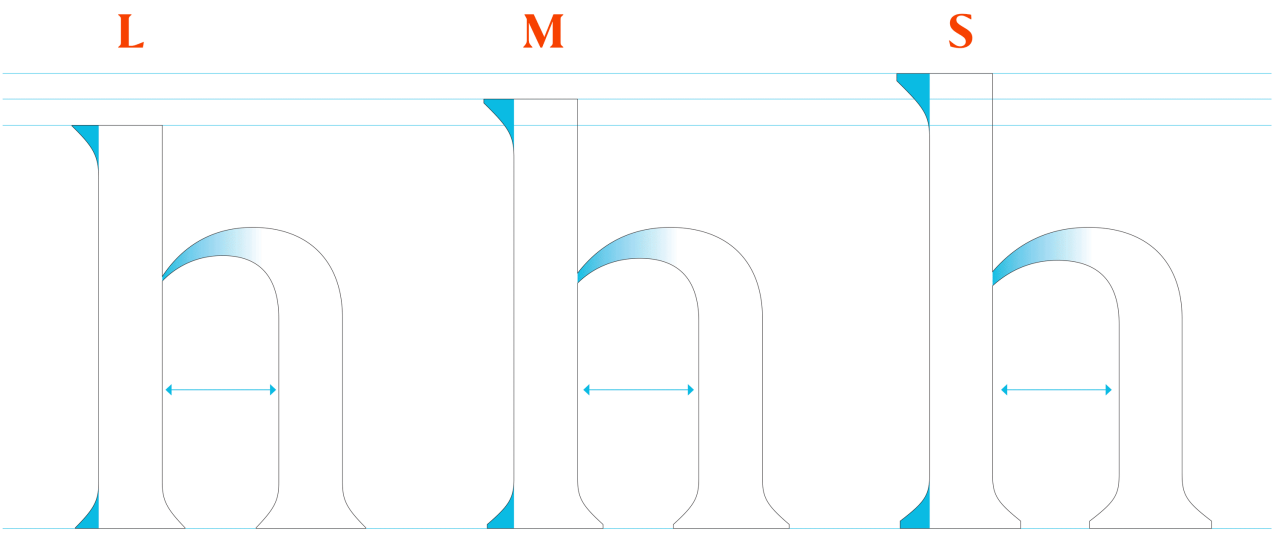
Optical axis

The optical axis became especially necessary in this family for two main reasons: (1) to have a high stroke contrast and very thin hairlines in display settings; (2) to save as much

space as possible, as the body size increases. Hairlines and serifs in a high contrast face can appear too fragile and weak in small sizes, while the thin lines of a text face can appear too strong when set in large body sizes. The spacing of a text font can also be too wide when it is set at display sizes. In headlines, letters can be narrower with a tighter fit, which not only looks better but also saves space.

So, three size specific subfamilies were interpolated: Grifo S for running text, Grifo M for titles, and Grifo L for larger display sizes.

Grifo L has an extreme high-contrast with very thin hairlines and sharp serifs. To allow for a tighter fit, say for compact headlines, letters sit closer together, ascenders are short and align at the cap height; while descenders are even shorter. In Grifo S, at the other end of the optical axis, letters are sturdier and wider and exhibit less stroke contrast. There is more space between letters, and extenders are longer. Grifo M, of course, is in the middle of the optical axis, between Grifo S and Grifo L. Accordingly it is intended for intermediate sizes. Glyph's corner components were extremely useful, because I could test different serif variations and decide for the most appropriate size and shape for running text in Grifo S, or for headlines in Grifo L.



An economic typeface

I intended for Grifo's text styles to have the traits required of a text face: good readability by being ergonomic and sufficiently conventional and transparent. At the same time I wanted the fonts to save space in news-related or editorial contexts, and consequently, to be practical for the typographer who needs to fit a lot of content on the page. Merely condensing letters or squeezing them together would make the typeface look less natural, so my efforts were focused on *space* management. I wanted economy, but then I also wanted open counters and comfortable space between letters. As Adrian Frutiger beautifully observed, the spacial element, like in architecture, is the one we actually use.*

*Adrian Frutiger, *Signs and Symbols, Their Design and Meaning*

In Grifo the arches are relatively flat to allow for larger counters. The Serifs are slightly retracted, to permit slightly closer letter spacing without sacrificing too much white space. Some serifs were even removed on relatively frequent letters (**a**, **d**, and **u**) thus saving a little more space. Round letters were kept round, but letters **a** and **s**, that occur frequently, are narrower. As we move in the optical axis towards the display styles, letter spacing decreases and ascenders and descenders become shorter. Headlines can then be set with tight line spacing and larger body sizes, because words take up less space both vertically and horizontally.

The styles

Each of the size-specific subfamilies has five weights: light, regular, medium, bold, and black. The light weight is good for setting elegant titling, while the black weight, the most expressive member of the family, is well suited for striking headlines. For the medium weight I decided to have it just slightly heavier than the regular so that it could be used for matching the color between texts set in different body sizes. To counterbalance the mechanical overtone of the family, I wanted the italics to add liveliness and variety. The **k** is slightly flamboyant, **v** and **w** are round and the **y** has a swinging tail. There is also a little bit of variation in the angle of some strokes. Nevertheless italics still reflect the rationality of the romans in the serifs and some straight horizontal cuts —notice for instance the rationalized flags on **v** and **w** — but the lowercase alphabet as a whole has a traditional, almost copperplate-like feel to it.

Grifo L
Extreme high-contrast display face for the larger sizes

Black *Italic*
Bold *Italic*
Medium *Italic*
Regular *Italic*
Light *Italic*

Grifo M
Titling subfamily

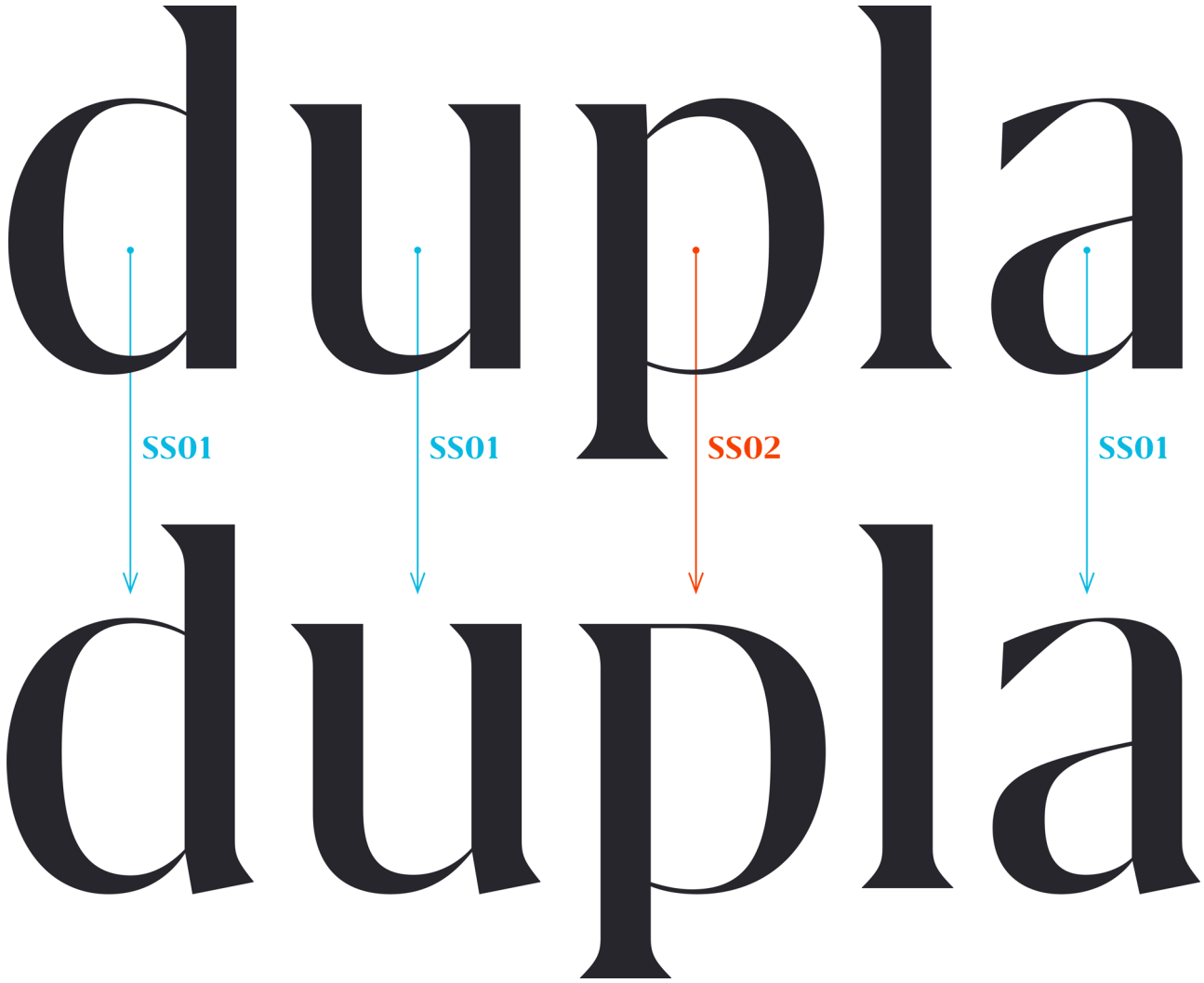
Black *Italic*
Bold *Italic*
Medium *Italic*
Regular *Italic*
Light *Italic*

Grifo S
Body text subfamily

Black *Italic*
Bold *Italic*
Medium *Italic*
Regular *Italic*
Light *Italic*

UPPERCASE and Lowercase, *Unknown Stars & their Whole Story*

Finally, to add a little more variety to the typesetting, or perhaps to give the text a more bookish feel, I decided to include OpenType alternate forms for **a**, **d**, and **u** with bottom serif-like terminals — in case the serifless forms are deemed too ‘clean.’



Thus the story of Grifo is complete. Every time I design a new typeface, I meet new challenges and, in overcoming them, I learn a little more both about the technical and aesthetic challenges of type design and of the audiences that read my letters.

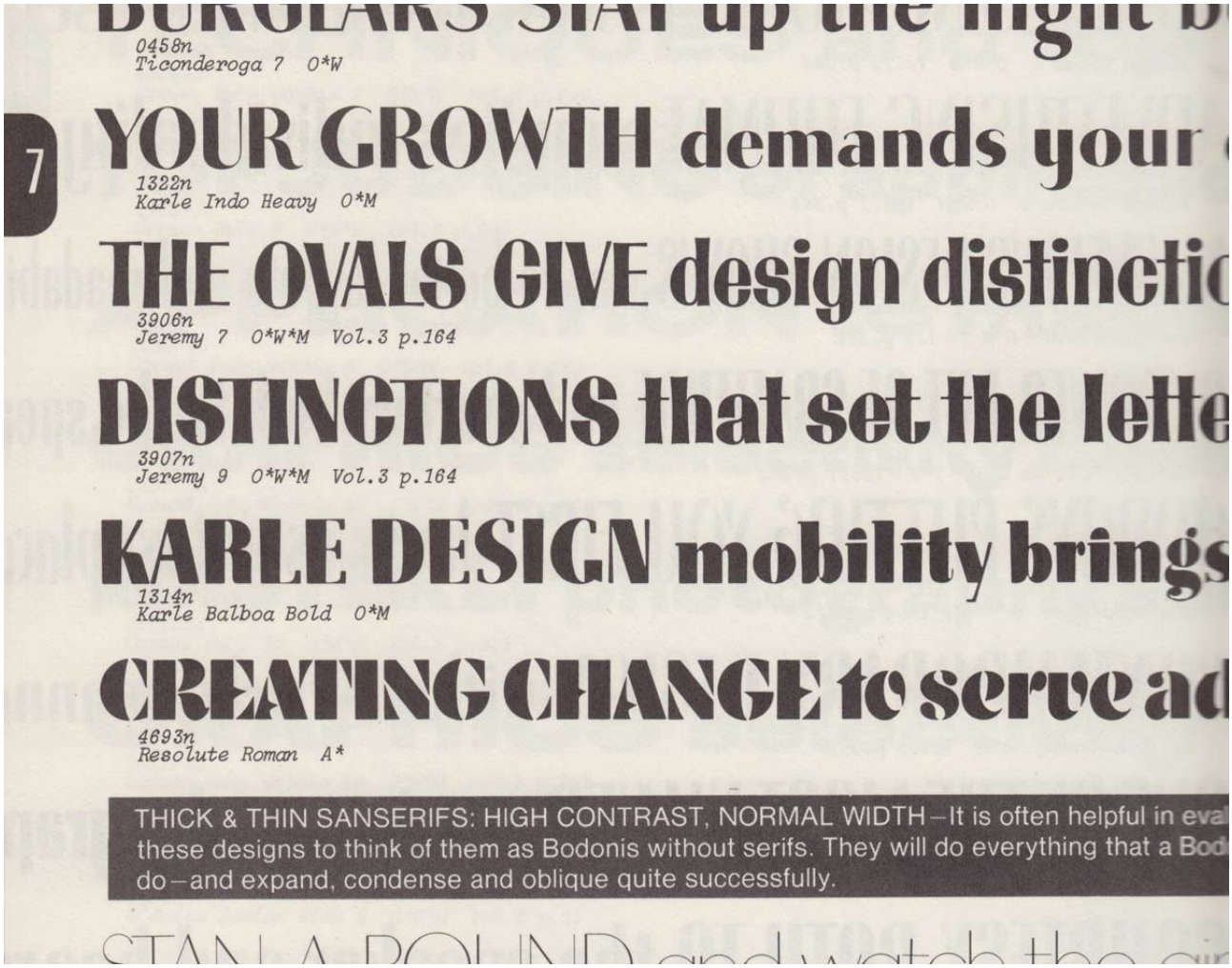
Designing Vinter

The process of drawing Vinter fonts began almost six years ago. The initial spark originated from one of the many magazines I regularly purchase for inspiration in my work as a graphic designer. Its headlines were set in an extremely thin sans serif, employing the thick–thin contrast commonly found in antiqua designs.

If only one could draw! I can't. That's why I keep on drawing.

In 2014, a custom variant of Vinter was designed for Royal Drawing School. It provided the springboard for expanding the family.

The serifless roman is not a new invention. Much like one can imagine William Caslon chopping serifs off billboard poster slabs to arrive at his *Two Lines English Egyptian* (sans as well as slab serif faces were both marketed as "Egyptians" at that time),[1] a modified Bodoni might similarly have provided the starting point for a stressed sans.



"Thick and Thin Sanserifs: High Contrast" *from the* Photo Lettering One Line Manual of Styles, *1971. Photo copyright Kris Sowersby*

The earliest example of a stressed sans serif typeface I've found is William P. Quentell's self-named roman of 1895, cut by Nicholas J. Werner for Central TF/ATF St. Louis. The design was adapted for the Boston Globe newspaper under the name *Taylor Gothic* in

1897, and later refined as *Globe Gothic.* In close succession, ATF published *Florentine* in 1886 (based on a Binner Engraving Company hand-lettered face from 1984) and Inland Type Foundry released *Studley*[2] (1887).

above: *One of the first modulated sans serifs is William P. Quentell's self-named roman, published in 1895.*

below: Although his involvement in the design is contested, the patents to Florentine credits the Danish designer, artist and architect Ludvig Sandöe Ipsen. The nature-like fluidity of Florentine's curves is a hallmark of the Art Noveau style, but bolder weights show considerably more restraint. The "Florentine sans serif", of which it lends it's name – an inscriptional letter found on the ledger tombs in the floor of Basilica of Santa Croce in Florence – also proved an important influence to Hermann Zapf's later successful serifless roman, Optima.

The following years – especially the Art Deco period – are riddled with contrasted sans serifs – mainly lettering for advertisements, architecture, and automobile emblems,[3] but also some typefaces – most notable, perhaps, A.M. Cassandre's Peignot (1937), a debonair

display[4] face from the French Peignot & Deberny foundry. The style fell out of favor in the 1960s as a result of the raise of the Swiss International Style, though Hermann Zapf managed to make a mark with his Optima,[5] an accomplished text face drawn for the German Stempel foundry in 1958.

Fascinated by the lively expression of the serifless roman, I also noticed an untapped potential. While type designers in search of a sans serif letterform suitable for running text have been exploring the genre with some success, contemporary contrasted display faces are mostly nostalgic endeavors with little innovation happening below the surface.

With Vinter, I imagined what such a typeface might have looked like if the Modernists didn't discard contrasted letters. By all means a display typeface, Vinter applies the strict geometrical logic of Modernism to modulated letterforms. This marriage of two seemingly polar opposites weaves text blocks with an unusual staccato rhythm, growing in tension as the weight increases. The contrasting opened and closed apertures terminate where necessary to paint the desired shape. Rather than adhering to a physical tool or any particular historical model, the shapes are limited only by the imagination of the designer.

Põhjapoolkera

Arktista tundraa on noin 25 miljoonan neliökilometrin alalla

Popolus Cone

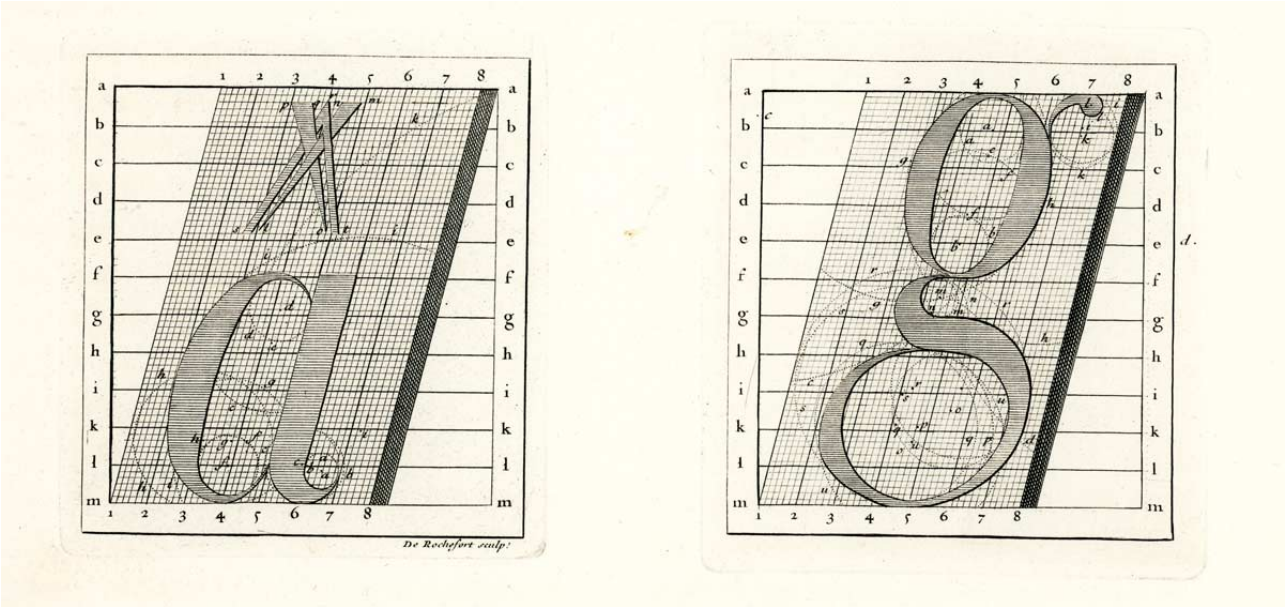
Daniel Gabriel Fahrenheit (1686–1736)

RAJAVYÖHYKKEELLÄ

Conventionally drawn cursives often borrow detailing from handwriting, slanted with the reading direction and sometimes making use of exit and entry strokes to convey the speed with which they were written. Most Modernist types reject such calligraphic traits. Instead they rely on slant angle alone to differentiate italics from their upright romans,

occasionally employing single-storey variants of complex letters like the lower case ‘a’ and ‘g’.

As work commenced on Vinter’s italics, I came to a strange realization. The typefaces I considered “geometric” were in fact far from it. Their key signature shape was lost in the italics – the circles replaced by ovals.



By some considered the first “modernist” typeface, the Romain du Roi – the “King’s roman”, commissioned in 1692 by Louis XIV – is constructed from a grid. The sloped romans are especially interesting in light of computer-aided slant. The resulting letterforms show an increased emphasis on vertical strokes, paving the way for later Transitional types. To arrive at a functional metal typeface, the punchcutter, Philippe Grandjean, deviated from the grid drawings. It is not, however the first of its kind. As early as 1529, in his Champfleury, Geoffroy Tory mapped letterforms on grids and showed their construction.

What if the radical dogma of the Modernist designer had also been extended to the italic styles? Those “derivations” would likely be replaced by more ideologically pure companions. The notion of pure slant could be discarded in favor of a newly drawn style, mirroring the radical geometric construction of the roman.

ABCDEFGHIJKLMN
OPQRSTUVWXYZ
abcdefghijklmnopqrst
uvwxyz
0123456789

Rotated letterforms illustrate battle formations in Bawkunst Oder Architektur aller fürnemsten *(1582). Image courtesy of Slávka Pauliková; Filip Tyden's "rotalic" concept.*

In search of another solution, I stumbled upon a strange historical sidetrack: the rotalic. Instead of a rightward slant, the letters are rotated clockwise. The repertoire of the rotalic is severely limited and most contemporary applications use them for expressive effect. I wanted to create something more useful and subtle. Yet it sparked an idea I couldn't quite shake. Rotation could help retain the rigidity of the design idiom. With a combination of slant and rotation, Vinter's geometric cursive marks a definite break with established conventions.

The Pole Perspective

Un vocabolario può contenere solo una

Diagonalgang

piccola parte del patrimonio di una lingua

íljígo naalyéhé

The family sports an extensive character set. With a combination of separate diacritical marks and pre-composed accented characters, Vinter supports more than 260 written languages and romanization systems. It also takes into consideration special localized conventions like the Dutch **j** with acute and Navajo accented nasal **i**.

The thinnest weight of Vinter was released in late 2012, earning a Certificate of Excellence in Type Design from the Type Directors Club. Commissioned by the Royal Drawing School in London in 2014, a custom variant was developed together with Sindre Bremnes. This version was subsequently used as a springboard for expanding the family to a more versatile set of tools, encompassing five weights with matching italics. In the process, the original spacing and drawing was revised.

Six years later, I'm more experienced, more confident – yet the initial idea for Vinter still excites me. Vinter poses a bold challenge, not only to type designers, but also to the graphic designers who will eventually put it to use and in doing so give it context. Developing the extended family allowed me to refine and clarify my intentions: Dogmatic adherence to the guiding form principle – when need be, at odds with conventions and tradition.

Whenever someone hears what I do for a living, invariably, they all ask me, "So, what is *your* favorite font?" I always tell them the same thing, "It's the one I'm trying to make."

1 Alessio, Joseph: Making Sense of Type Classification in Smashing Magazine.
2 In his book, *American Metal Typefaces of the Twentieth Century,* Mac McGrew questions the originality of Studley, finding it uncomfortably close to *Quentell/Taylor Gothic/Globe Gothic.* Source: Type Heritage.
3 Stephen Coles answering the question "Why are there hardly any sans serif typefaces with a high contrast in stroke weight?" at Quora.
4 There exists a lesser known text geared spin-off of Cassandre's *Peignot* called *Touraine.* It has more traditional forms for the capital-like lowercase characters, namely 'aeghmnrstu', provided by Guillermo Mendoza y Almeida. Motivated by the success of *Chambord* (1945) by the competing Fonderie Olive. The name alludes to it as well (Chambord is a famous castle close to the Touraine region). Source: Fonts in Use. It is interesting to view Peignot's unicase letterforms in light of the experimental Modernist letterforms in Herbert Bayer's Universal typeface (1925).
5 Note also José Mendoza's Pascal.

Making Magazine

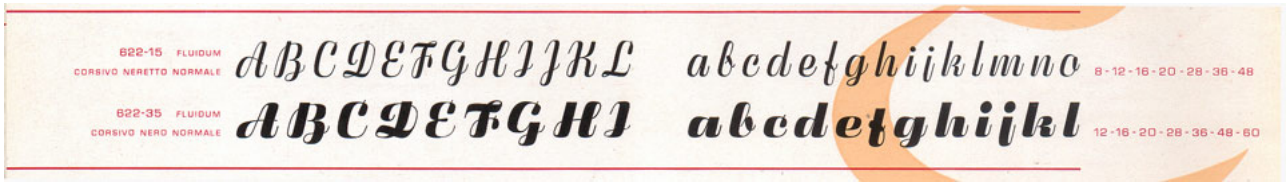
Origins and background

My first approach to this project began with the lettering I designed for BoMo, a graphic design studio, in spring 2011. It's based on a brief: *feminine*, *professional* and *sensibility*. The solution came as a well-crafted series of 'calligraphic letters' with high contrast, the B, the M and the o, combined as two connected syllables. During the design process I discovered the significant potential that this idea could have if it were developed as a typeface. Thus, almost one year later, I began to sketch it, and two years after I released it!. It evolved from the initial three letters of the logo but with differences: slightly less condensed proportions, different designs for the two upper case letters and a new construction of the connecting strokes.

It combines a sense of script with geometric and slightly condensed structure resulting in idiosyncratic curves, yet with a retro-chic twist. These might probably be the most attractive features, because all together they give a very strong identity to words.

During my research I review a lot of previous & excellent typefaces sharing a similar idea, but any of them had this sense of a connected and upright script. Somehow, Magasin explores and pays tribute to the charm and playness of typefaces that were designed during the 1930s. Some inspiring references are Corvinus, released by Bauer in 1935 (designed by Imre Reiner in 1934), Quirinus (Alessandro Butti,1939) and Fluidum (1951), a kind of non-connected script version of Quirinus, also designed by Butti for the Nebiolo foundry.*

Left: Cover of a catalogue published by Nebiolo in the 1950s; **top**: Cover of a catalogue and a Qurinus specimen, a typeface designed by Alessandro Butti in 1939. Both published by Nebiolo in the 1950s; **bottom**: Detail of the cover of a catalogue published by Nebiolo in the 1950s; **below**: Detail of a catalogue published by Nebiolo in the 1950. It shows Fluidum, a typeface designed by Alessandro Butti in 1951.



The design principle

Magasin is based on the idea of designing a display typeface inspired by the pointed pen calligraphy with geometric, upright and connected construction and high contrast. What I wanted to show is the obvious accuracy that can be seen in any calligraphic work, but with a close attention to the creative combination of linked letters when creating words, bringing a lettering flavor.

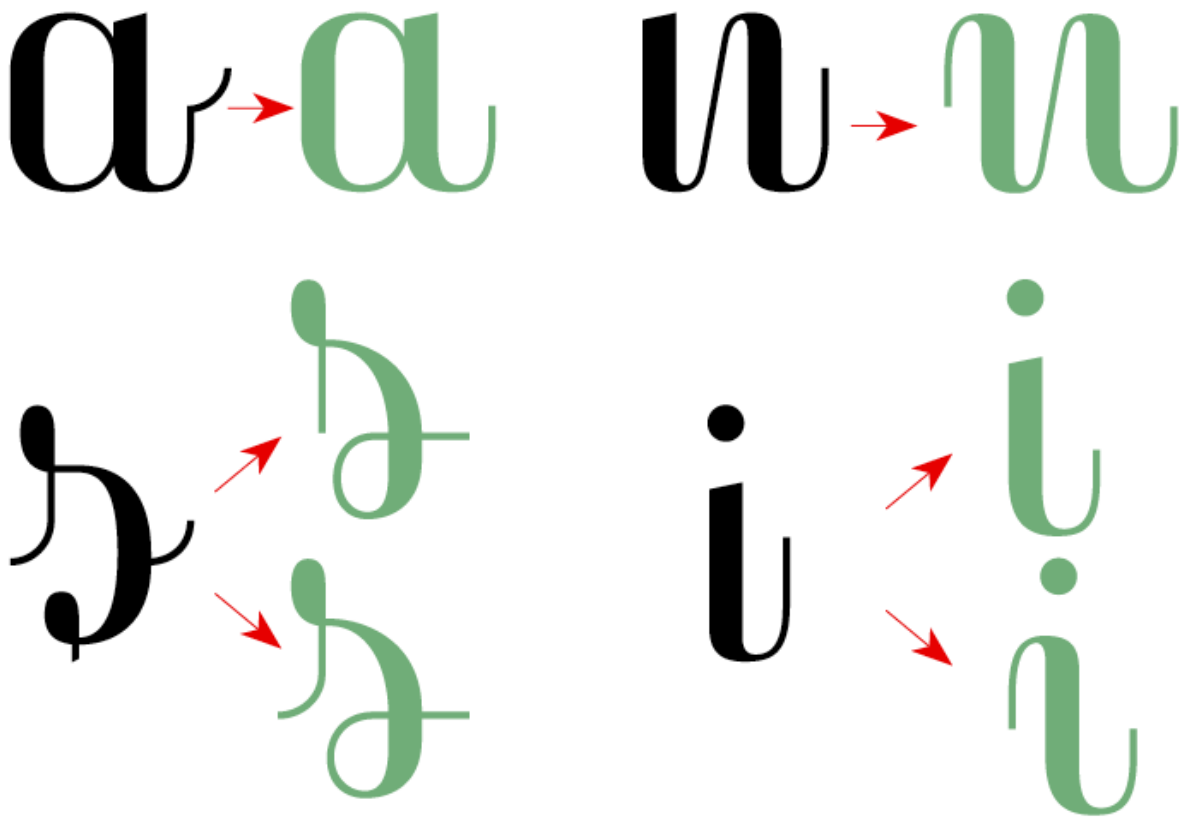
Construction principles:

1. the **wavy shapes** to emphasize the rhythm
2. **four different ways of linking letters**, always merging at half of the x-height

3. **loops and drops** reminiscent of pointed pen calligraphy
4. the **angled** ending stroke

The process

The first versions of Magasin were more experimental; I gave an extraordinary leadership to the connection strokes, and characters as ‘m’ and ‘n’, had a different starting stroke, but soon I found it problematic.The following versions were based on the exploration and refinement of some characters and the different connection possibilities, with the goal of balancing the spacing, a process that also led to the design of alternative glyphs.



Early versions of Magasin shown in black; final solution(s) in color

At a certain point, I was not sure if it could become something usable or just a personal amusement; some connections were looking really weird but others just came automatically and in a very beautiful way. So I wrote a list of necessary ligatures to balance the text flow, and another of the non-convenient combinations that later became ‘exceptions’ in the programming. I also designed a reduced set of secondary alternates (ss02) and an out-strokes version of the ‘c’, ‘ç’, ‘e’ and ‘q’, to gave a better ending to sentences or words. Therefore, it implied a bunch of OT programming for a correct use and performance. I’ve explained this all in more detail in the PDF specimen I designed.

Top: Magasin, regular lowercase character set; **bottom left**: Magasin, lowercase contextual alternates (ss01); bottom right: Magasin, lowercase contextual alternates (ss02)

Capital and Swashes

The capital letters appeared much later, they are a bit experimental and very much inspired by the copperplate calligraphy mixed with some cancelleresca features.

Magasin, uppercase contextual alternates (ss01/ss02)

While testing it, I discovered that Magasin could be very useful in a lot of applications, and for many various moods; moreover, the swash capitals were intentionally designed to 'pimp' words and provide many possibilities, but regular capitals can also perform better in certain situations.

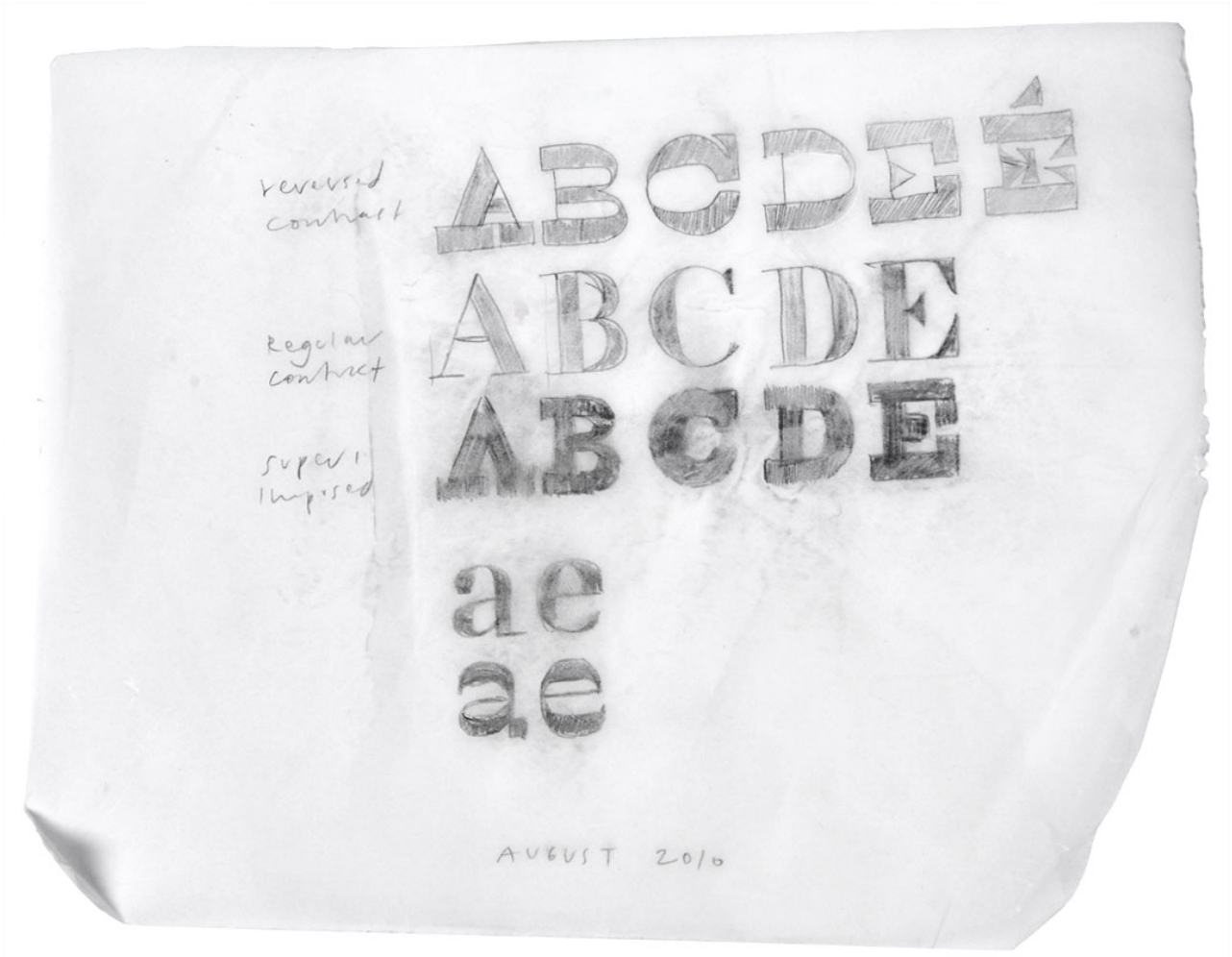
And finally... why this name?

I only chose the name at the end of the process. It sounds like 'magazine' in English, but actually Magasin is the word for 'store' in French, because I always imagined Magasin used in magazine headlines, but also for brands and packaging. I've enjoyed working on Magasin immensely, and I have learned a lot, as always happens with every typeface I design. Because I love and collect old specimens, my typeface and the specimen are also a celebration and a tribute to all those works of art and their designers.

Beauty and Ugliness in Type Design

Peter Biľak on the process of designing his newly released Karloff typeface, demonstrating just how closely related beauty and ugliness are. Karloff explores the idea of irreconcilable differences — how two extremes could be combined into a coherent whole.

In 2010 I was invited to a design conference in Copenhagen to speak on the subject of conceptual type. The organisers were interested in examples of typefaces whose principal design feature was not related to aesthetic considerations or legibility, but rather some underlying non-typographical idea. In my address I argued that there is no such thing as conceptual type, since type design is a discipline defined by its ability to execute an outcome; the process that transforms the pure idea into a functional font is a critical part of the discipline. Having rejected the topic of the conference, I nevertheless went on to speculate on what a true example of a conceptual typeface might be like.

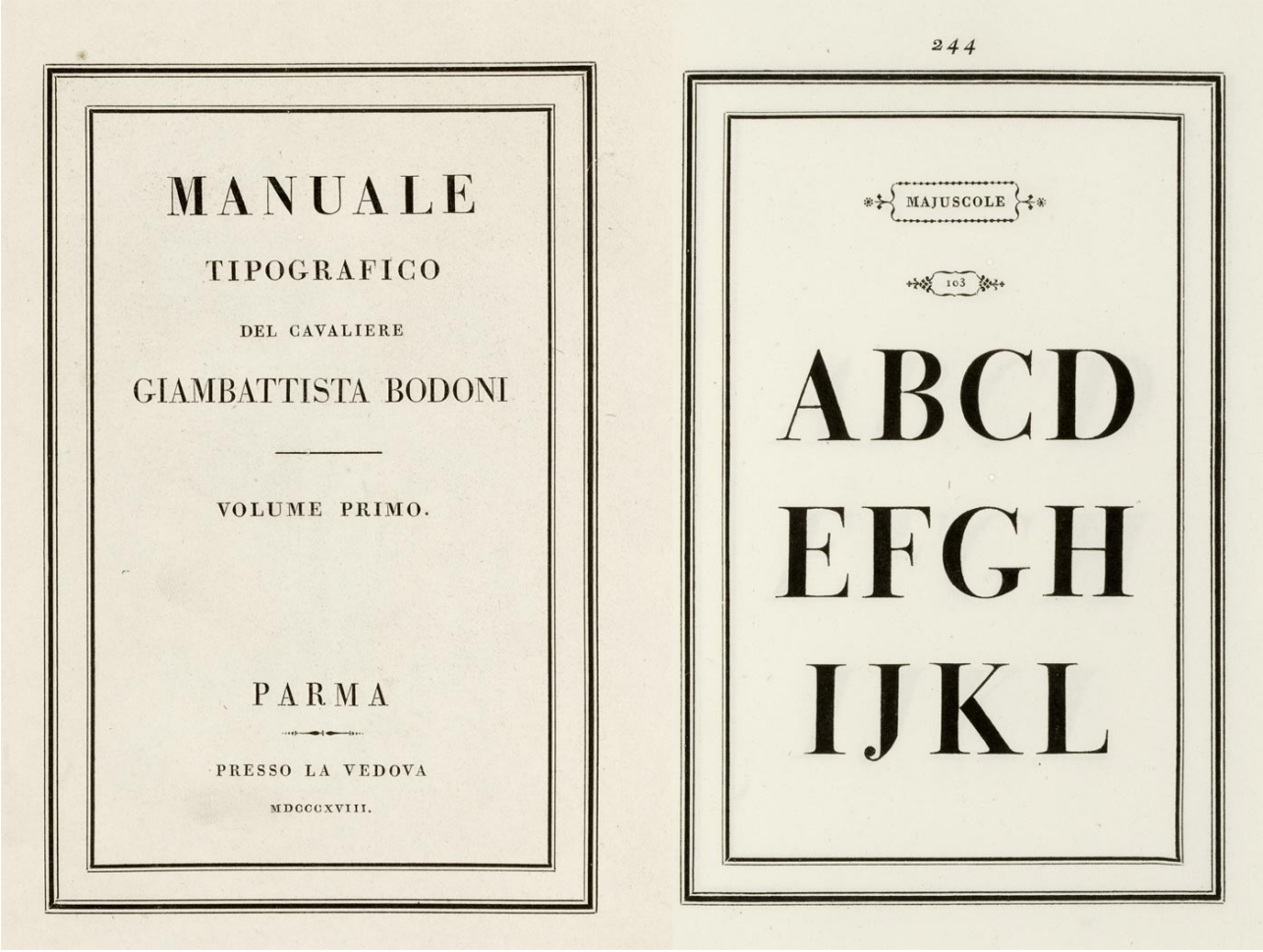


At the time I was also interested in the idea of irreconcilable differences and how two extremes could be combined into a coherent whole. As an example, I looked for the most beautiful typeface in the history of typography — as well as the ugliest one — and for a way to meld them.

The Beauty

While any choice representing beauty is bound to be very personal and subjective, many agree that the high-contrast typefaces created by Giambattista Bodoni and the Didot clan are some of the most beautiful in existence.

Bodoni was one of the most widely-admired printers of his time and considered amongst the finest in the history of the craft. Thomas Curson Hansard wrote in 1825 that Bodoni's types had "that beautiful and perfect appearance, which we find it difficult and highly expensive to equal."[1] In his *Manuale Tipografico* of 1818, Bodoni laid down the four principles of type design "from which all beauty would seem to proceed", namely: regularity, clarity, good taste, and charm.


MANUALE

TIPOGRAFICO

DEL CAVALIERE

GIAMBATTISTA BODONI

VOLUME PRIMO.

PARMA

PRESSO LA VEDOVA

MDCCCXVIII.

244

MAJUSCOLE

103

ABCD

EFGH

IJKL

His close competitors in France were the Didots. Not only did François-Ambroise Didot invent many of the machines used in printing, but his foundry endeavoured to render the types more beautifully than his rivals Baskerville and (later) Bodoni. Some considered Didot's works the most beautiful types that had ever been used in France (up to that period),[2] though others found them delicate but lifeless.[3]

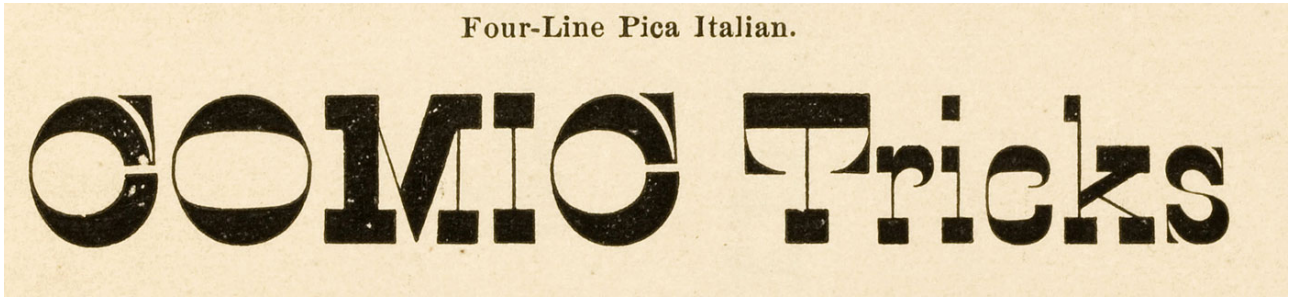
ABCDEFGHIJKLMNOPQRSTUVW
XYZ ÉÀÈÙÂÊÎÔÛËÏÆŒÇ&

The Ugliness

I have to admit that dealing with ugliness was a lot more interesting than revisiting the beauty contests of the classicist printers. The search for ugliness triggers a certain primal, voyeuristic curiosity, and from the designer's perspective there is simply a lot more space to explore. Capturing beauty has always been considered the primary responsibility of the traditional artist, and even now it is rare to find examples of skilled and deliberate ugliness in type design, (although examples of inexperience and naïveté abound).

The eccentric 'Italian' from the middle of the Industrial Revolution was a clear choice. This reversed-contrast typeface was designed to deliberately attract readers' attention by defying their expectations. Strokes that were thick in classical models were thin, and vice versa — a dirty trick to create freakish letterforms that stood out in the increasingly saturated world of commercial messages.

No other style in the history of typography has provoked such negative reactions as the Italian. It was first presented in Caslon & Catherwood's 1821 type specimen, and as early as 1825, in his *Typographia* Thomas Hansard called the type a "typographic monstrosity". Nicolete Gray called it "a crude expression of the idea of perversity"[4], while others labeled it as "degenerate".[5]



The goal of my project was to show just how closely related beauty and ugliness are. Donald Knuth, an American computer scientist with a special interest in typography identified over 60 visual parameters that control the appearance of a typeface. I was interested in designing typeface variations that shared most of these parameters, yet included both the ugliest and most beautiful letterforms.

Karloff, the result of this project, connects the high contrast Modern type of Bodoni and Didot with the monstrous Italians. The difference between the attractive and repulsive forms lies in a single design parameter, the contrast between the thick and the thin.

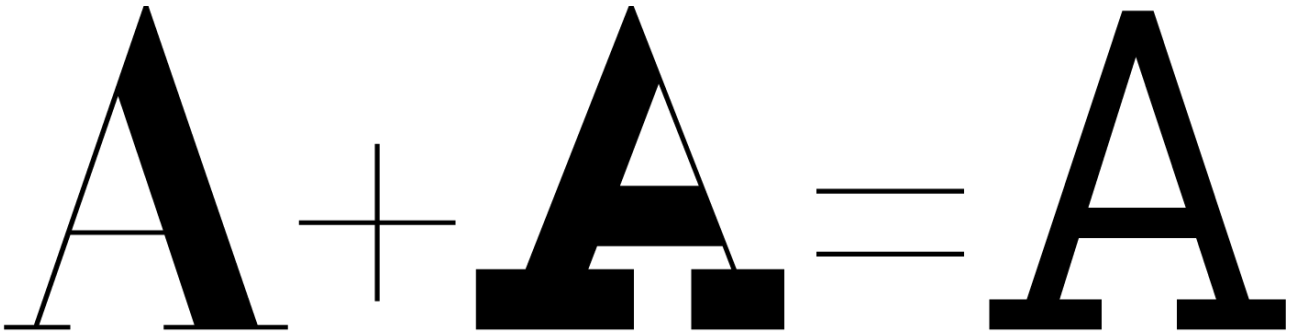
Karloff Positive

Karloff Positive Italic

Karloff Negative Bold

Karloff Negative Bold Italic

I asked Pieter van Rosmalen for help, and both of us worked on both versions. While at the beginning I looked at the Didot from Imprimerie Nationale as a reference, Pieter departed from this model and made the project more personal. We worked on both models at the same time, trying to be very strict about mathematically reversing the contrast between two weights. The advantage of working on both versions together was that we could adjust both of them to achieve the best forms, rather than creating one as an afterthought of the other.

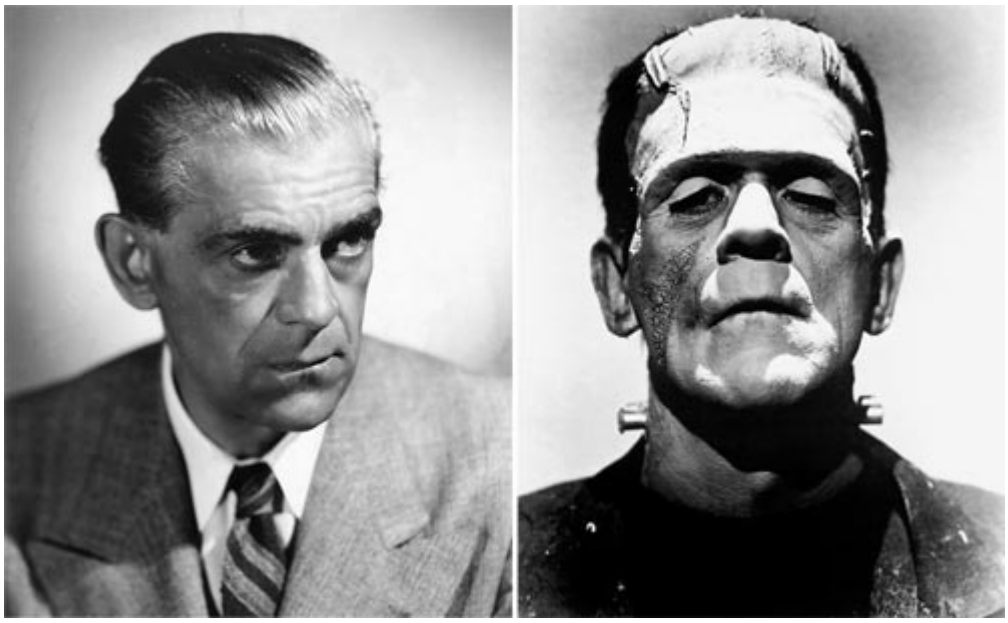


Towards the end of the project, I worked with Nikola Djurek, our frequent collaborator, who helped with interpolation and fine-tuning of the fonts. Having designed two diametrically opposite versions, we undertook a genetic experiment with the offspring of the beauty and the beast, interpolation of the two extremes, which produced a surprisingly neutral low contrast version. Karloff Neutral required only minimal intervention, because the master weights from which it was interpolated were well defined.

About the name

Karloff was the artistic name of the British actor William Henry Pratt. He chose this pseudonym to prevent embarrassment to his dignified family, who considered him the black sheep of the family. Although he played mainly sinister characters, in real life,

Karloff was known as a very kind gentleman who gave generously, especially to children's charities.



Thanks to Paul Shaw, James Clough, and David Shields.

1. Hansard, Thomas C. *Typographia: an Historical Sketch of the Origin and Progress of the Art of Printing*, 1825.

2. *Encyclopædia Americana*, 1832.

3. Updike, Daniel B. *Printing Types: Their History, Forms, and Use*, 2001.

4. Gray, Nicolete. *Nineteenth Century Ornamented Typefaces*, 1938

5. Benson, John H and Carey, Arthur J. *The Elements of Lettering*, 1940

Novel Constructions: The Making of a Typeface

A sudden bolt of inspiration would makes for an enticing story of a typeface's beginnings, one that would perhaps be helpful when marketing it. However, in reality, not all typefaces come into the world that way. Sometimes, as was the case for Novel, the idea slowly percolates. Even the somewhat unspectacular name I chose for this family reflects that process.

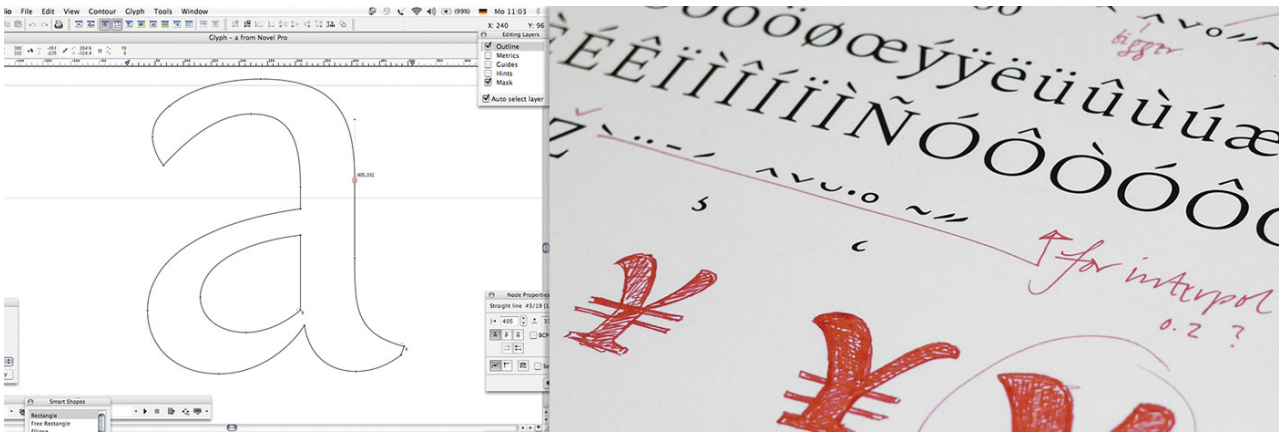
Just like many of my fellow Type and Media graduates I was adamant about continuing to work on designing typefaces after graduation. But unlike most of them I never had to face the question of whether to continue on the project developed over the course of my study. My efforts were less than stellar, so I couldn't wait to start from scratch.

Though there was no sudden moment of insight, I believe that with most type designers it's very obvious which typefaces could have had an influence. As for me I admire Jan van Krimpen's Romulus and Bram de Does's typefaces Trinité and Lexicon. In addition, I can't imagine ever getting tired of looking at Peter Verheul's Versa. As I studied both graphic design and type design at the Royal Academy of Art, my affection for reading typefaces with broad-nib contrast and calligraphic details isn't surprising.

For me the start of working on a typeface involves strictly being away from computer. The design process is rather simple. I spend a lot of time on sketching different ideas — at first quite roughly, but as soon as I find something I like I develop it further in greater detail. My favorite part of drawing letters is sitting down with a rather soft pencil and my sketch book. Most glyphs I draw have an x-height of about 6 cm, which enables me to redraw them quickly when I make mistakes, or consider alternative shapes. In this phase the design and characteristics of letters take precedence, so I don't worry about inaccuracy in the overral rhythm. When I feel that I've found some ideas worth developing further, I strive to develop these letters as far as possible *on paper*. When I reach a phase where I discover the shapes I was searching for, I tend to switch to a Rapidograph as it permits greater precision. Those drawings have no gray scale and they sometimes brutally reveal weaknesses in the concept.

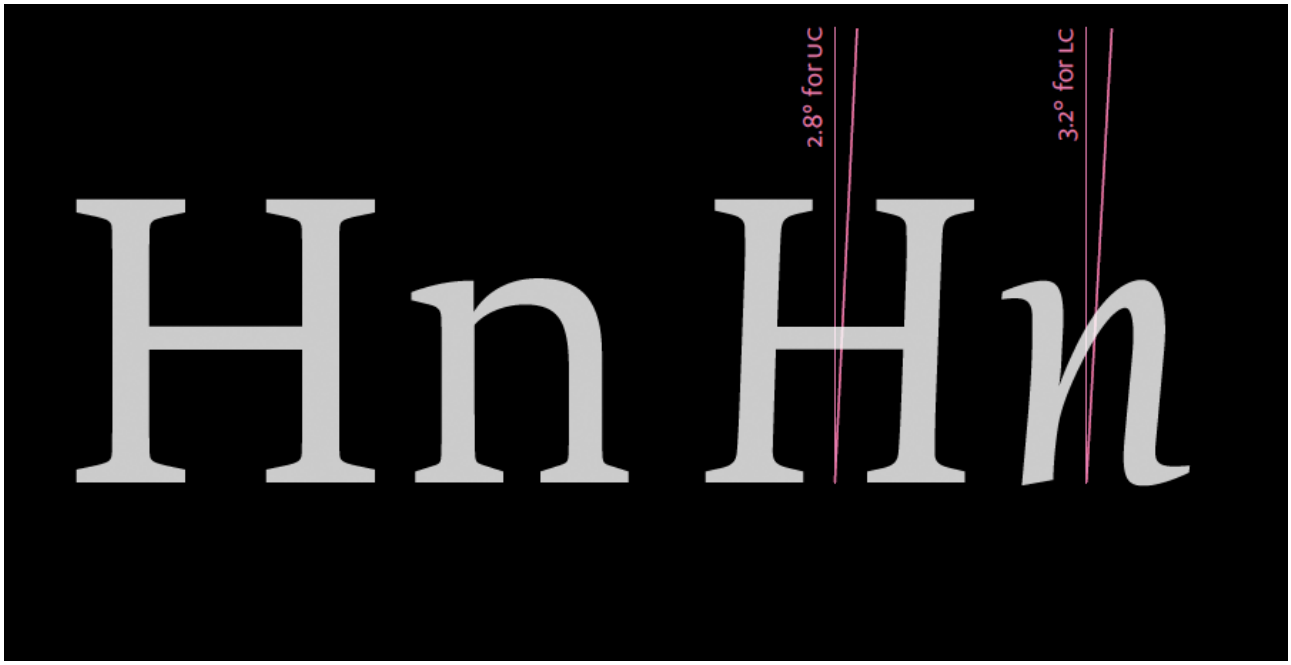
Designing typefaces this way takes a little longer at the beginning, but I feel that working this way provides me with a much better and clearer understanding of the shapes. I am also convinced that this way I am able to implement changes much quicker than if I had to think about nodes and path directions. Immediate contact with shapes that drawing with a pencil provides liberates me from thinking about font production and lets me concentrate on what matters most — designing the alphabet. It often feels that adjusting anchor points, nodes, and extrema are a distraction at this point in the process.

When drawing type I tend to focus on the darker book weight. That way I can imagine or envisage how the shapes will alter when made lighter or bolder. Precise drawings take a lot of time and effort. I try to work as efficiently as possible, even though I find drawing type very enjoyable.



Once I feel I have designed enough glyphs, I scan the drawings and begin to vectorize them. Here I begin to integrate the future interpolations in the design process. I use the

glyphs I just digitized as a basis for the light and the bold weights. My preference to develop italics and roman at the same time makes this phase of the process very time consuming. A lot of the issues only become apparent when test prints at reading sizes are made. That is why in this phase some major design ideas might be altered or jettisoned all together.



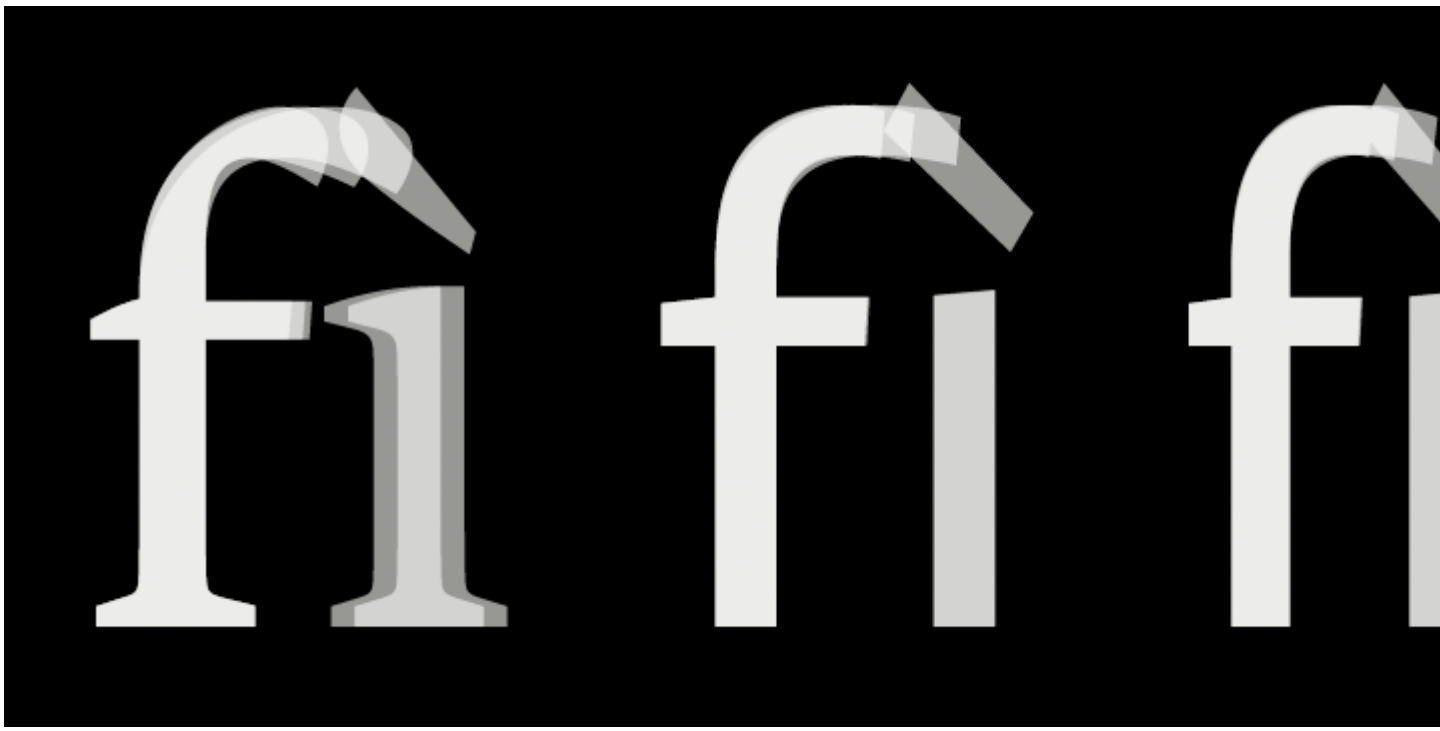
Italics

There appears to be a growing trend in typefaces for italics whose design is fairly close to the roman, and I find this disconcerting. I think that highlighting some passages of text is more elegant when done with distinctly designed italics. While naturally roman and italic should have similarities, slant angle should not be the only means to differentiate them.

As lowercase constructions are more complex than the uppercase I felt it was necessary to have them a little more dynamic. For that reason lowercase letters are slightly more slanted than the uppercase letters.

Flexible f-terminal

In my early drawings I fell in love with the long f-terminal of Novel. This feature looked nice in many letter combinations, but not all. Letters followed by **b** for example, or when an accented glyph follows **f** looked very unattractive. The solution was a flexible f-terminal that would be wide when space permitted, show up as a ligature, or shrink if it were followed by an accented letter. All typefaces in the Novel family have this feature, except Novel Mono.



Swash-like Terminals

Novel is supposed to have a friendly appearance. Swash-like endings or terminals on round shapes like **a**, **c**, **f**, **r**, and **y** contribute to a natural feel. Also the calligraphic details on **A**, **V**, **W**, **v**, and **w** help to extend the warmth of design elements that have their origin in handwriting. As italics are closer to handwritten words, developing them came easier than the roman. Naturally these characteristics were not adopted to the sans serif version, lending it a more neutral personality.

Novel Sans

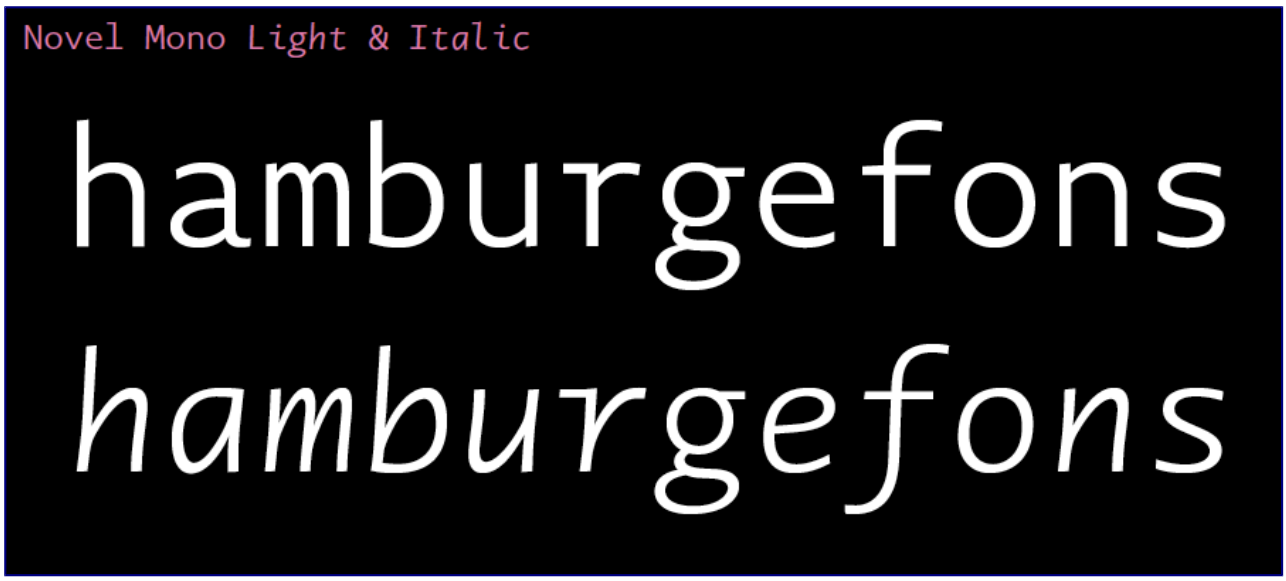
Creating a matching sans serif typeface was the plan from the outset. Only a few weeks after I digitized the first drawings of Novel, I began designing Novel Sans. I decided to

make the two typefaces in parallel to make sure they were complementary. This way I could ensure that elements I designed for Novel would also work for Novel Sans. Obviously many shapes would not be problematic, but some of my favorite details proved to be difficult to adopt. For example, I spent considerable time on letters such as lowercase **v**, **w**, **x**, **y**, **z** before I was confident that I could go for a particular design feature without fear of later regretting it.

Novel Mono

When Novel Sans was nearing completion, friends suggested that I should try to make a monospaced version. I must admit that at first I wasn't taken by this idea. I thought that too many of Novel's design features, such as its Classic proportions, a generous roman combined with a pretty narrow italic, and the warmth would get lost. Despite these reservations, I decided to give it a go.

Of course there are differences to be seen, especially between the italics of Novel Sans and Novel Mono, but when comparing both designs side by side it's more obvious what they have in common. The final outcome surprised me. It works much better than I ever thought it would. In fact, of all the styles, I use Novel Mono most.



Novel Sans Condensed

The classic proportions of Novel and Novel Sans might be considered distinct characteristics of the family. The Sans Condensed version, however, required a much more balanced rhythm. The width contrast between the romans and the italics had to be decreased, as the italics of Novel Sans were already very narrow.

Legibility

There are many ways to measure legibility, with some more legitimate than others. But with all of them I have difficulties when it comes to the most interesting aspect: What is the reader accustomed to looking at? I don't think that actually measuring legibility is nonsense, but it's only one of the many aspects or ingredients of a typeface design. I believe a good type designer instinctively makes the right decisions when faced with the

question: Should I go for the distinctive detail or for reading quality? Reducing Typeface design simply to considerations of legibility seems to be unfair and perhaps misguided.

When I was designing Novel, I printed high resolution proofs of different type sizes to judge quality and legibility. To me it helps much better discussing legibility with colleagues like Albert-Jan Pool, rather than spending time on eye tracking or mathematic grayscale calculations.

The Design of a Signage Typeface

The story begins in 2006 with a trip down Route 66. Day in, day out, I looked at U.S. traffic signs that were either set in the old, somewhat clumsy "FHWA font series" or the new Clearview HWY typeface. Approaching the signs, I would often test myself: which typeface works best from a distance, and which of its features or details might be responsible for its performance. I had so many more questions than answers. Surely every professional type designer has at least an inkling of how a signage typeface should look: Probably it sports a rather clean sans serif design, open counters and a rather large x-height. But which x-height works best, and why? What is the optimal stroke width? A monocular or binocular g? Should the design be somewhat condensed to permit more information on a sign, or rather should it be relatively wide so that individual letters are more easily differentiated?

Studying Existing Road Signs

I was unable to fully answer those questions, but felt that I must find the answers, no matter what the cost. Back in Europe I began studying the typefaces on road signs just about everywhere the Latin script is used. But looking at photos or signage specifications doesn't reveal much about the actual performance of those typefaces. So I set off, driving thousands of miles across Europe to explore the legibility of these signs and typefaces, first hand. Once I even ended up in a holding cell at the border crossing to Norway, because the customs officers just wouldn't accept that someone would drive all over Europe simply to take photographs of traffic signs. (See my FLickr sets World of Traffic Signs and Type on Traffic Signs.)

I was surprised by the sheer variety of type styles I discovered on my journey. Even though all road signage systems are intended to be as legible as possible, there appears to be no consensus on how to achieve this in terms of type treatment. Some road signs used grid-based typefaces, some were extremely wide geometric typefaces with the simpler forms of a and g, some very thin, and some very heavy. These days, with digital sign production, we see more and more print typefaces (like Helvetica) and even system typefaces (like Arial) on signs. The old geometric and grid-based typefaces were mostly a product of the drawing and sign-production methods of the time. Today we can choose from hundreds of very legible, high quality print typefaces; however, during my own research I remained skeptical that simply plastering our best print typefaces on road signs would be the best way to go.

Top-left: Germany. Bottom-left: Italy. Right: Holland.

A typeface on a sign that is read from 300 yards has different requirements than a typeface read in a magazine, from your armchair. And even if the typefaces are designed specifically for signage, they are often a local solution that just doesn't work everywhere. For example, the Transport typeface used in the U.K. is a very good and legible design, but it is designed for English words and names and is far too wide for the generally longer names of German cities. Another example is the Clearview typeface with its extreme x-height, which works on American road signs, but not so well for languages using numerous diacritical marks. So in the end, for every typeface I checked and tested, I discovered both advantages and disadvantages. There was not a single typeface that I could recommend for signage in every situation.

> Once I even ended up in a holding cell at the border crossing to Norway, because the customs officers just wouldn't accept that someone would drive all over Europe simply to take photographs of traffic signs.

Creating Wayfinding Sans Pro

So I determined there was still room for a new signage typeface with a broad range of potential uses, and I hoped that I could design one that would even be more legible than the common existing ones. From the outset it was very important to me that I did not base my work on any of the existing typefaces typically used for signage. I wanted to build my typeface from the ground up, challenging every design principle of signage typefaces. But this also led me to my first major design problem. A signage typeface is all about the moment — when you come close enough to the sign that it just becomes readable. And it's here where you can actually make a difference. When you attempt to improve the recognizability and distinguishability of these blurry letters just a fraction, the typeface becomes easier to read from a greater distance, thus you have already created a more successful signage typeface. But how should I create a typeface for a reading situation that I can't actually replicate? A screen typeface is judged on screen, a print typeface is judged from print-outs, but testing every little design detail of a signage typeface by always mounting different designs on actual signs would be, to say the least, rather impractical.

> A typeface on a sign that is read from 300 yards has different requirements than a typeface read in a magazine, from your armchair.

A New Design Approach

That's when I came up with the idea of the *Legibility Test Tool*, an OSX application I built that offers real-time simulations of different viewing conditions (distance, fog, halation, and positive/negative contrast) during the design stage. While I was working in

my font editor on the design of individual letters, the tool simulated views of test words with the letters I was working on. With this tool I could completely remove the guesswork, therefore optimizing my design for even the very worst reading conditions. Often the simulations surprised me. Sometimes I was tempted to design my typeface in the way I was accustomed to from the print world, but the tool clearly demonstrated that the reading conditions of road signs require a unique design solution for maximum legibility within this context.

Design Principles of a Signage Typeface

The design process itself was also very different to that of designing a typeface for print. Usually a type designer first sketches out the outlines of certain letters. But naturally, this focuses on the final design and its stylistic details. However, these very details will be the first to disappear when the text is read from a distance. What matters here is the skeleton of the letterforms. So in the beginning I worked with nothing but single-line letter skeletons and no character outlines. This allowed me to apply different stroke widths to those skeletons, thus testing the crucial correlation between the letter skeletons and the applied stroke widths. I also experimented setting the stroke width of my own letterforms to match those of existing typefaces. With this procedure I could directly compare the performance under difficult viewing conditions, and could optimize my design for maximum legibility — arriving at solutions superior to those of existing signage typefaces. A typical result of this working method are the slightly exaggerated details like the wider crossbars of characters such as f and t. Making them rather short in print typefaces permits tight and even spacing within words, but it also makes letters such as l, t, f, and sometimes even i, harder to distinguish, especially when the text is to be read under difficult viewing conditions. So I always tried to create a rather generic letter skeleton that was familiar and easy to recognize; but I also attempted to stress the individuality of each letter to increase letter differentiation, especially for pairs of similar letters.

Crucial letter pairs:

- CG in the Dutch road signage font (top) and Wayfinding Sans (bottom)
- OQ in the French road signage font (top) and Wayfinding Sans (bottom)
- f l t in the German road signage font (top) and Wayfinding Sans (bottom)

Comparison between Helvetica & Wayfinding Sans Pro.

Another crucial feature is the stroke width. When I compare existing typefaces in my Legibility Test Tool, all the typical stylistic differences quickly disappear. But what remains ,and has the most important impact on the legibility, is the letter's skeleton, the stroke width, and the interplay of these two elements. Sometimes signage typefaces are extremely bold — the rationale being that a bolder stroke can be read from a greater distance. However, an increase in stroke width comes at the cost of smaller counters and therefore reduces legibility. This problem has become even more problematic in the last few decades, with the increasing use of more and stronger retro-reflective sheeting for road signs and back-lit signs in airports, subway stations and so on.

Comparison of Wayfinding Sans Pro (top) and the Spanish & Italian Road Signage font.

Therefore, I think that the best solution is to define the stroke width and the x-height of the boldest style, based on crucial letters such as a, e, and s, which have up to three strokes within the x-height. When the strokes of these letters are still clearly visible — even under the halation effect of retro-reflective or back-lit signs — then the typeface will perform well for signage. Diacritical marks are also an important part of many languages using the Latin script. Again, what might be desirable in print, might not work for signage. On signs the diacritical marks must be unmistakable in their design and prominent in their size, because such separated letter parts will be the first to become illegible or even invisible when viewed from a distance.

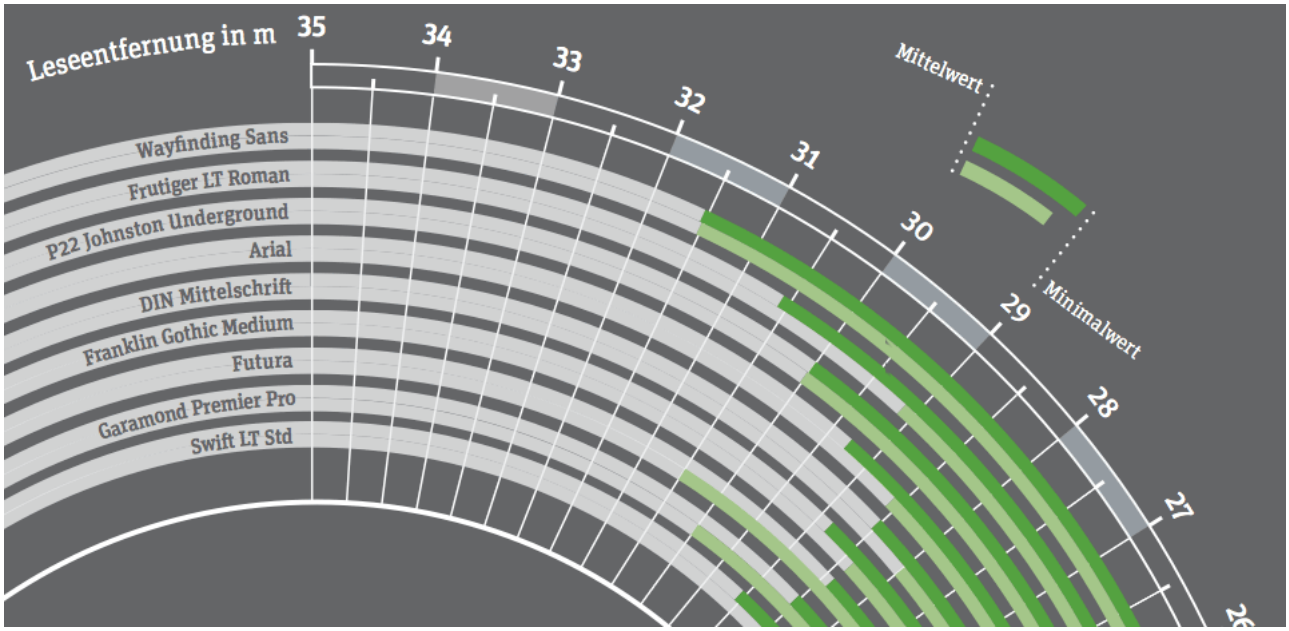
Left: diacritical marks in the British & Polish road signage font.

Right: Wayfinding Sans Pro.

Figures are usually designed to blend or harmonize with letters. But the figures of Wayfinding Sans are optimized for the requirements of signage use: maximum distinguishability and lining tabular design, though Oldstyle and proportional figures are also available via OpenType features. Entering and positioning arrows with text in a signage layout can be a time-consuming task. But the arrows of Wayfinding Sans can easily be typed along with the text, simply by activating a Stylistic Set and typing the appropriate code. These codes follow a simple naming scheme based on the cardinal directions: “hyphen hyphen n” will create an arrow pointing up (“North”); add an “e” for East and the arrow will point North-East.

Empirically tested

When presenting my work in progress at conferences, I was often asked about scientific proofs for the legibility of my typeface. Personally, I didn’t feel that I needed such proof. I had based my work on a solid theoretical framework, and with my Legibility Test Tool I could simulate the very worst viewing conditions possible. If my typeface performed well in these extreme simulations, then it would also work well for any typical signage use. But as it happens, an independent empirical legibility study was recently conducted at the University of Applied Sciences “htw” in Berlin.



Mittelwert: average

Minimalwert: minimum

Leseentfernung: reading distance

The study tested different typefaces in the context of signage use. I was asked to provide a style of Wayfinding Sans Pro. I shouldn’t have been surprised about the results, but I was

certainly happy about them: Wayfinding Sans Pro (bold condensed) was the winner in all conducted tests. It could be read from a greater distance than any of the other styles of the tested typefaces — among them typical signage typefaces like Frutiger, DIN 1451, Johnston Underground, and Futura.

In 2009, I wrote about the progress of my work under the title "The Ultimate Signage Typeface." I was not suggesting that I had created the ultimate wayfinding typeface; rather, I was attempting to describe the process in creating one. The article received a lot of attention and commentary — I knew I was onto something, so worked even harder toward the goal of creating a typeface that would be worthy of such a title. We have now begun work on additional pictogram fonts comprising hundreds of common wayfinding symbols — the perfect accompaniment to Wayfinding Sans Pro. To take a closer look at the typefaces, check out the PDF type specimen. Wayfinding Sans Pro has just been released and is available in 20 styles at fonts.info and MyFonts.

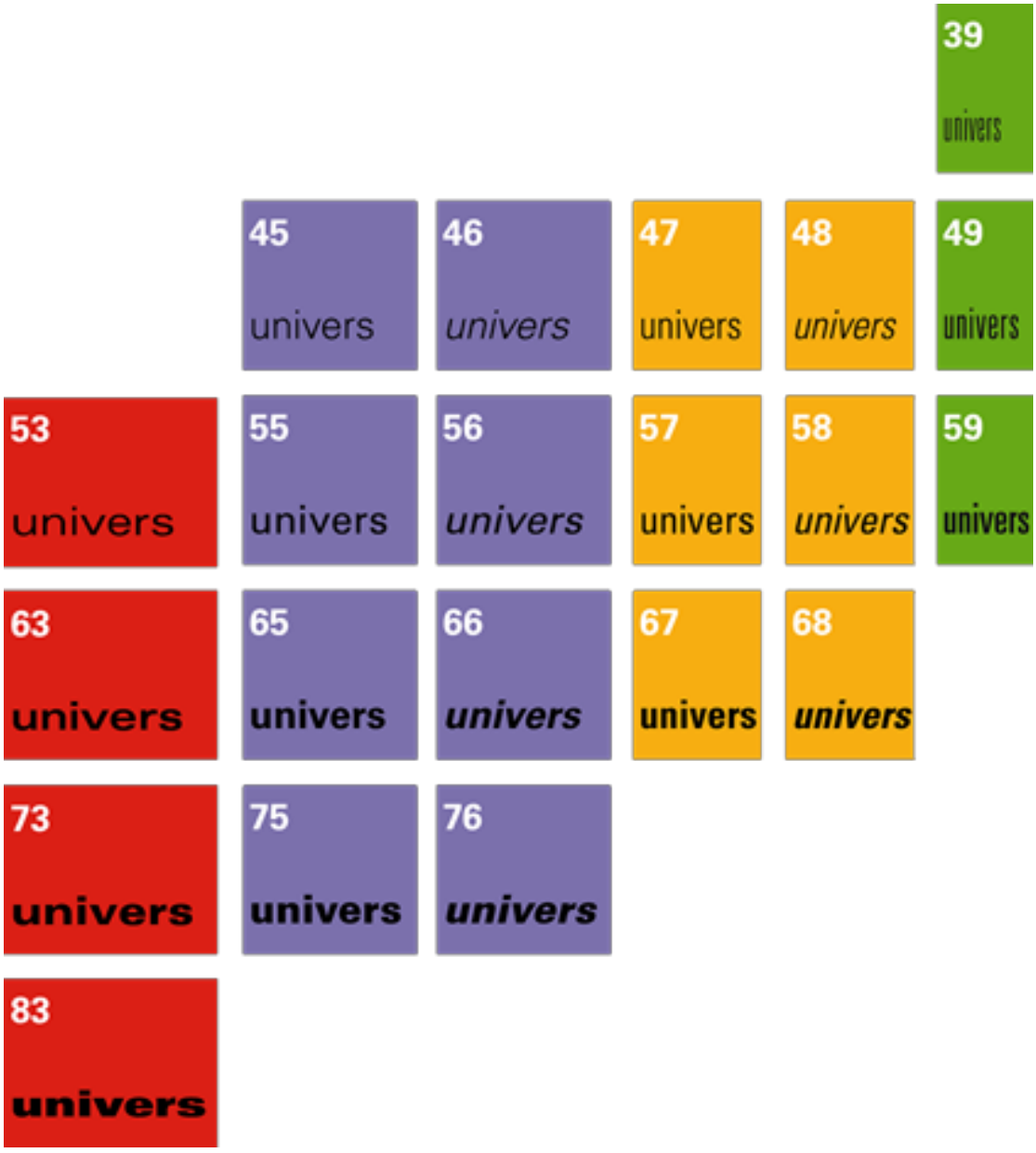
About the author:

> Ralf Herrmann studied graphic design at the Bauhaus University Weimar. He is the author of several typography books and founder of the type foundry fonts.info & the German typography community Typografie.info. Since 2009 he is the editor of the German typography magazine TypoJournal. Currently Ralf Herrmann is doing his PhD at the University of Applied Arts in Vienna. In his dissertation he will research the implications of cognitive map research applied

to the design of maps and wayfinding systems. Ralf also teaches typography for the MSc course Traffic & Transport Information Design organized jointly by the International Institute for Information Design (IIID) and the University of Applied Sciences FH St. Poelten, Austria, under the auspices of UNESCO.

Designing Type Systems

I remember a conversation from back in my student days where my typophile friends and I debated what the ultimate typeface of the twentieth century was, a typeface that summed up all of the era's advancements and knowledge into a coherent whole, one that would be a reference for years to come. Helvetica was one of the candidates for its sheer ubiquity, proof of its overall acceptance. Another, more subtle proposal was Jan van Krimpen's Romulus, one of the first typefaces to have related Sans and Serif versions. And another, my personal pick, was Univers by Adrian Frutiger.



Univers specimen, Deberny et Peignot, Paris, 1964. Thanks to Linotype GmbH for providing the illustration.

Univers goes beyond the quest to design individual letters, attempting instead to design space, to create a system of relationships between different sets of shapes which share distinctive parameters. Prior to Univers, type designers concerned themselves with the relationships between letters of the same set, how an **a** is different from a **b**.

Univers creates a situation in which there are a's of many different shapes, and each has to be positioned on the axes of weight and width, distributed sufficiently far away from the next, but no further, in order to create a usable system. How heavy ought the Medium to be in order to leave space for yet another weight, the Bold, and how will this translate into a design with condensed proportions? These were all new questions for type designers, and Frutiger opened up completely new territory for those who were to come after him.

Thanks to Frutiger it is now common practice to produce a dozen or more styles when working on a new type family. In terms of typeface innovation there is much more room for originality than when you only look at the individual lettershapes. Thus to create truly useful new works, type designers need to examine not only how characters relate to each other within a style, but also how different styles relate to each other within a family.

Gardener vs Architect

Greta Sans.

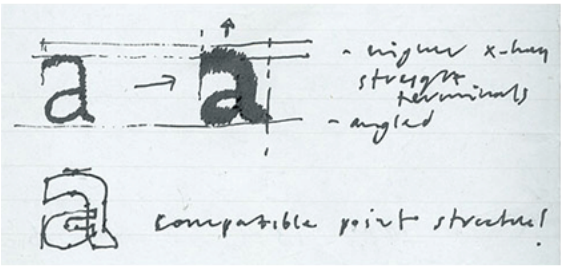
I've designed large typeface families before. Fedra, for example, now has over 116 individual styles supporting 170 languages, and has been used in the most complex typographic situations from dictionaries to newspapers, Bibles and information graphics. But it is not really an example of a font designed to be a typographic system from the start. It started in 2001 as a relatively small family of Sans, and over the next 10 years it grew to include Serif, Monospaced, Condensed and Display styles, as well as different language versions. Fedra is an example of a bottom to top approach, in which a relatively simple design gets larger and more complicated over time. Composer Brian Eno calls this the gardener's approach: nurturing simple things towards greater complexity, carefully planting seeds, and helping them grow to their full potential.

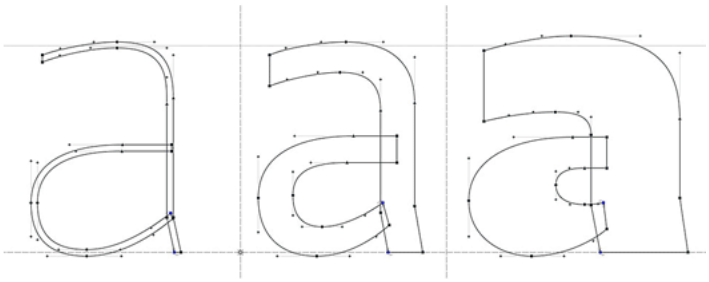
The opposite organising principle, again in Eno's words, is the architect's approach. An architect traditionally starts with a concept, developing the complete idea first, working from top to bottom. History (2008) is an example of the architectural approach, in which each individual style contributes to a greater purpose, sharing proportions with the rest of the family.

Greta Sans is another example of this approach. It has been carefully planned from the outset, designed as a system of interrelated styles. From the very beginning work proceeded on multiple styles simultaneously; not only when sketching the extreme and middle styles on paper, but also when converting the resulting shapes into digital format, the emphasis was on testing how certain letterforms react to extremely compressed dimensions as well as very generous ones.

Greta Sans sketchbook, 2008.

Only after being tested at each end of the proposed spectrum would the designs be selected and adopted into the typeface family-to-be. Each glyph would have to anticipate all its variations and maintain a basic structure that could function across all designated width and weight variations.





Different design masters were conceived and drawn at the same time, investigating how the same design characteristics would be translated into extreme weights and widths.

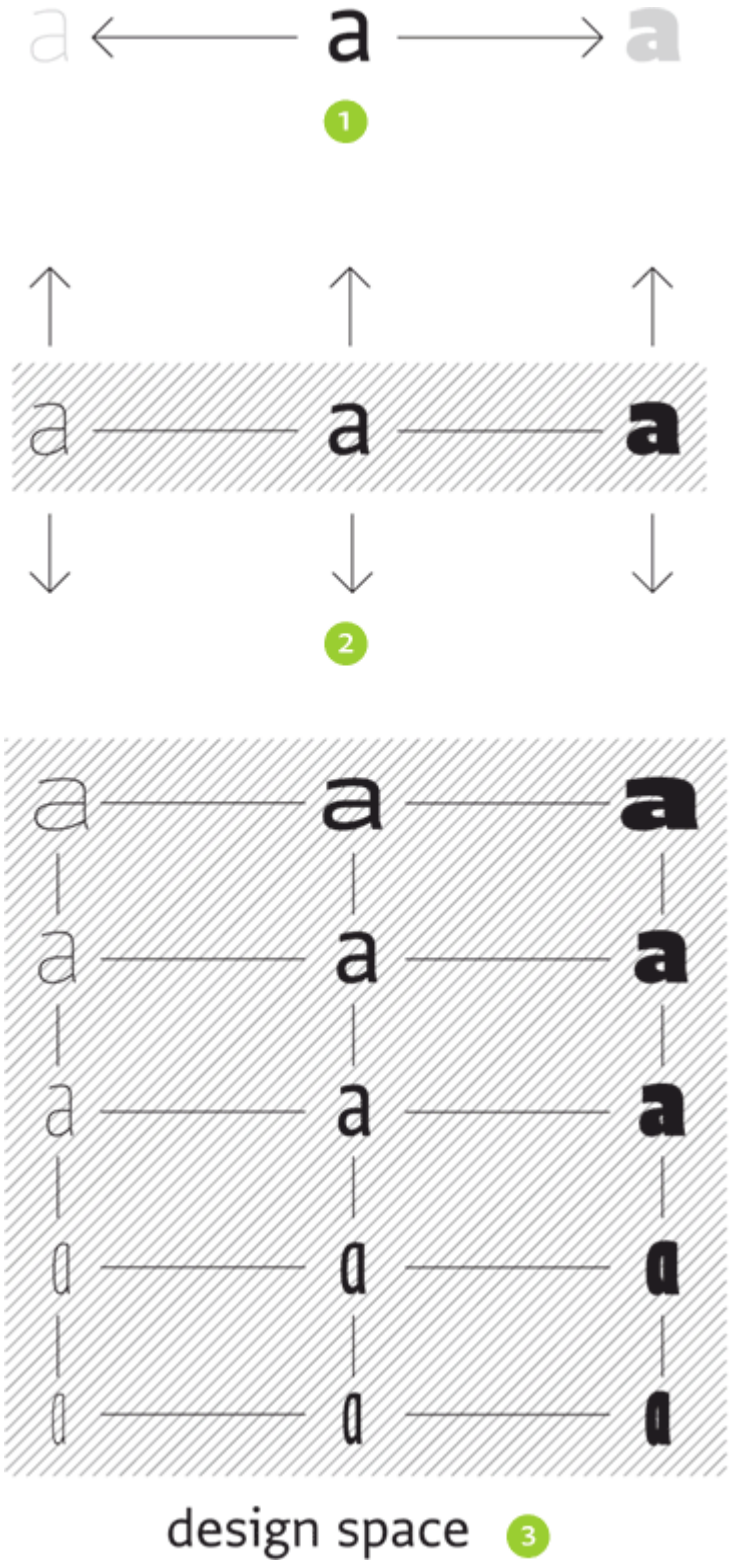
The Problem With the System

The nature of systems is to dictate a certain direction; the role of designers is to recognise when the original design idea ceases to work within the system, and then to create exceptions to the system rather than letting the system have a negative impact on the design. In large type families of related styles this impact is usually that while the starting point is usually characteristic and recognisable, the design becomes blander and less interesting as it is stretched across its variations. My intention was to design a highly flexible system while also ensuring that the resulting shapes were not just compromises, but maintained the strong personality of the Greta typeface.

Some of the exceptions in linear interpolation of Greta Sans type system: dots change from circular to rectangular; dollar signs lose their crossbars, and ‘g’ uses a single-storey form in Compressed widths.

For example, at the lighter end of the weight axis, the circular dot over ‘i’, (or in diacritics and punctuation) has to become a rectangle to avoid becoming too small. On the width axis, shapes would sometimes have to be modified even more dramatically: the double

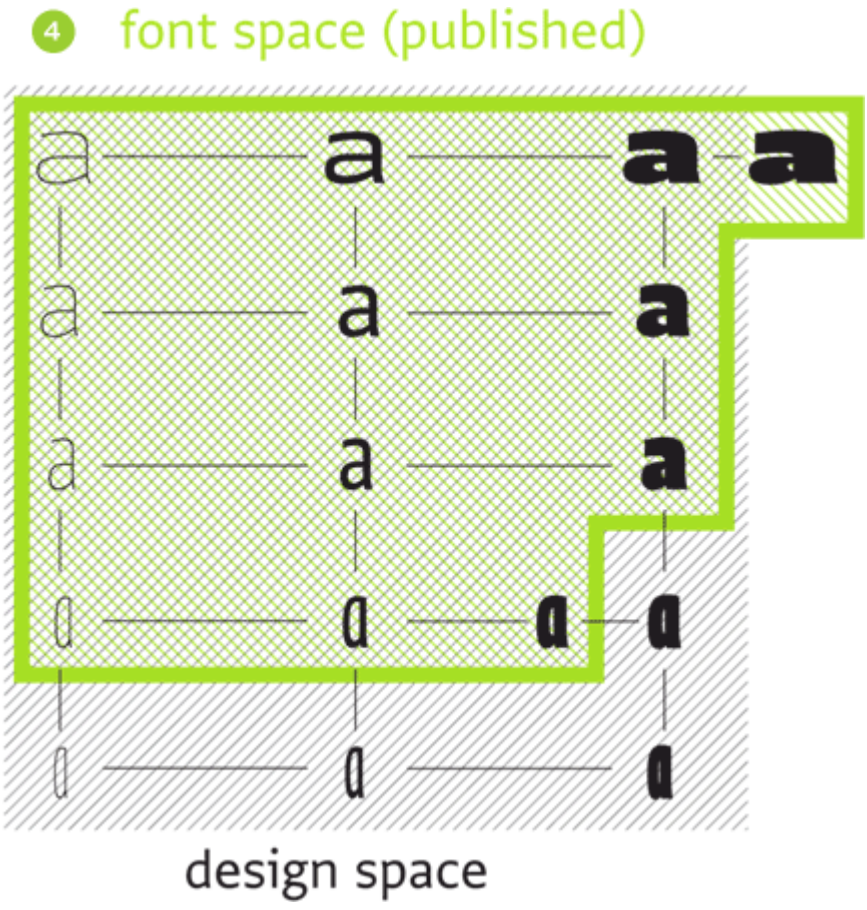
storey ‘g’ typical for Greta becomes a single storey ‘g’ in Compressed width, where the lack of space demanded greater simplification. Dollar and cent signs have full crossbars in the wider versions, but divided crossbars in the condensed versions. Dozens of other changes happen when taking the design to extreme dimensions, in order to maintain the general design characteristics and preserve the natural look of the shapes.



The process of drawing Greta Sans started in the middle of the imagined design space (1), and from there the extremes were explored (2). The idea was to adapt the design to the

available proportions, while preserving the main design characteristics. When designing design masters, we design the heavy weight as heavy as possible, even when the exact weights will not be used. It is easy to interpolate and make the Black weight lighter; making it heavier is complicated. This allows keeping the design space as large as possible (3), which is reduced later, when the final selection of styles took place. We decided not to use the Compressed Black as a master, and stepped it down one weight. We dropped also extra compressed styles. On the other hand, we've added an extra weight to Extended styles (Super), when we saw there was available space for an extra style.

While the Fedra Sans family was created from two design masters, Light and Bold, (Book, Demi and Medium were interpolated), Greta Sans' 13 design masters were individually designed, as were another 13 masters for italics, and all 26 included Small Caps. The masters (Hairline, Regular, Black), were interpolated and expanded to 10 weights. Four widths were imagined and implemented, resulting in 80 styles.



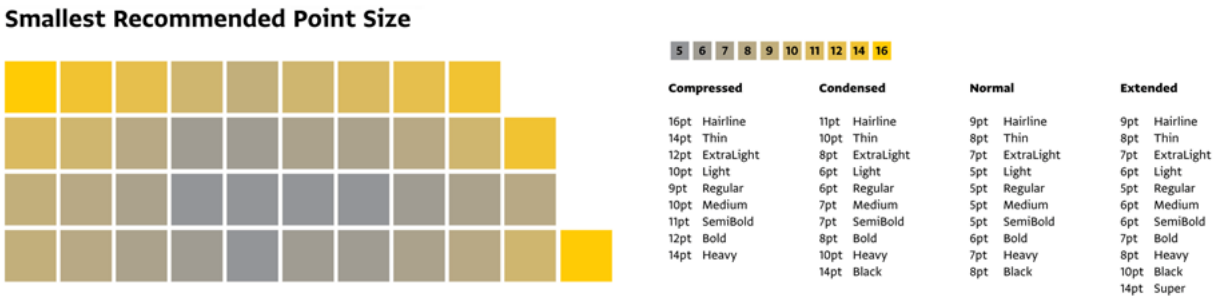
Continuous Optical Sizes

In the earliest age of movable type, optical sizes became the main organising principle of typefaces. For example, Jannon's caractères de l'Université from the 1530s include numerous optical versions ranging from 6 to 36 points, each slightly different. The design of the typeface would be reinterpreted at each given point size, often resulting in different

weights, different proportions, different letter spacing. These different designs would blend into a harmonious size progression and function as one design. Optical sizes disappeared with the transition from hot metal press to photocomposition sometime in the 1950s. After about 50 years of neglect optical sizes have made a comeback, and many typefaces now come with versions specifically designed for text and display applications. Optical sizes, however, represent a range of variations. In the old days, as in the Jannon example, typeface would come in as many as 15 optical versions. All the in-between sizes progressively added or removed features, getting continuously darker and looser when meant for small sizes, or continuously lighter and tighter for large sizes. The word continuously is important here. There weren't text or display versions as is common now. Each size was discretely adjusted to maintain the characteristics of the typeface.

Jannon's caractères de l'Université from the 1530s includes 15 optical versions ranging from 6 to 36 points. On the left is 7pt sample scaled 425% to match the 36pt version. Note the difference in contrast between the thick and thin strokes, and overall differences in details between the two versions.

Greta Sans is designed as a continuous optical size system. While the basic text styles (Regular) are spaced and optimised for small sizes, the surrounding extremes (Hairline, Black) are designed to be used as Display types, and therefore tightly spaced and kerned. The resulting interpolation then runs continuously from Display to Text to Display use. A similar pattern (Extended, Condensed, Extended) can be seen on the width axis, as the Regular styles are most suited for small text, and extremes are optimised for large sizes.



Greta Sans: all styles superimposed.

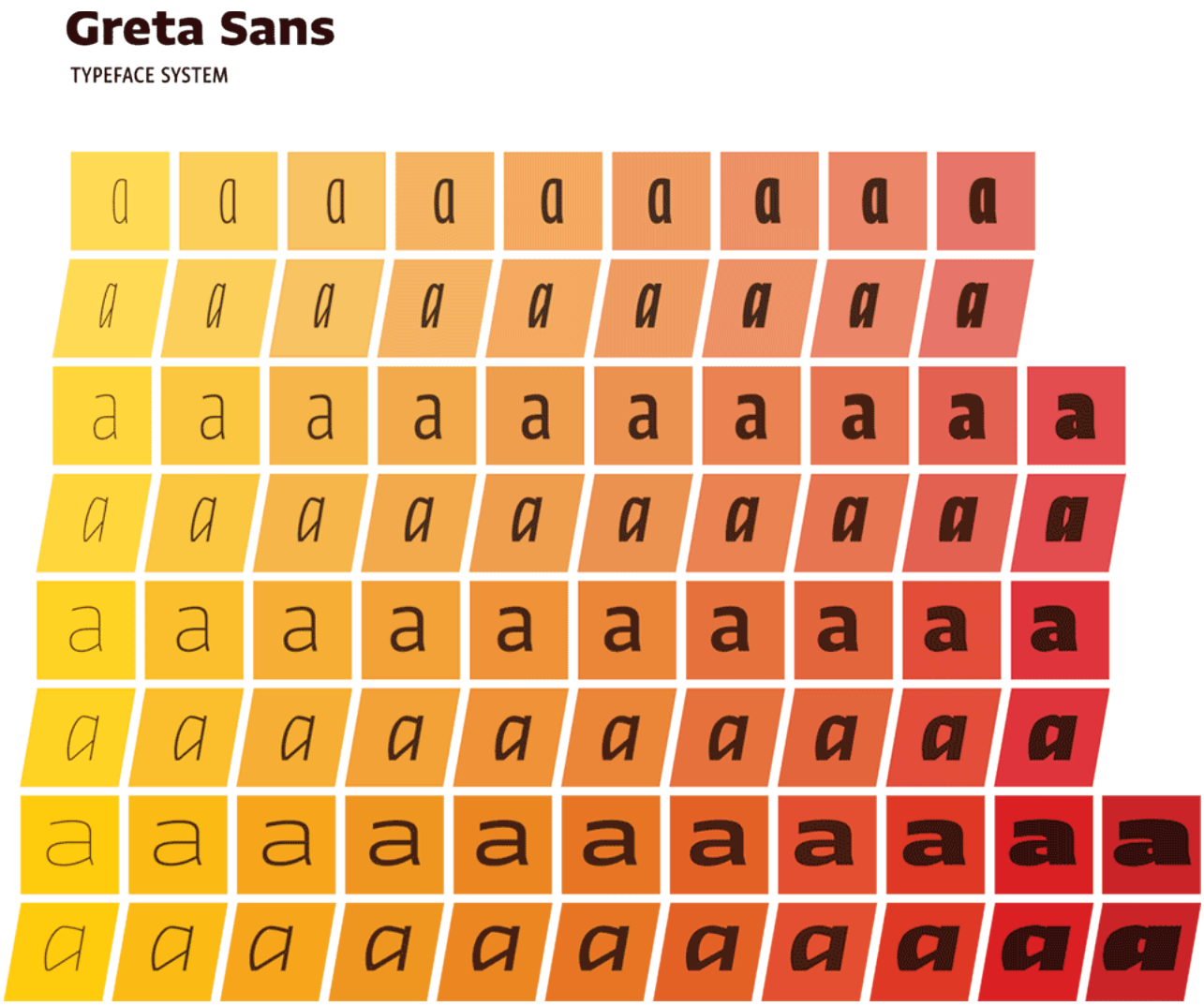
Design Space

While the key characteristics of most typefaces are defined by the outlines of the letterforms, Greta Sans' design also extends to the gaps between styles. All its characteristics, including the visual contrast between styles, weights and widths have been orchestrated into a unified typeface system. Greta Sans explores the entire space of possibilities and is designed for extraordinary design flexibility. It is a toolbox that addresses a broad spectrum of design situations from the simplest to the most complex, offering multiple options for establishing a visual hierarchy.

Next

Greta's Latin fonts set up some formal parameters, but the most exciting phases of this project are still to come. While such a versatile system of similar proportions is rare within the context of Latin typefaces, it is unheard of in the domain of non-Latin type. We intend to bring this system to a number of non-Latin styles planned for 2013–14. There is no reason why only Latin type should benefit from these advances in typography.

Greta Sans was conceived by Peter Biľak; designed and produced together with Nikola Djurek.



Garçon Grotesque: A Contemporary Interpretation of Copperplate Gothic

Night and Day Modes

Honesty in form is one of the major tenets of modernism. In other words, a design should accomplish a narrowly defined function in the simplest manner possible. This belief is extolled in many design disciplines, including typography. In 1931, Eric Gill wrote:

"The world is not yet clothed in garments which befit it; in architecture, furniture, clothes, we are still wearing things which have no relation to the spirit which moves our life.... The majority still think Gothic architecture to be appropriate to churches, tho' Gothic architecture is simply a method of building appropriate to stone and is not really more Christian than Hindu. We still make tables and chairs, even when we make them by

machinery, with the same ornamental turnings & cornices & so forth as when furniture-making was the job of a responsible handicraftsman." — An Essay on Typography, p. 6.

This attitude was influential. Designs such as Univers and Helvetica became, in the field of typography, a paragon of modernism — letterforms for a mechanized and commercialized society. It makes sense: Designers love the notion of a fixed form for a fixed purpose. There's an honesty and simplicity to it that we find appealing and comforting. But this is an aspiration, not reality. Often, old forms that dealt with an old purpose are reused for a new and unintended purpose. For me, this is the story of Copperplate Gothic.

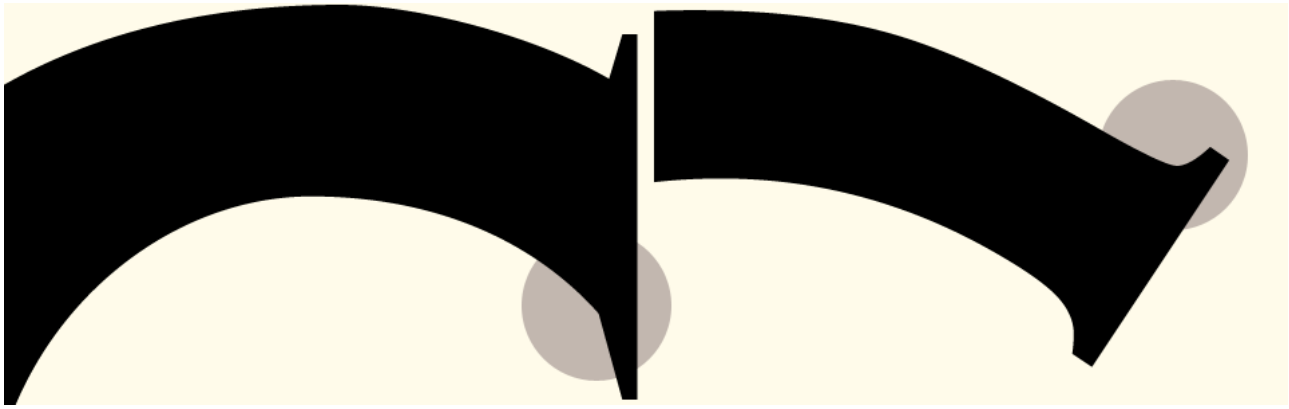
Garçon Grotesque.

During the late Industrial Revolution, engraving for commercial printing became very popular. Out of this emerged the engraver's sans serif. The letters carry small spur-like

serifs, added to ‘sharpen’ the text. These small spurs are practically invisible at small sizes, but when the letterforms are scaled up, then, if the engraver’s intent is to be honored, the small spurs should be removed. But Fredric Goudy, the designer of Copperplate Gothic, went in a different direction. It could be said that he behaved in a manner similar to that of graphic designers in the 90s. Those designers would take an Agate typeface and blow it up for the novelty of the resulting forms. They took forms designed and intended for one context and used them in another. Essentially, this is the story of Copperplate Gothic, the engraver’s sans serif used in an unintended context.

Early sketches.

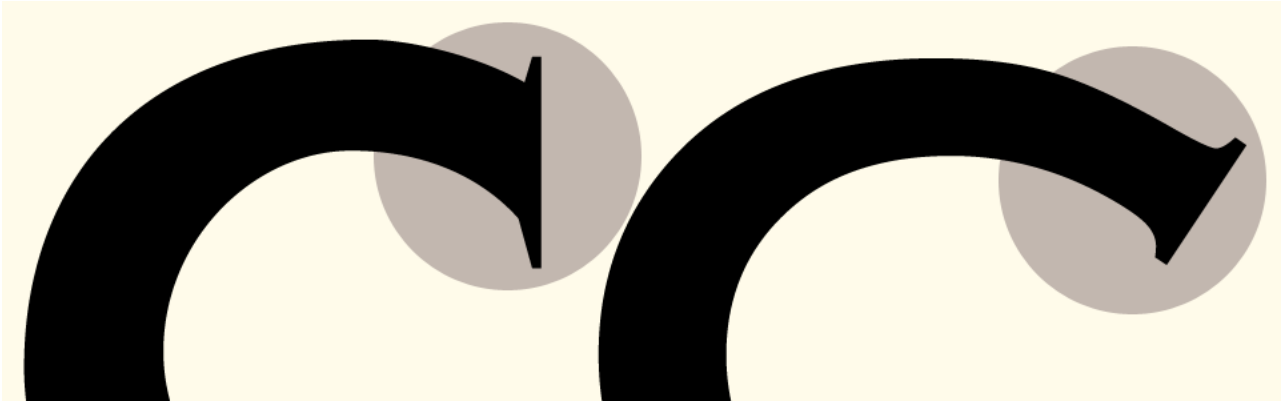
For whatever reason, Copperplate Gothic survived into digital, and has become shorthand for sophistication, elegance, and culture. Indebted to being pre-installed on most computers, Copperplate Gothic has become something of a go-to or default typeface in much the same way as Times New Roman and Arial have. But it is a lackluster solution. No lowercase, problematic letterform construction, limited language support, and paucity of weights are, in my opinion, major drawbacks in the Copperplate Gothic design. While attending CooperType, I asked myself, how should a contemporary Copperplate Gothic look?



Serif construction. Left: unbracketed slab or wedge serifs; right: bracketed or adnate serifs.

Methodology

Ever look closely at the spurs on Copperplate? Quite awkward, aren't they? In all the digital versions, the spurs are bracketed. Attaching spurs to these low contrast sans serif letterforms results in a dissonant hiss. Scaling these letters to large sizes turns that hiss into a screech. The first problem to solve was how to make these spurs work. After some time, I came to the conclusion that the best solution was to treat the spurs like regular serifs and construct them as unbracketed wedge or slab serifs. This recreates all the sharpness of the original, but with a much more satisfactory performance at larger sizes.



Terminals.

Another troublesome aspect is how the terminals are handled. For a design that has become a shorthand for elegance, the angle terminals of the capitals are anything but. This made sense for Goudy's original intent for Copperplate to be a work of pastiche, but in today's context, a better solution is required. Not unlike how a tailor hems his cuts, finishing Garçon's terminals vertically or horizontally helps give it a clean and orderly appearance.

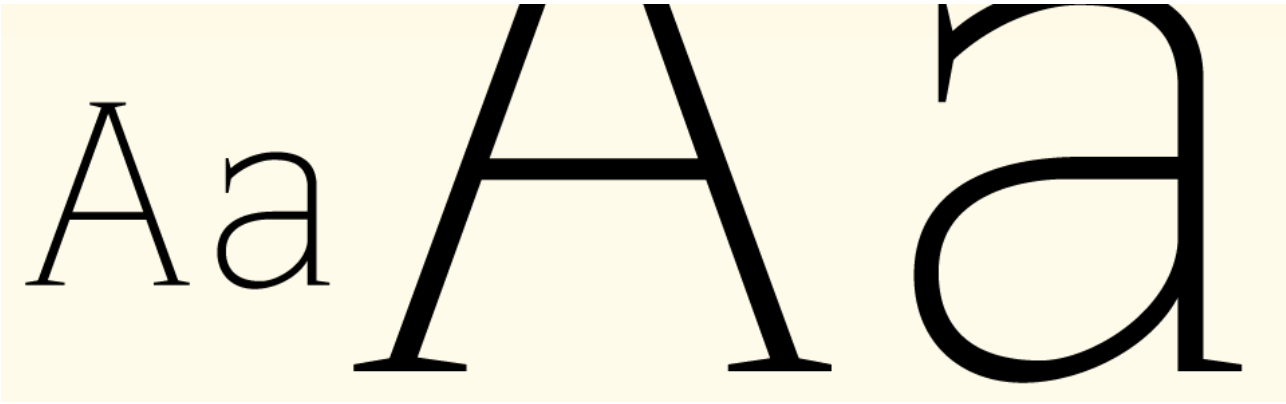
Placement of spurs / serifs.

Then there's the question of where to place the spurs. Adding spurs in every single instance would be overwhelming, so my priority was to add them while maintaining the overall typographic color and rhythm. If adding the spur improved the color, I kept it in; if not, it was omitted.

Lowercase.

All these decisions were made before I approached the lowercase. From the outset I understood the difficulty of designing a lowercase for this model. So, several strategies were used to make the spurs feel as natural as possible. The transitions in curved letters, such as **a**, **e**, and **c** were made with a high shoulder; that is, the curves moved relevantly abruptly from horizontal to vertical points.

Letters like **g** and **t** required another method. I looked to calligraphy to see where spurs could be added naturally and not detract from the overall color.



Garçon Grotesque Light.

Even as the final deadline for CooperType drew closer, I was determined to include multiple weights and small caps, which I felt were essential to showcase Garçon. I had drawn the bold weight in the second semester of CooperType and spent the third semester drawing the lightest weight possible. An extremely thin weight was not practical, as there needs to be some contrast between the main strokes of the letterform and the spurs. I rested on a weight ratio of 8 units for the spurs and 32 units for the vertical strokes in the Thin weight. Thanks to interpolation with Python, it was possible to build out the intermediate weights of Garçon in an reasonable amount of time, allowing me to focus my last remaining energy on the small caps.

At the time of the TDC exhibition, Garçon had five weights all with small caps. But I wanted much more for the retail release. Foremost, was to expand the character set. Some foundries publish these accented characters as a “pro” release at an additional fee. I disagree with this model. Just because you speak Croatian or Turkish, shouldn’t mean you have to pay more than a designer who speaks English.

Garçon offers broad language support.

I envisaged restaurants using Garçon Grotesque on their menus, so I included tabular figures.

The name Garçon comes from the French word for boy, but it is also used for young male waiters. In that respect, it's an appropriate name for this typeface, not only for the obvious reason of its intended market, but also in how I see this project in the context of my professional career. I finished my apprenticeship with Joshua Darden back in 2008. Since then, I've worked as a freelance graphic designer, spending my spare time cultivating my own typographic voice. But for the longest time, I felt like I was merely a shadow of

Joshua and, for years, I hesitated to even show people my work. This was true until I learned of CooperType and decided to apply. While in the program, a personal goal was to produce something I wanted the world to see, something that would crystalize all my training. It might sound grandiose, but I think I succeeded because of how simple Garçon turned out. It doesn't try to grandstand or impress with exuberance. It is simply an honest answer to the question: How to make something that I see everyday better?

Designers like the idea of complete control over their work, and we naturally strive to impress our peers. But it is easy for us to forget that to design is to make something that people will actually use. No matter how well we plan, where and how that design will end up is out of our hands. Moreover, we should not be asking solely whether it is novel or not but rather what problems the design solves, and how successfully it solves them. Garçon Grotesque was designed with this in mind. Even something that has descended into the vernacular, such as Copperplate Gothic, can be improved upon. — THOMAS JOCKIN.

The Questa Project

The Questa Project is a type design adventure by Dutch type designers Jos Buivenga and Martin Majoor. Their collaboration began in 2010 using Buivenga's initial sketches for a squarish Didot-like display typeface as a starting point. It was a perfect base on which to apply Majoor's type design philosophy that a serif typeface is a logical starting point for creating a sans serif version and not the other way around. The extensive Questa family includes serif, sans, and display typefaces.

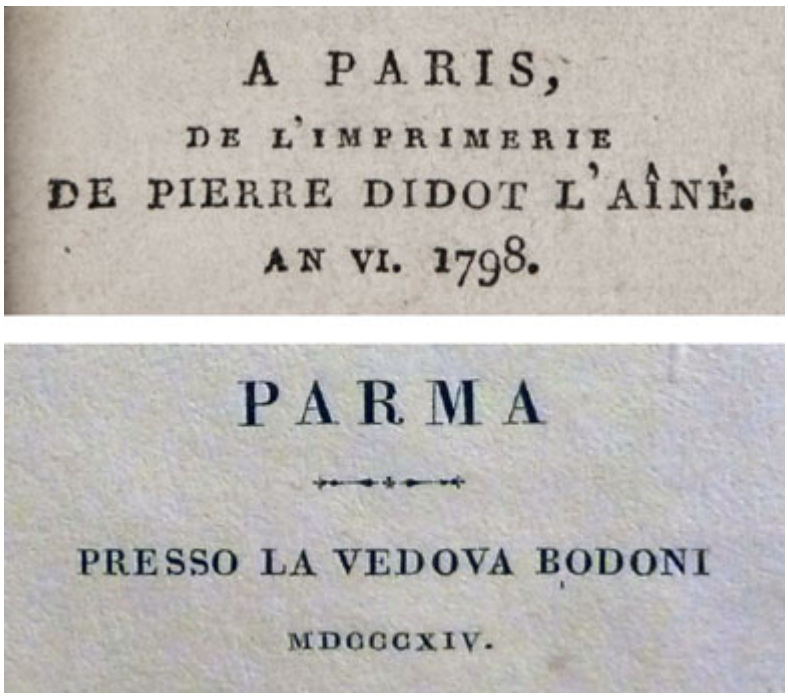
Questa, a serifed typeface

Historin
sparfuc.
qafligez

The initial sketches of Questa

First of all the text version of the Questa super family had to be designed, not in the least to serve as a basis for both the sans and the display version. Typefaces like Didot, Bodoni, and Walbaum were reviewed and some characteristics were used as rough guidelines for the design. To prevent Questa's shapes from becoming too clean and sharp, several features – not typical to Didot-like typefaces – were considered. The goal was not to make a revival of any of these three, but rather an original typeface.

Questa belongs to the group of Didot-like neoclassicist typefaces



Didot and Bodoni in metal type

Questa has smaller capitals and a larger x-height than Didot, making it better adapted to present-day needs

The contrast within Questa's characters is relatively high. At the same time the thin parts and the unbracketed serifs are strong enough to prevent the characters from breaking open. Modern digital revivals of Didot-like typefaces are often very thin, even compared to the original printed metal typefaces from around 1800.

Questa doesn't have the ball terminals typical of many Didot-like typefaces. Instead its shape is a teardrop terminal with a sharp-pointed ending. The proportions between x-height, capitals, and ascenders/descenders are very much adapted to present-day needs. This means, compared to Didot, the x-height of Questa is rather big and the capitals are relatively small. The inclusion of small caps, four sets of figures, ligatures and extended language support makes Questa a real workhorse typeface.

The italic of Questa – compared to a typeface like Didot – is more upright and less constructed. Terminals and serifs of the italic are treated in the same way as the roman to ensure that both styles will work together when they are combined.

Harlequin Synchronize Voltage

Harlequin Synchronize Voltage

Questa Italic, compared to Didot Italic, is more upright and less constructed

However, there is room for several style elements that can be traced back to Humanist or handwritten letterforms. This makes it difficult to classify Questa italic; it is in fact quite far removed from the typical Didot-esque italic style.

¶¶ *a*a *k*k *v*v *G*G *Y*Y

In Questa Italic there are several style elements that can be traced to Humanist or handwritten letterforms

z 235679

z 235679

Reversed contrast in the numerals of Questa Italic, similar to the contrast in the lowercase **z**

The numerals in Questa italic have a clearly different contrast than their counterparts in the roman. Where the stress in the roman shapes is in the vertical elements of the numerals; in the italic this is reversed, very much as can be seen in the lowercase 'z' of the roman and italic.

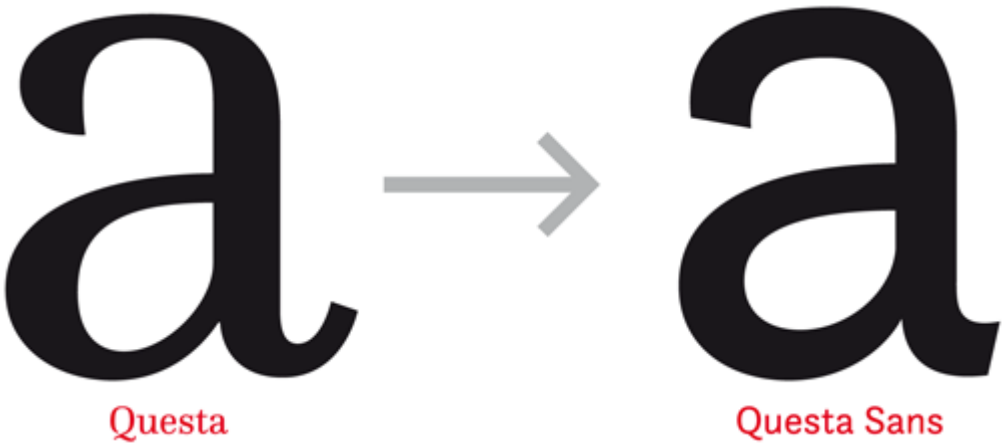
The strong text color of both roman and italic makes Questa very suitable for print as well as for use on screens. Questa comes in five weights in both roman and italic.

Light Regular **Medium** **Bold** **Black** SMALL CAPS 256 256 fk ffi

Light Regular ***Medium*** ***Bold*** ***Black*** *SMALL CAPS 256 256 fk ffi*

Questa Sans

From the start of their collaboration Buivenga and Majoor intended to design a sans serif counterpart that would simply be based on the shapes of Questa serif.



Questa Sans is simply based on Questa

In developing the sans there was no room for ‘niceties’ or ‘handsomeness’. The way the sans was going to look was a logical outcome of the process of cutting away the hairline serifs, changing the contrast, and optically correcting its shapes.

Questa Sans was derived by cutting away the serifs, changing the contrast and optically correcting its shapes

Ultimately the whole process of deriving a sans from Questa serif resulted in a typeface much in the spirit of the first serious sans text faces, like Akzidenz Grotesk. In this context the history of Akzidenz Grotesk is quite interesting. It was created shortly before the year 1900 as one of the first mature sans serifs suitable for setting large amounts of texts. Given the fact that before that time there were hardly any serious sans serifs, it could be assumed that Akzidenz-like typefaces were more or less based on the serifed text faces that were fashionable at the time, like Walbaum and Didot.

Akzidenz Grotesk could have been derived from the group of Didot-like classicist typefaces, whereas Helvetica and Folio just imitate Akzidenz Grotesk


a
Bodoni
1796
a
Didot
1784
a
Walbaum
1804
a
Akzidenz Grotesk
1898
a
Folio
1957
a
Helvetica
1957
a
Univers
1957

Advertisement from 1899, announcing 'Accidenz-Grotesk'

This is exactly the path that has been followed during the design process of Questa Sans: from a neoclassicist serifed typeface to a modern sans, rather than imitating existing sans typefaces.

In comparison: typefaces like Folio or Helvetica – both made in 1957 – were not based on a serifed typeface. Instead they were commissioned as an immediate response to the highly

popular Akzidenz Grotesk. Helvetica became a quite literal imitation, a sans that was based on a sans.

The word **Harlequin** set in Akzidenz Grotesk, Helvetica, Folio, Questa and Questa Sans

Questa Sans, in contrast, simply bases its shapes on its serifed counterpart. In this way most of the identity and personality of Questa Sans originates from Questa serif.

Where the italics of serifed typefaces are considered a fully-fledged member of the typeface, it is unclear why the italic shapes of most sans typefaces are so underestimated. Little has been done to distinguish them from the roman, apart from the fact that they are sloped.

Aa Ee Gg Kk Qq Rr Vv Yy

Aa Ee Gg Kk Qq Rr Vv Yy

The italic of Akzidenz Grotesk is not more than a sloped roman. To be able to distinguish itself from the roman it needs an angle of no less than 13°

In contrast, the italic of Questa Sans is modeled on the italic of its serifed counterpart, which results in a 'real' italic. The whole construction is essentially different than that of the roman. The angle is not more than 8°, better than the 13° to 16° that most sloped/oblique typefaces need.

Harlequin Synchronize Voltage

Harlequin Synchronize Voltage

Questa Sans is based on the 'real' italics of Questa. They have a slope of not more than 8°

Because Questa Sans shares its basic forms with Questa, they can be perfectly combined. Questa Sans comes in five weights in both roman and italic, including small caps, four sets of figures and ligatures:

Questa Sans comes in five weights in both roman and italic

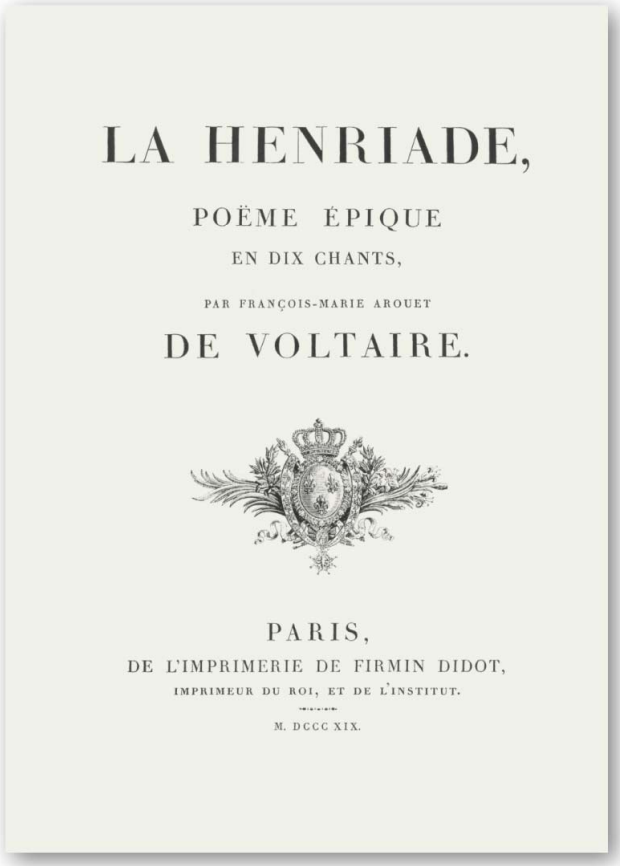
Light Regular **Medium** **Bold** **Black** SMALL CAPS 256 256 fk ffi

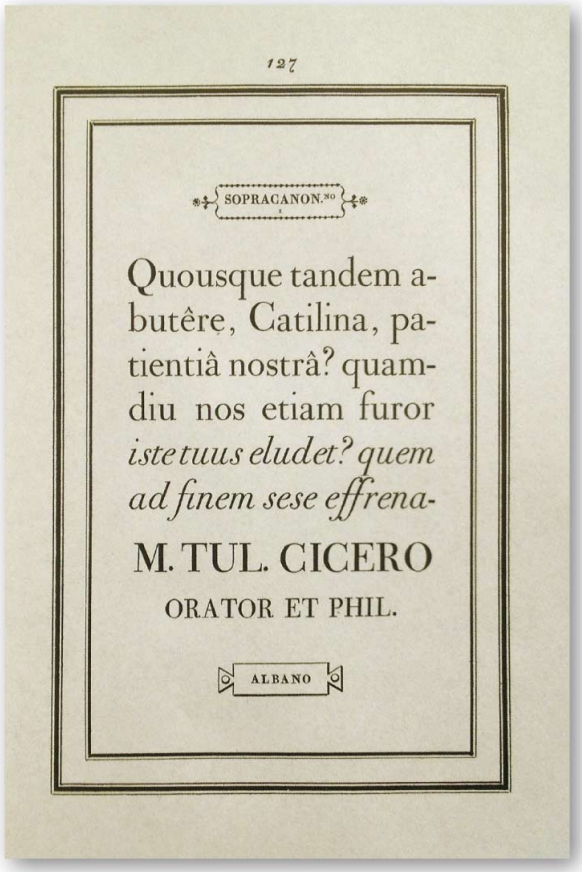
*Light Regular **Medium** **Bold** **Black*** SMALL CAPS 256 256 *fk ffi*

Questa Grande

The third version of the Questa Project is called Questa Grande. It is based on the text version of Questa. This display or headline typeface, with its very thin hairline serifs, is designed in the spirit of the best work of Firmin Didot and Giambattista Bodoni.

Examples of types by Firmin Didot (1819) and Giambattista Bodoni (1818)





In all weights of Questa Grande the thin parts will have exactly the same thickness

Where the text version of Questa has an almost workhorse-like quality, Questa Grande is more elegant and refined in the details. The sharp-pointed teardrop terminal found in Questa have been replaced by a crescent-like shape. The light parts and hairline serifs are unquestionably thin, and interestingly in all weights of Questa Grande the thin parts share exactly the same thickness of stroke.

***

Martin Majoor (b. 1960) started his type design career in the mid-1980s. He designed several award-winning typeface, like Scala, Seria, and Nexus. Worldwide the Scala family

is a bestseller and it has established a position as a ‘classic’ among digital typefaces. Besides working as type designer, Majoor has designed several books, from poetry to complex scientific books. Worldwide he gives type design workshops and lectures at Schools of Arts and at design conferences. He has written articles for magazines like *Items*, *2+3D*, and *Eye*, and has contributed to several books on typography. Majoor works in both The Netherlands and in Poland.

Jos Buivenga (b. 1965) can be passionate about a lot of things. He loves to paint, listen to music, brew an almost perfect espresso... but nothing challenges and rewards him more than designing type. Buivenga is the founder of Exljbris, the one-man Dutch font foundry through which he releases and offers his typefaces. In 2008, while still working as an art director at an advertising agency, he released his first commercial typeface Museo while offering several weights free. That strategy paid off and Museo became a huge bestseller. Partly thanks to that success he now calls himself a full-time type designer.

Questa is available only at Fontspring. The three regular fonts (Questa, Questa Sans, Questa Grande) are free. For further information visit the Questa website.

Making Signo

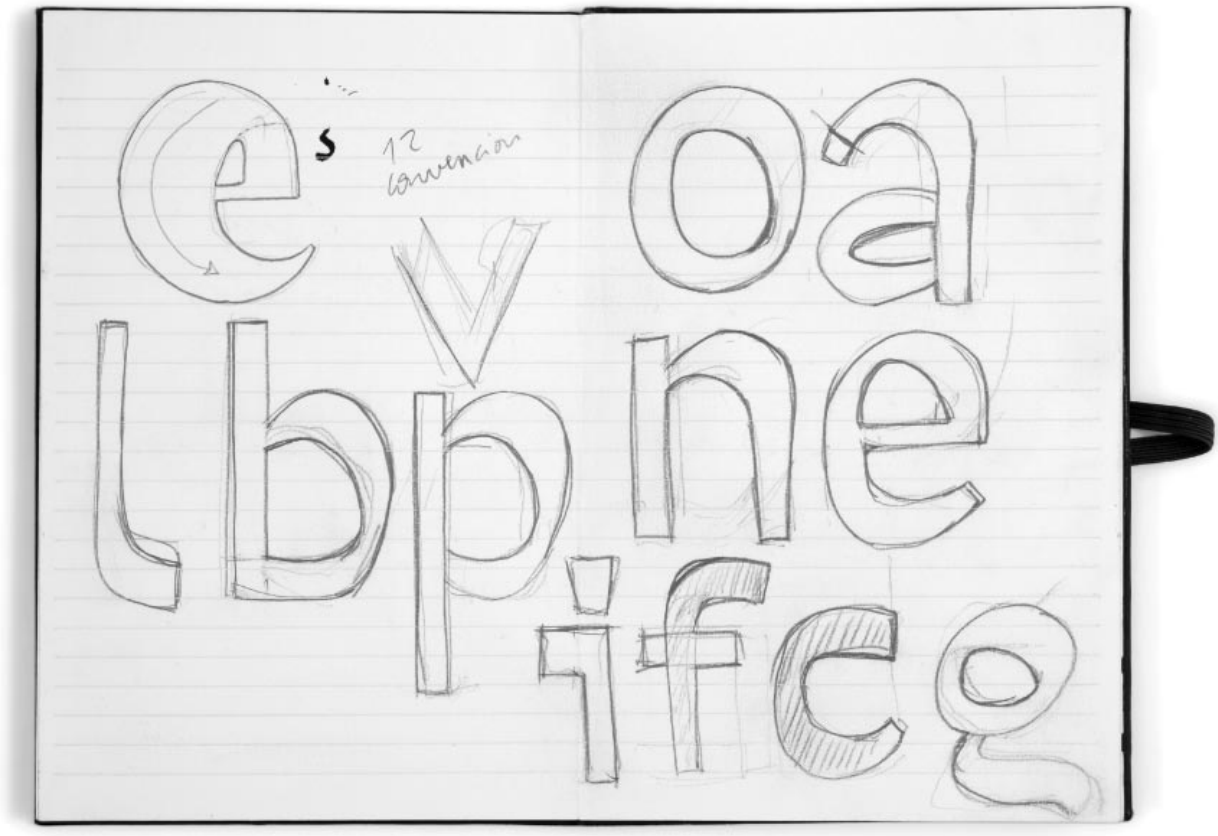
Every typeface taken seriously enough by its designer will teach valuable lessons. From Signo I learned that in designing a reverse contrast typeface, the challenge isn’t so much in the contrast, or in the black part of the letter for that matter. The conventions for that part are being disregarded, played with, reversed, so the white part of the letter has to assume greater control. And it leads one to rethink what ‘reversed’ really means.

Signo started as an attempt at designing a sans serif with reverse contrast. However, I didn’t really want an eccentric type suitable only for headlines; rather I wanted to design a

usable and versatile typeface and try to use the reverse contrast in service of readability and functionality. I had in mind some advantages of the reverse contrast: the concentrated weight at the top and bottom of the letter would favor the horizontal continuity in lines of text, and the thinner stems meant that the letters could be narrower — a good thing for a versatile and functional typeface. The x-height could also naturally be taller, since the black of the letters would be “expanded” vertically.

Reversing the contrast

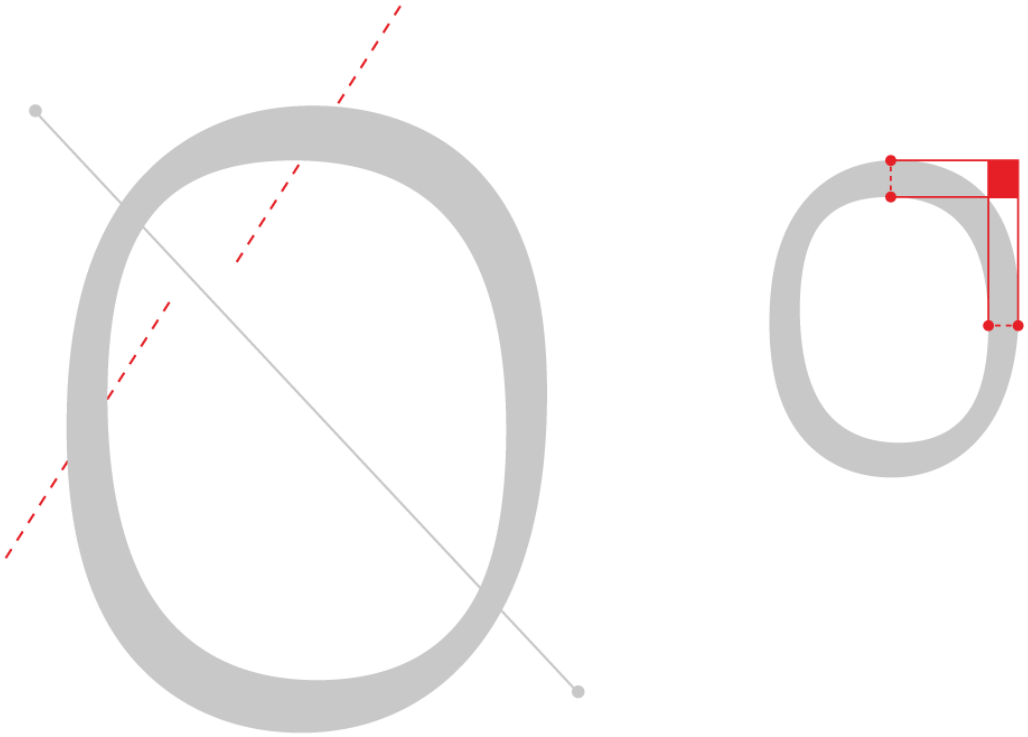
In the first sketches I tried some letters with reverse contrast, in witch the contrast wasn’t merely reversed, but had a deeper relation to a calligraphic modulation of the strokes. These shapes were fun but I also wanted to design a usable typeface both for headlines and text, so after the first outlines in FontLab I soon went astray from these sketches towards more conventional shapes. That begun a long process of going back and forth, between an experimental and fun, but less usable approach, and a conventional but functional one.



At this point I was thinking too much in terms of 'reverse contrast.' I was going for a logical, mathematical approach, so my objectives were being reduced to the mere reversal of the conventional ratio between thicks and thins. And sure enough, the results were quite simply ugly letters (not shown here). Reversing the contrast, felt more and more like an arbitrary act, an imposed mathematical inversion of a basic optical principle of letter forms. In Signo, I was trying to find a way to make this feel natural. How could a reverse contrast typeface be designed in a way that felt natural?

I knew I didn't want anything to feel artificially reversed or strange in Signo, even if the horizontal strokes were heavier than the vertical strokes. I slowly left the notions of

contrast aside and approached the shapes more freely. That meant coming to terms with the first sketches and realizing that If the stress axis is rotated far enough, the weight would shift towards to top and bottom parts of the letters, without anything having to be artificially inverted. Most importantly, I didn't have to insist so much on notions of contrast, which is just the rate between the thick and thin parts of the strokes, which in turn are only the black part of the letter. This return to the sketches also made the designing of Signo really fun again.



Shifting the weight towards the top and bottom.

The counters

Since I stopped concentrating so much on the strokes, I began playing more with the angle of stress as the commanding principle for rotating the different concentrations of black around fixed counters. The shapes grew increasingly more organic and playful, a bit freer from the traditional conventions (or reversed conventions) in sans serif typefaces, and the counters began to rule the design. In a way the black felt like soft, pliable matter, easy to mold around hard and solid white shapes. The black in Signo, is 'blobby' with an asymmetric distribution of weight, but it is shaped around solid, open counters, which provide the order and rationality I was looking for.

Floating effect

Drawing from Roger Excofon's idea of shifting the weight to the top half of the letters in the beautiful Olive Antique, In Signo too, the black is distributed asymmetrically around the counters. The letters are heavier at the top, with more concentration to the right. This way, especially when set big, the letters seem to be lifted up slightly. The stems are also shaped to accentuate this effect, with some stems curving outwards at the top, while others shrink slightly in width towards the baseline.

Metrics

The constant element of the design process, even with all the experimenting across an entire year, were the vertical metrics. That probably had to do with the use I had in mind

for Signo, from the outset. I imagined a charismatic yet versatile typeface used in magazines for both headlines and text. The ascenders and descenders are short and the x-height is relatively tall, facilitating open counters. Good proportions for smaller text sizes, but also for punchy headlines.

The family

Signo comes with 6 weights from thin to bold. The matching italics have a cursive flavor and will add warmth and variety to the page. The weights include two variations for text, regular, and book. The Regular provides stronger headlines and darker captions to match the main text, while the book is a lighter option for text.

Biome – the making of a typeface

A biome in nature is essentially an ecosystem. It's also the name for my new typeface family. And now that the 14-weight Biome™ Wide family is complete, I'm able to look back on the process.

The drawings that led to Biome (previously known as Nebulon) were completed in 2006, but I discovered, when I uncovered the drawings recently, that I had been thinking for a long time about various unconnected concepts that eventually worked their way into the same typeface. I was surprised to realize how many different ingredients went into this

design. Obviously, other type designs were considerations throughout the process, but things besides typefaces tended to make their way into the stew of ideas that eventually got synthesized into the new typeface.

In 2002, I had been sketching a very rectangular, vaguely calligraphic sans design. Notes on the pages referred to something square, futuristic and mechanical. But like most of my type designs, some organic elements couldn't help but creep in. I continued to consider this idea. Digital trials showed something square, blocky and with sharp, angular cuts at joins.

Starting around 1990, I was interested in midcentury modern design, particularly furniture and architecture. I found I liked certain traits that were prevalent: minimalism and biomorphism. In contrast, I was just as strongly repelled by the barren and overly rational elements of the period. I still think that modern architecture and design could stand to be more human and biomorphic, even if it remains minimal. "Organic modernism" was a

subset of the design movement that, at least in concept, I could appreciate. It crept into my drawings for houses, furniture, and eventually letterforms.

For a number of years, I've tried to imagine letterforms with outside contours that follow the shape of a grotesque but with inside contours that follow the shape of something more open and humanistic. What would result? Eventually, I found a formal entry point for an experiment: subtract the inside counter form from the outside shape. But rather than overlap existing typefaces, I wanted to start from scratch with solid shapes. Initial tests were intriguing, though the limited characters weren't enough to be conclusive.

In March of 2006, I sketched and digitized a keyword in Light and Bold, Wide and Narrow. In outline form, the figure/ground issues weren't as evident, while curves and shapes were emphasized. I remember feeling like I was on to something.

Proofs, in clean black and white, showed other aspects. One result that I liked were letter shapes that seemed "spooky." Pointy terminals at the bottom of h, m, and n gave the letters a kind of haunted, ethereal quality, like eyes of a skull. An intriguing, unexpected effect.

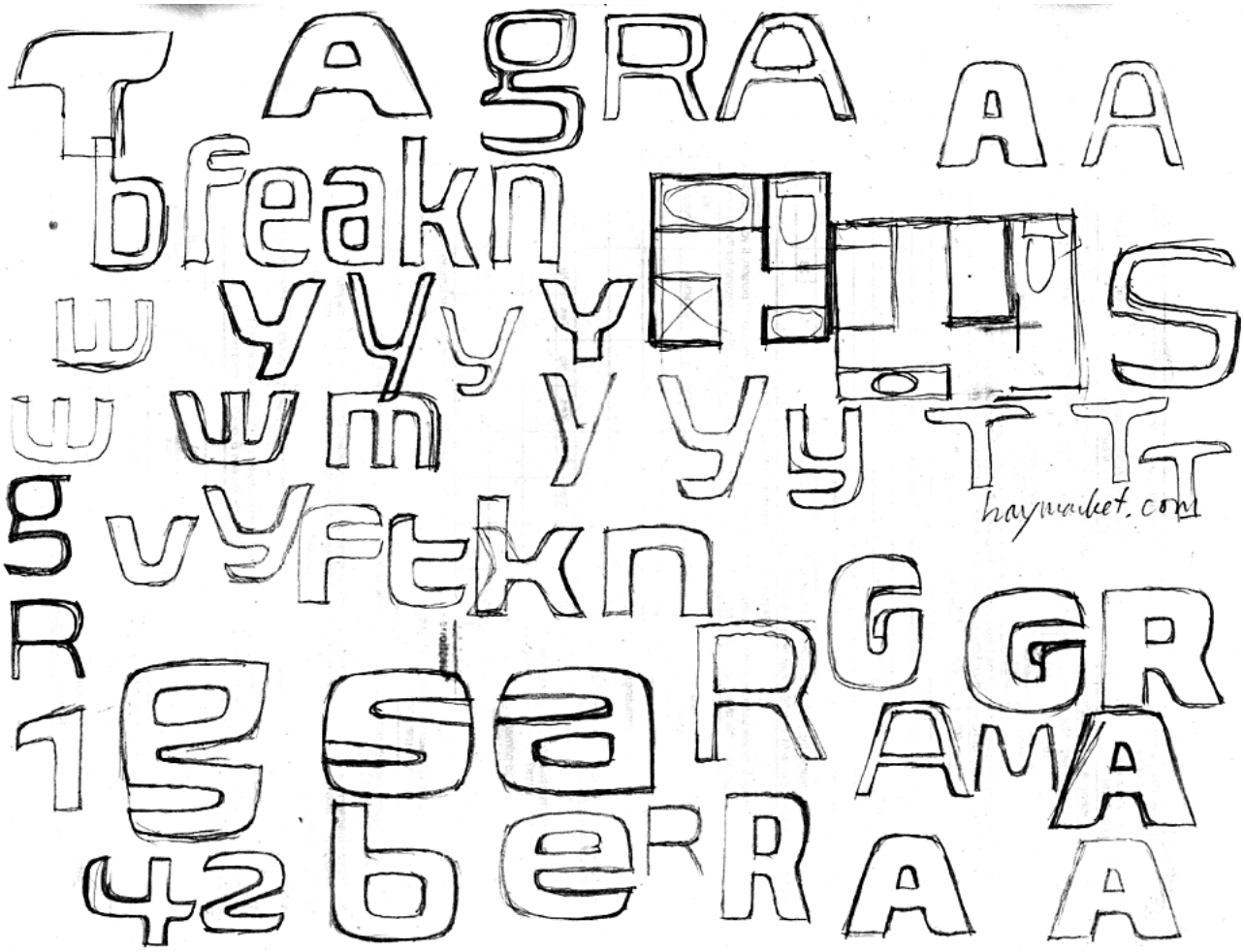
Certain letters clearly could not endure the “subtraction” process without becoming mangled, oversimplified or just awkward. Angled or straight letters like V, K, R and H resisted this subtraction. I experimented with making the shapes more round and soft, rather than square with round corners. The soft extreme was so loose and waggly that the counter shapes became active and chaotic. The pointed vertical terminals on h, m, n, u kept the design too unsettled. And as the wide master was the primary one I was working on, I realized that feature fought with the horizontal flow of the design. Losing that intriguing element improved cohesion, so I cut them. I started to see a midcentury modern flavor in some of the shapes, I think due to the width. Since the ellipse wouldn’t apply to angular letters, what kind of theme could harmonize with them? K and k were attempts to graft a Danish Modern shape aesthetic onto the original theme. All those organic furniture shapes bubbled to the surface.

A more faceted, hard version seemed like a solution until proofs appeared, clearly showing a very dated, tiki, retro feel. Much too limited in use, and now evoking a woodcut rather than an abstract, super ellipse. Animated yet homely, not futuristic. Biome already referred to the Eurostile® design in its squarish shapes and wide stance, and with Eurostile’s dated feel, Biome couldn’t keep this additional jauntiness. But something of the tension and vitality of the faceted version was interesting, something the earlier sans also had. Between the soft and hard extremes I found an ideal shape. It was something organic and soft, yet compressed and taut – a lively super ellipse.

These shapes were not easy to represent smoothly in the PostScript format. The proportions and shapes in each master were delicate and fussy to digitize, and they didn't interpolate particularly well. Intermediate weights had curves that tended to look dead and overly squared. Since the lively yet taut quality was what differentiated Biome, I added intermediate masters in the center of the design space to control the shapes throughout the range. At this development stage, the width range of the masters was much more extreme than the final fonts.

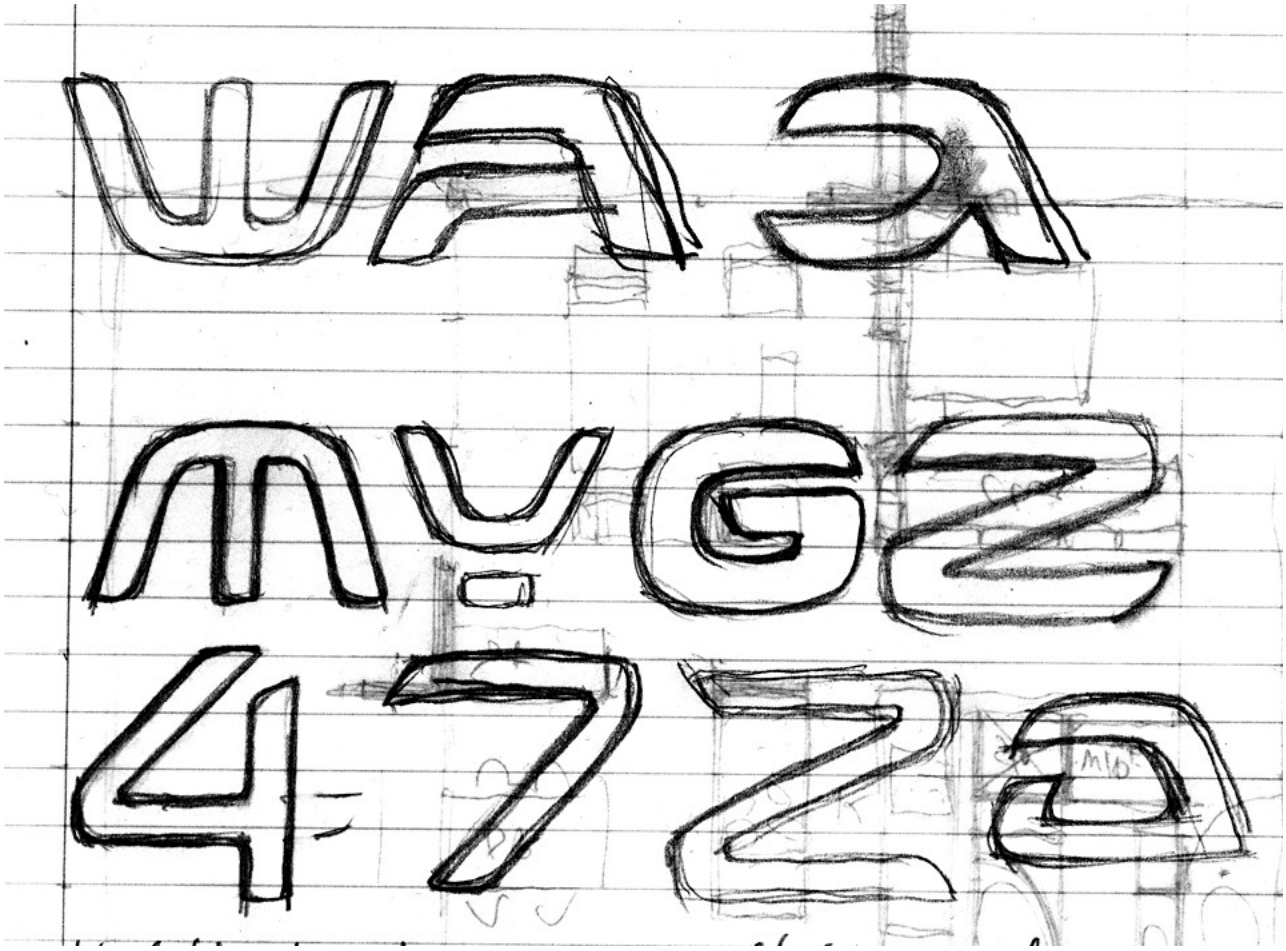
I made a survey of the existing square or futuristic sans designs to see if the traits or feel of Biome overlapped with other designs. There were quite a few futuristic sans designs, some very prominent, like the Eurostile, Handel, and Neuropol™ designs, and others less exposed, like the Quagmire™, Cocon™, Korataki™, Galaxie™ and Rogue Sans™ typefaces. Many of these exhibit traits I wanted to avoid in Biome. Most are based on hard geometry or modular, grid-based schemes, or in the case of Eurostile, a conventional grotesque structure. Many modular and futuristic typefaces are spaced too tightly for use at small sizes, and I wanted Biome to feel calm, humane, open and sleek.

I typically sketch letter shapes over and over, throughout the process of development, so that while the outlines are evolving in digital format, I'm testing shapes on paper at the same time. Because of the number of iterations the basic shapes underwent, it was fortunate that I had constrained myself to keywords throughout the process. Pencil and paper were always handy, and for me, there's still no better way to test out ideas than to draw them. Not every sketch ends up digitized, and not every digitized shape ends up in the final design. It pays to resolve all the important design decisions of a typeface before finishing the character set, especially with a large weight range.



Once the keyword was settled with Biome, it was time for some editing. It was visible to me in the keyword that so many disparate concepts had been crammed together. I had to abandon shapes that adhered to those concepts when they didn't harmonize with the rest of the alphabet. The counters of a, s, g became less simplistic. The corners of a, h, m, n and u became more balanced and quiet, and the correct radii for inner and outer corners of A, K, V, W, etc. were settled. Diagonals were made very slightly curved. Many of the alternates I had tested were discarded. At this point, I finally considered that Biome could be finished and released, rather than remain a frustrating experiment.

Clearly a display design, the round corners and soft shapes lent themselves not only to “futuristic” applications but also to more sporty, slick and masculine ones. The less of the retro feel it had, the more versatile it became. Some of the default shapes of Biome resulted in a moderately unconventional and “futuristic” appearance. I thought that by substituting in a few glyphs, the effect could be made either more conventional, or more futuristic and abstract. I tested many alternate shapes but kept relatively few of them, since they had to blend with the rest. I settled on a conventional set and an abstract set, which would be accessible as OpenType® features.



Because I had kept a very large x-height throughout development, I discovered when I thought about small caps, that they could be the same height as the lowercase. On developing the small caps, I realized that some of the lowercase shapes could double as small caps, as in c, o, s, v, z. Having this versatility of shapes, and the various alternates,

gave me the idea for a unicase set that would use a mix of cap and lowercase shapes. I eventually decided that this set would have absolutely no extenders, giving rise to the unconventional small cap q. This feature included its own set of figures, also matching the x-height.

Biome went from an unwieldy, conceptual experiment to a cohesive type design. The creation process was similar to developing a complex recipe that had to simmer over time, while ingredients married, in order to arrive at its own flavor. I have called Biome a retro-futuristic, soft display sans. It is a hybrid of humanistic and mechanistic. The design's biomorphic traits are amplified at larger sizes, and its mechanistic traits are more evident at small sizes. Biome is also spaced for a wide range of sizes, though I think it performs better in display. The design retains a retro flavor, a paradox with "futuristic" designs. "Futurism" of any age always shows its origins eventually. Biome comes pre-aged.

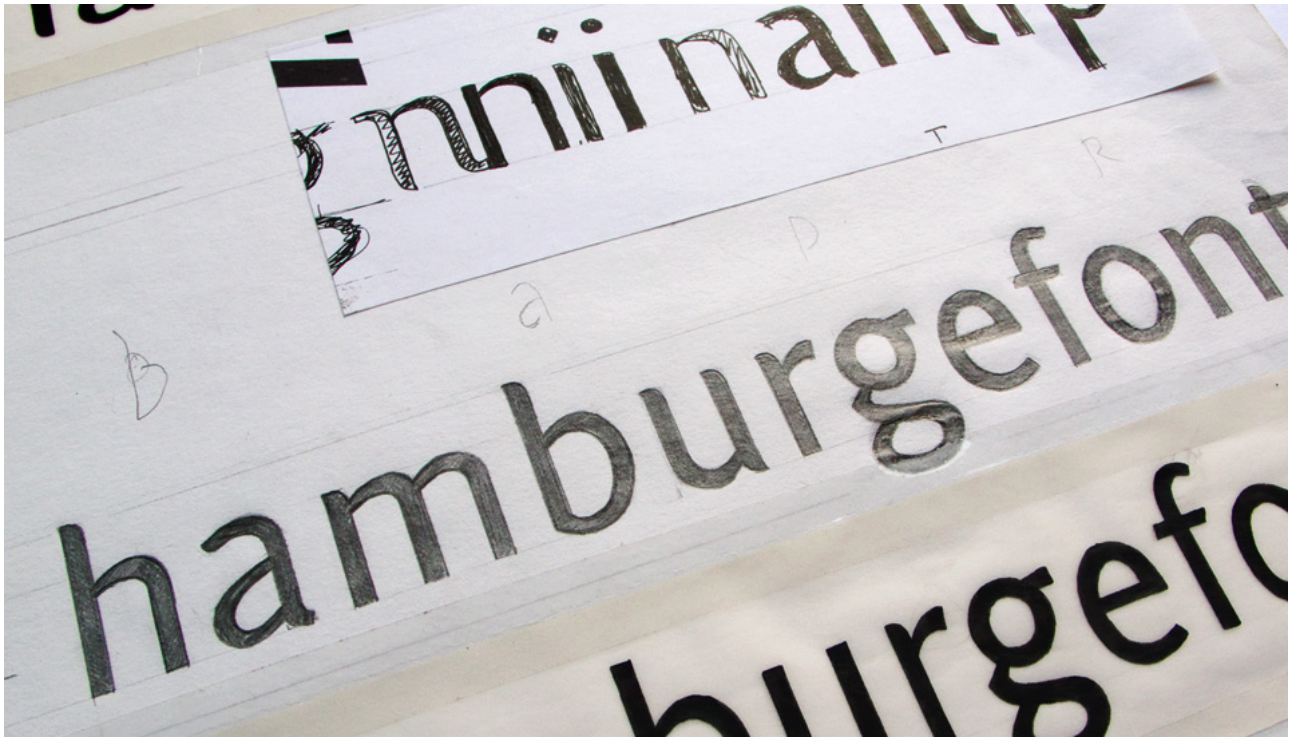
Carl Crossgrove is a type designer living in the San Francisco Bay Area. He started lettering and calligraphy studies at around the same time he learned to read. He is now employed by Monotype Imaging, designing typefaces for custom clients and the company's retail libraries. His retail type designs include the Beorcana™, Mundo Sans™, Reliq™ and Origami™ typefaces.

Making Acorde

After five years of intensive work, my type family Acorde is finally on the market. It is a reliable workhorse for large, demanding design projects. The typeface's name is derived from *a cor*porate *de*sign typeface. However, Acorde is not only suitable for corporate design programmes but for information design and editorial design too.

Overview of Acorde. The type family consists of 14 styles, with 925 glyphs per font.

Work on Acorde began back in 2005 as part of my graduation project in the *Type and Media* course at the Royal Academy of Art in The Hague. Recently several magazines, writing about the type family's release, asked me about the booklet I created in which I outlined Acorde's early development. I had not looked at the booklet in years and was surprised to find that the aims outlined in the booklet have been met.



First sketches for Acorde, dating from January 2005, The Hague.

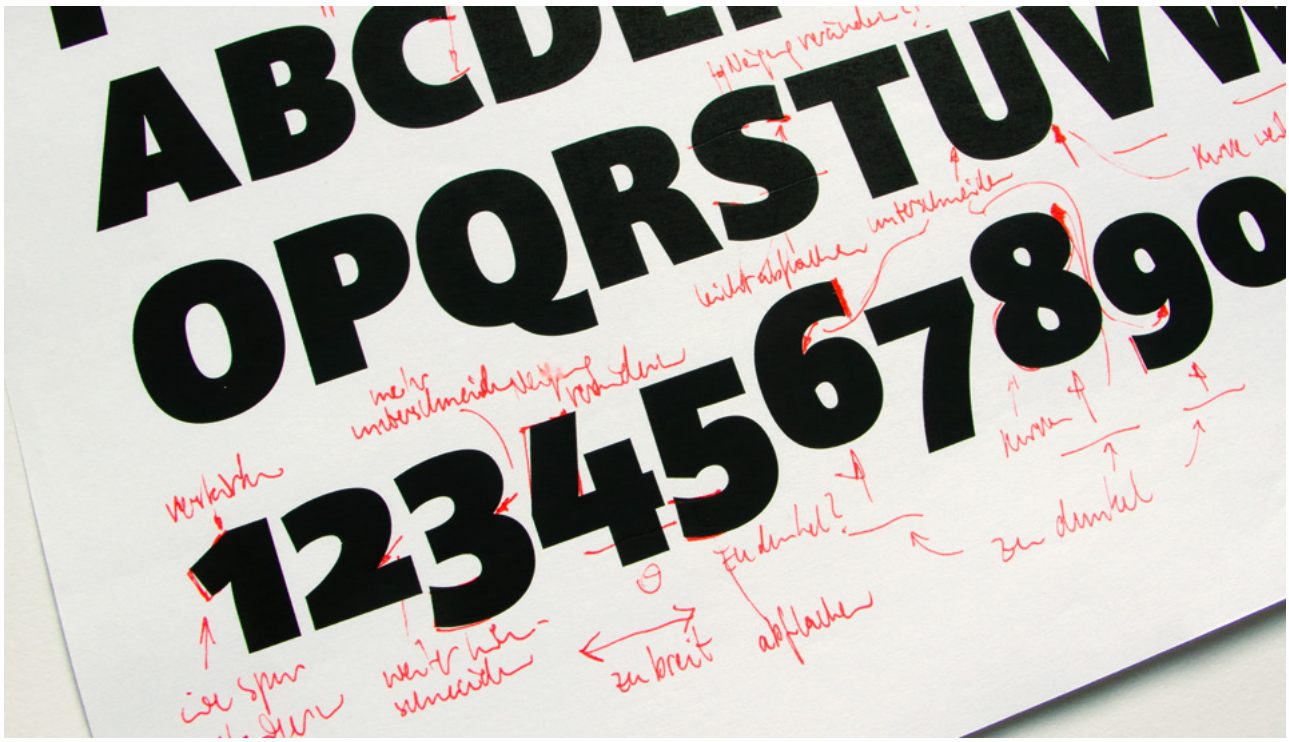
For such an ambitious project, with 14 styles and 925 glyphs per font, my time at *Type and Media* was of course too short. But the time I spent studying type design there was so full and intense, that I continued to profit from what I had learned during the following months and years. I wasn't able to immediately put it all to use, but in time those skills developed, along with my eyes.

Longevity

One of the goals I set when I started designing Acorde was to make it long-lasting. It is especially important that a typeface conceived for the corporate field is able to last for a long time and keep up with the longevity of a good logotype.

Of course a typeface designed for corporate use should have enough character and personality to differentiate it from the competition. But at the same time the shapes should not be too loud and expressive at the expense of becoming quickly outdated. The design of such a typeface (like the design of a good logotype) should not be caught up in current tastes. Its qualities should lie in well chosen proportions and a well balanced ensemble — it should be timeless.

That Acorde was developed and designed over a long period, probably contributed to Acorde's 'timelessness'. I guess that if the the letterforms — over the course of five years — did not bore me, then perhaps others too would not see them as the product of any particular time.



Corrections on a print of Acorde Extrablack, dating from January 2008, Vienna.

For all sizes

Acorde was designed for settings at a broad range of different sizes, from continuous text to large headlines and even larger signage. Acorde's characterful details become more visible in those styles where personality is desired and needed. In big sizes, in headlines, the typeface appears strong and expressive and makes short and distinguished messages very powerful. In small sizes and in the lighter weights those details become less noticeable; they do not ask for too much attention but rather add to legibility and to the balanced appearance of the typeface. These are characteristics that make it a real workhorse.

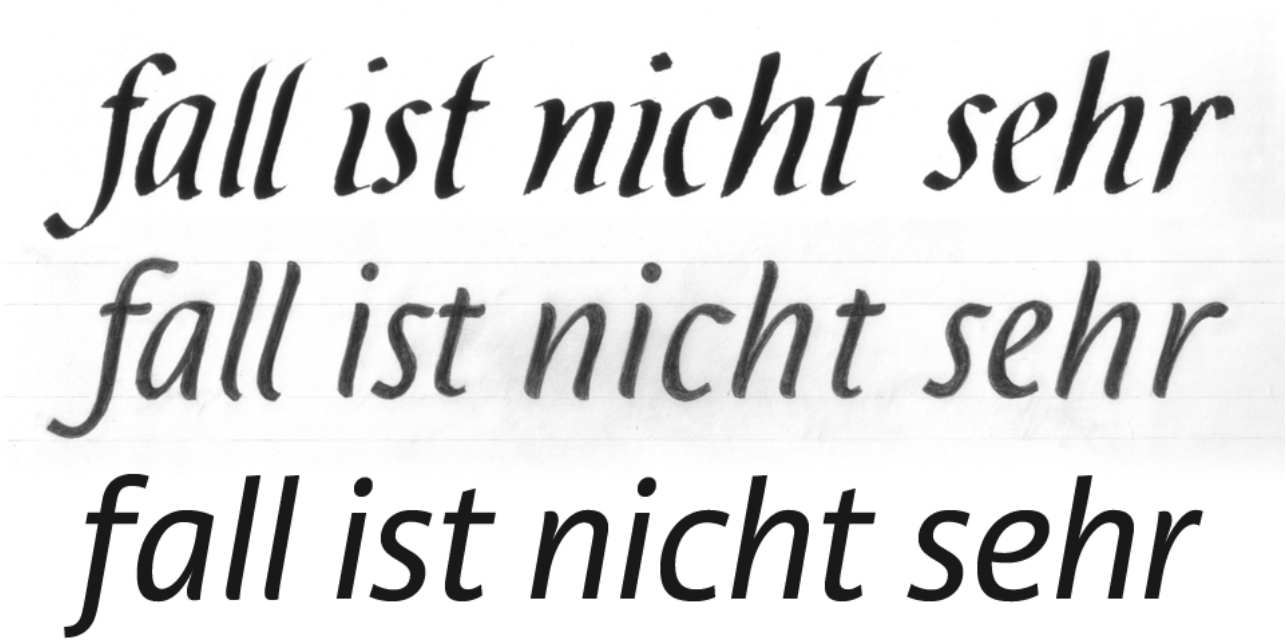
Various styles of Acorde. This sample gives a good overview of Acorde's diversity. Plenty of character at larger sizes, smart and legible in small sizes.

Professionals and amateurs

A corporate design typeface is used by various people. In contrast to, say, a book typeface which is primarily used by the book designer. A corporate design typeface is used by the graphic designer who chooses it, knows how to use it and who develops the corporate design. But the typeface is also used by other employees in the company, those without a knowledge of graphic design; therefore, it needs to be easy to use and set.

True Italics

By the time of the graduation exhibition for the *Type and Media* course in The Hague, Acorde did not have an italic. What did exist though were sketches for the Italics based on writing with a broad nib pen.



The development of Acorde Italic. **Top**: Writing with a broad nib pen; **middle**: sketches based on the handwriting; **bottom**: final version of Acorde Italic.

The influence of the broad nib pen is still visible in the final Acorde Italic. Acorde's characterful details, which have flavored the typeface since the very beginning, are even more visible in the Italics and the heavy weights developed most recently. The heavier the style, the more visible, or prominent the details become. The Extrablack Italic probably shows the character of the typeface best. The mixture of hard edges and curves is very noticeable, and I think the typeface is most dynamic in this particular weight and style.

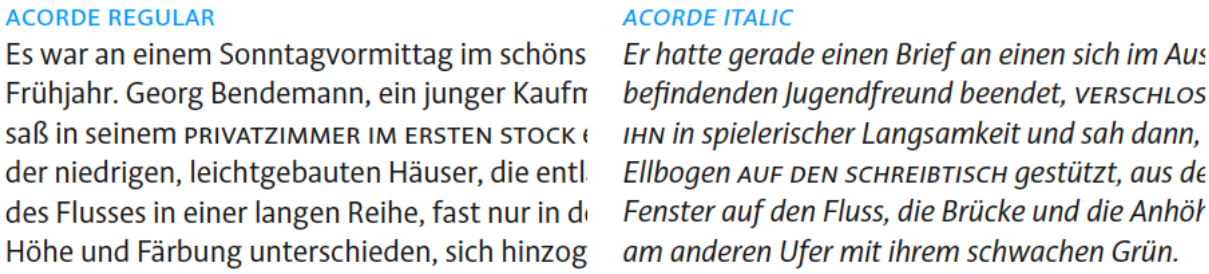
Acorde's details are most noticeable in the heavy weights, especially in the heavy Italics.

Proportions

While the proportions of the Regular were chosen to guarantee optimal legibility without consuming too much space, the heavier the weight becomes, the more suitable it is for headlines. The heavy weights are relatively narrower than the lighter ones — most of the extra weight is added towards the inside of the letters (the counters). This maintains the type's space saving (economical) qualities and gives the heavier weights a very strong and solid appearance. To balance the small counters inside the weightier letters, the spacing in the heaviest weights is very tight.

Overlaying the seven weights of Acorde clearly demonstrates that the typeface puts on most of its weight toward the insides of the letterforms.

Acorde's capitals are not particularly prominent, but are designed to blend well with the lowercase, making for an even color of the text en masse. This improves legibility in Acorde, especially for the German language where capitals appear frequently.



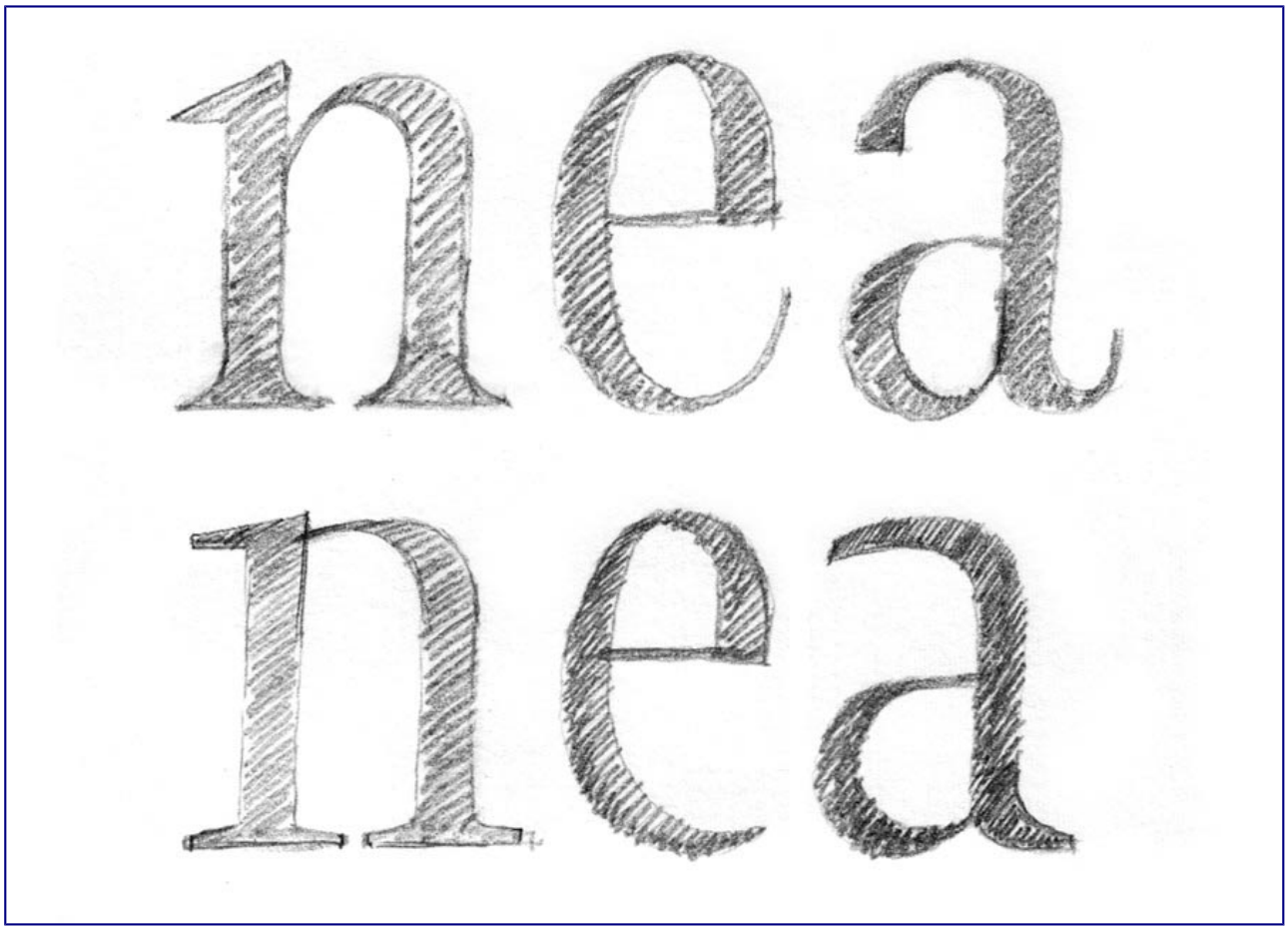
Balanced and even. Acorde's capitals and small caps blend nicely in the overall colour.

Motivation

I now live and work in Vienna as an independent designer. I have been teaching Design and Typography at the Höhere Graphische Bundeslehranstalt in Vienna since September 2009. I am very pleased that Acorde has finally been released, and I am curious which path it will take and where it will show up. And of course I also enjoy using it myself. It is a great reward for a designer not only to design a type family but also to design with it once it has been released.

> Stefan Willerstorfer was born in Vienna in 1979 and studied design in Austria, in the Netherlands and in England. In The Hague (NL), at the Royal Academy of Art (Koninklijke Academie van Beeldende Kunsten – KABK), he completed the Type Design course »Type and Media« with a Master of Design degree. At the University of Reading (UK) he completed the course in Information Design with a Master of Arts degree.
>
> Naturally, as a graphic designer doing corporate designs I was able to use much of that knowledge — knowing exactly what is required of such a typeface — in creating Acorde. Similarly, my experience working for more than two years with the international newspaper designer, Rolf Rehe, led me to design a typeface specifically developed to meet the requirements of newspaper text. I started working on this typeface about a year ago and what I learned working with Rolf has proven invaluable.

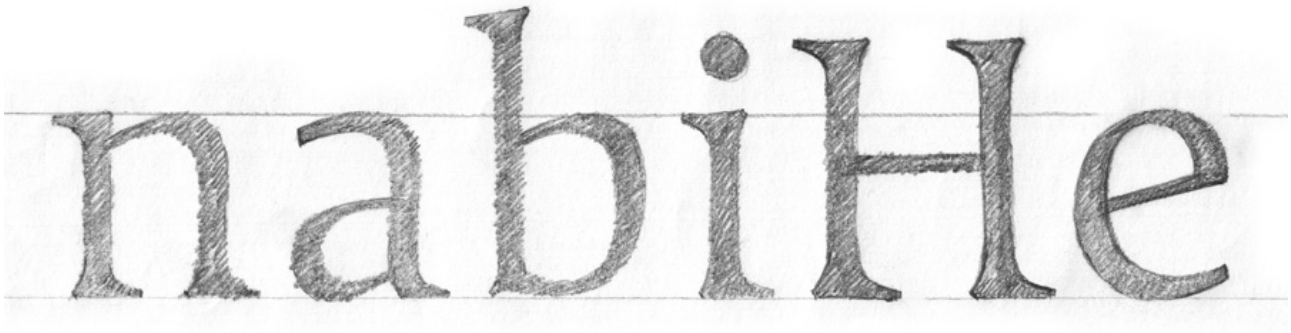
Making of FF Tundra



by Ludwig Übele

A line of text is like a silhouette on the horizon. Closer inspection reveals the detail, the trees, bushes, rocks; details that, though only vaguely perceivable from afar, create both rhythm and variation. The beauty of this landscape is born of both regularity and variety.

I chose Tundra as the name for my new serif typeface not during the design process, but from the outset. I had in mind this idea of a wide and flat landscape. This was the initial idea: Tundra should lead the eye effortlessly along the line, thus emphasizing the horizontal. This would have been rather easy, since a typeface with comparatively wide proportions would achieve this quite naturally. But I also wanted to create a useable, legible typeface: somewhat compact or condensed so that it might also serve well for narrow columns and space-starved headlines.

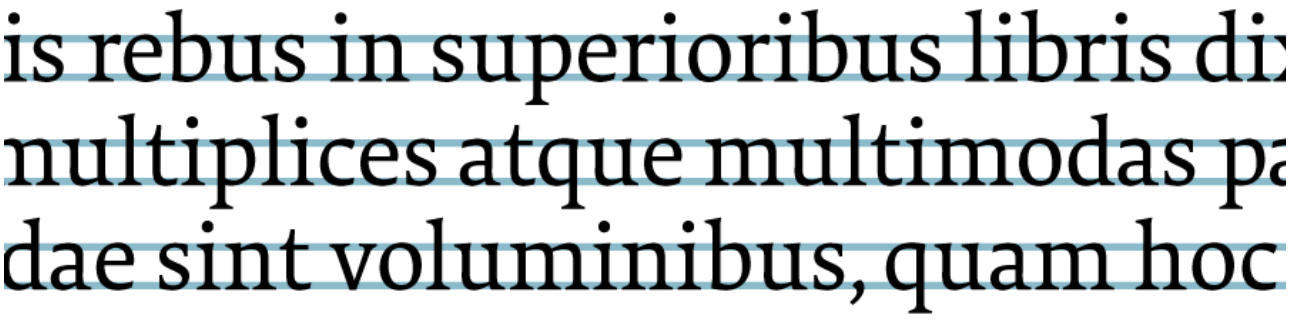


In the first sketches Tundra had asymmetrical serifs to accent the reading direction. Somehow it looked cropped (mutilated), especially for the capitals.

A typeface has two principle directions: The horizontal, the line, which the eye moves along; and the vertical of the individual characters, defined predominantly by the stems. The stems are responsible for the rhythm of a typeface, while the curves (bowls, in-strokes, out-strokes, etc) determine its character. In general, the narrower a typeface becomes, the less distinctive it is. A narrow typeface creates a picket fence or staccato effect, a line dominated by closely spaced stems. This is tiring and dull, and does not make for easy reading. The same occurs when the distances between the stems is too generous. So my main question was: How could I create a rather narrow typeface that best emphasizes the round parts and the horizontal line? How could I optimally adjust these two directions?

Warm and open

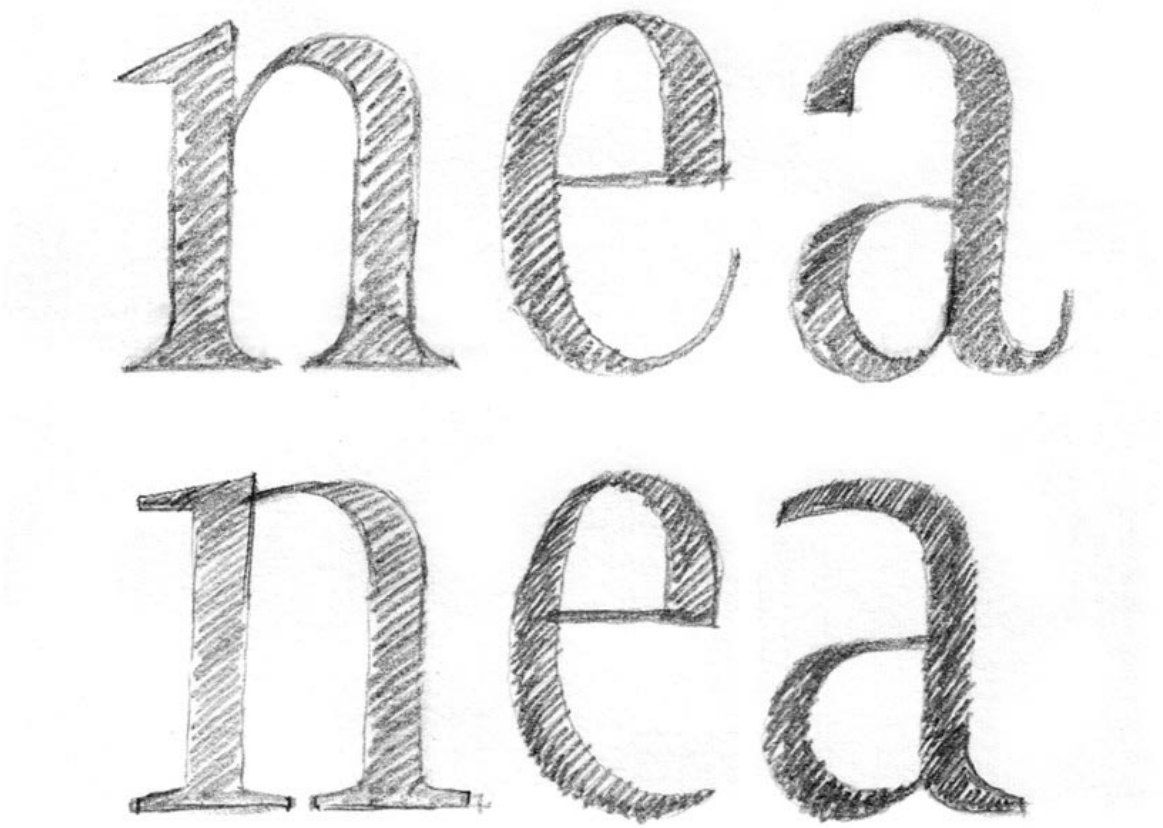
The most important parts of a typeface are the zone at the base line and even more at the x-height. Here reside the more complex forms (in contrast to the middle parts, which are usually only the vertical stems).



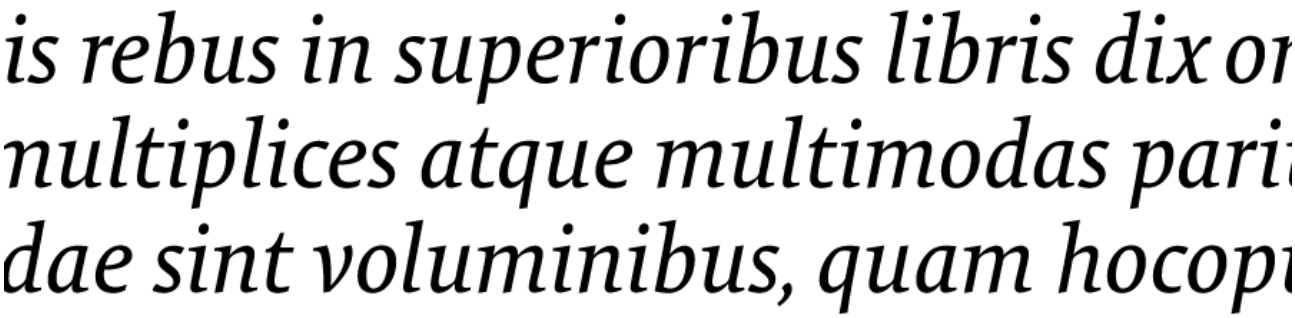
As a counter movement to the stems, which are more dominant the more narrow the typeface becomes, I tried to emphasize these two lines: the base line and the x-height. I made the general contrast rather moderate. The serifs are strong and flat. I also drew the shoulders (**n**, **b**) flat and strong.

Some characteristics of Tundra: moderate contrast between thick and thin parts, flat and strong serifs, diagonal stress, open and heavy terminals, flat and strong shoulders.

The diagonal stress moves the thick parts more to the horizontal. The terminals (**a**, **c**, **e**) are heavy and the apertures open. The letters **c** and **e** — owing to their contrast — could almost be part of a sans serif typeface. Open forms also permit more interaction between the letters. All these elements help to create even lines that make reading easy and comfortable.



Above: Comparison of narrow type: closed and open letterforms.

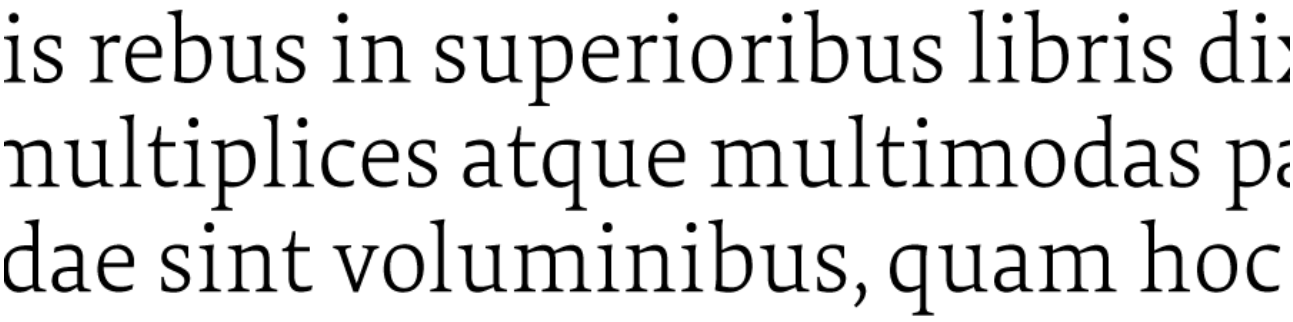


The italics have no curved head and terminals, but serifs, to emphasize the baseline and x-height.

Of course reading is much more complex than these very simple considerations. Why a typeface is legible, why it appears fresh or lively is much more complicated and difficult to specify. Rhythm can't be reduced to a fence pattern. And to create harmonious letterforms it's much better to follow your own feeling for forms rather than follow rules. Very often I'm unable to point out why I like a typeface and why it creates an enjoyable image of text; or, conversely, why it fails. Therefore, I try to track my own eye, and how it describes a path through the text, across the line, and through the words. Is it a pleasing and fluid movement, or does it stutter and stall? But still I can't precisely describe why a

typeface works. Usually I try make forms clear and distinct. I was never much interested in playful details (which you can't see at small sizes anyway). I think a good typeface must be more than a selection of interesting (and more or less pushy) details. It needs a design vocabulary of its own. A good text typeface should be concerned with producing interesting and lively texts, rather than interesting and lively characters.

When I designed my typeface Marat, I also drew a super black version, and – unusual for a classic serif typeface – it works very well. For Tundra the opposite is true. It appears that this particular construction prefers lighter weights.



The lighter a typeface the more linear its stroke. The Extra Light weight has much less contrast between thick and thin than the Bold. The thin parts of the Extra Light and Regular are almost equal.

The reason might lie in the moderate contrast of the letterforms. So I drew Light and Extra Light weights and reduced the contrast yet further. In my opinion, many thin contemporary Old Face types contain too much contrast. Maybe its caused by extrapolation, I don't know.

I'm not a friend of fonts with thousands of (interpolated) weights flooding the font menu. I try to graduate the weights very carefully and appropriately for the particular design.

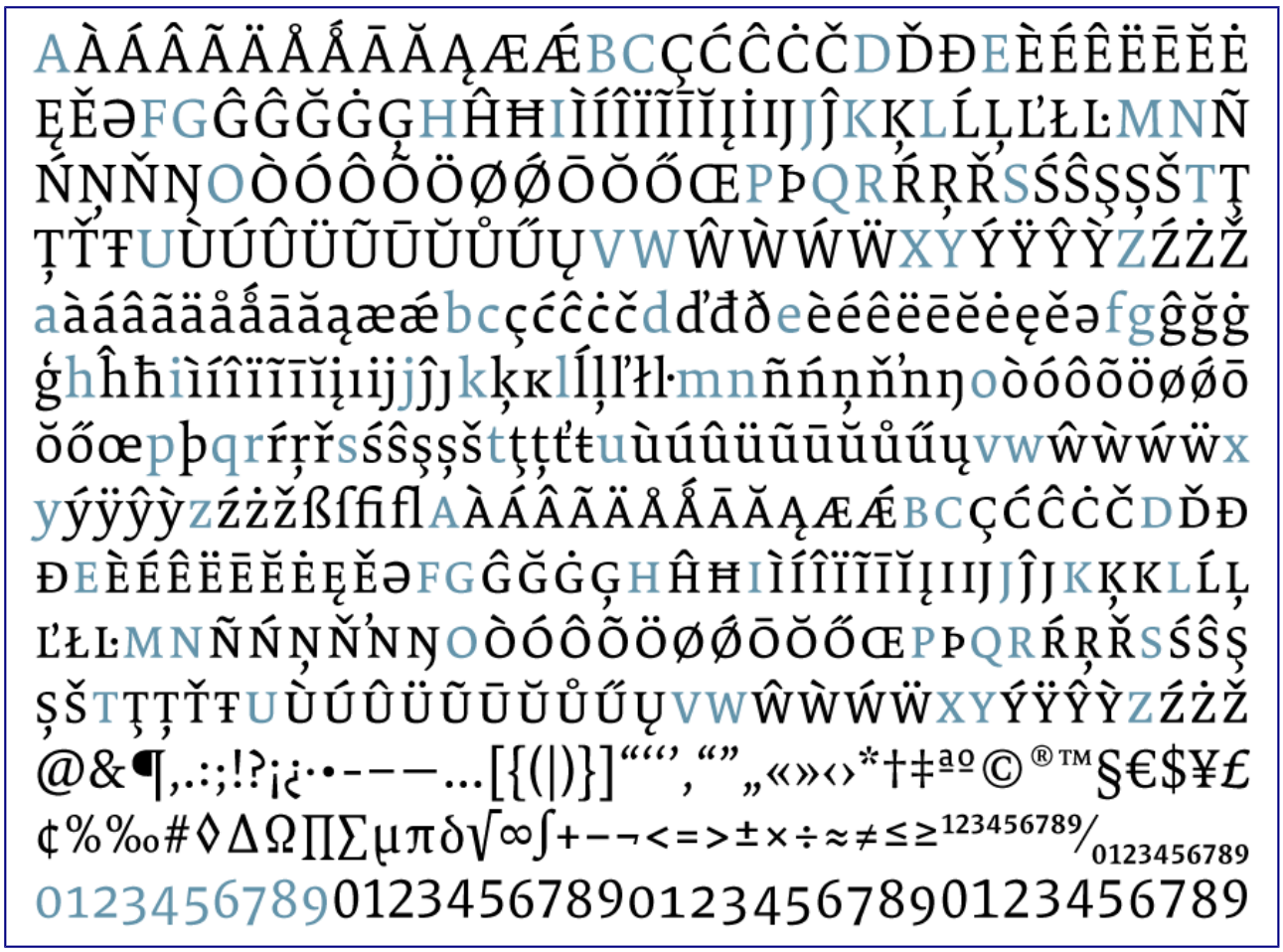
Tundra comes in six weights from Extra Light to Bold, accompanied by italics and small caps. The Pro character set contains letters for all major languages using the latin alphabet.

Different numerals and various other OpenType features provide advanced typographic performance. There is one thing I want to point out, a composition problem often occurs for certain character combinations, mainly **f** and **y**.

For problematic combinations Tundra contains alternate characters or ligatures (blue).

For this reason Tundra contains ligatures and alternate letters. A common problem is **f** followed by an accented character. In this specific case a narrower **f** applies automatically via OpenType's contextual alternates feature. For **g y** there also exists a ligature. For more details check out FF Tundra on the FontFont web site.

Tundra has been selected by the Type Directors Club of New York to receive the 2011 Certificate of Excellence in Type Design.



FF Tundra full character set.

You can find more of Ludwig's work at ludwigtype.de and follow him on twitter. Back in 2008, I interviewed Ludwig for ILT.