an alphabet book

history and meggsy

The evolution of the **i** and **j**

Kerning

Lowercase/uppercase (majuscule/miniscule)

Mechanical typesetting

Old style figures

Roman

Serif/**S**ans Serif

The W and U, and their parent the **V**

typo graphy/graphers

The **B**eowulf typeface

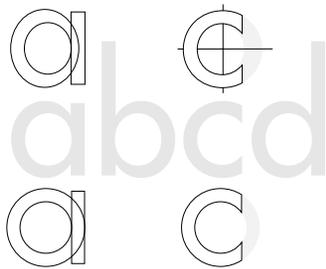**D**istinguishing typefaces

Futura

Claude **G**aramond and his face

Bradbury **T**hompson (badass)

Univers (Adrian Frutiger)

Wolfgang **W**eingart, educator

Hermann **Z**apf, calligrapher

are gill, goudy, gutenberg and GIAMBATTISTA
as boring as they are in
the history of the printed word?

THE HISTORY OF THE PRINTED WORD?

drooling and geeky

Chinese Calligraphy

Emigre

Q

x height

A... an alphabet book

handwriting

about typography?

rhetoric and banter

Handwriting

Never!

Prehistoric vs **P**ostScript

Y - the Crystal Goblet

R

curved leg

Of course this **is** an alphabet book, so if you'd like to find a letter, you're going to have to know what letter it comes after.

If you're not to good with the alphabet, you can find it on the **V** page.
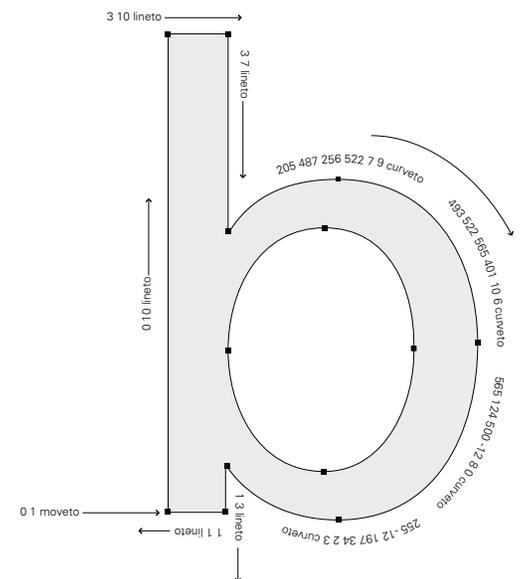
Beowulf

Fonts that are used by a printer are actually computer programs. They consist of a lot of numbers and statements like the commands **lineto** or **curveto** which draw (think hard) lines and curves. The example **b** is shown with the postscript code that is used to draw it.

For the Beowulf typeface, van Rossum and van Blockum replaced all the lineto and curveto commands with something they wrote called **freakto**. Instead of a straight line or a curve, it draws a random spikey-looking line.

3 10 lineto

3 7 lineto

205 487 256 522 7 9 curveto

493 522 565 401 10 6 curveto

565 124 500 -12 8 0 curveto

0 10 lineto

255 -12 197 34 2 3 curveto

0 1 moveto

1 3 lineto

1 1 lineto

ERIK SPIEKERMANN: You made **the first "random" typeface** called Beowulf, by replacing the commands "lineto" and "curveto" in the PostScript code with your own command "freakto." The new command calls up a random generator that makes the character outlines irregular. When you created Beowulf, were you **trying to prove something** or was it just a joke?

ERIK VAN BLOKLAND: **It was quite a joke.** We were both into programming - or would you call it hacking? What came of that interest was a very cool-looking thing. We wanted to make a typeface that looked very smooth and rounded off, but instead it became spiky, with little pointy bits sticking out from the edges of each character in a most unpredictable way. And what's the most fun about Beowulf is that every time you print it, those spiky bits take on a slightly different appearance. **SPIEKERMANN:** You both have said that a designer, by definition, has to make things that haven't been made before. But why? Isn't it the job of the designer to work within a frame of reference which is commonly understood? If we use Egyptian hieroglyphs or Chinese writing here in The Hague, we won't communicate anything. But at the same time, as graphic designers who are trying to innovate

Erik Spiekermann interviews Erik van Blokland and Just van Rossum

An excerpt from **Wired** magazine, July 1995

and establish creative new ways of communicating,

we have to be surprising and invent new images What does that mean for type? Is it going to disappear or is it going

to go back to images? **JUST**

VAN ROSSUM: Type is definite-

ly here to stay. Text won't disappear; in fact,

you'll see more and more of it on screens. **Images simply aren't strong enough or powerful enough to express everything** you

want to say. You can't make pictures to replace this

interview.

Thirty spokes meet the hub
but it is the emptiness between them that makes the
essence of the wheel.From clay pots are made,

Chinese Calligraphy

but it is the emptiness between them that makes the
essence of the house.The principle: The material con-
tains usefulness,
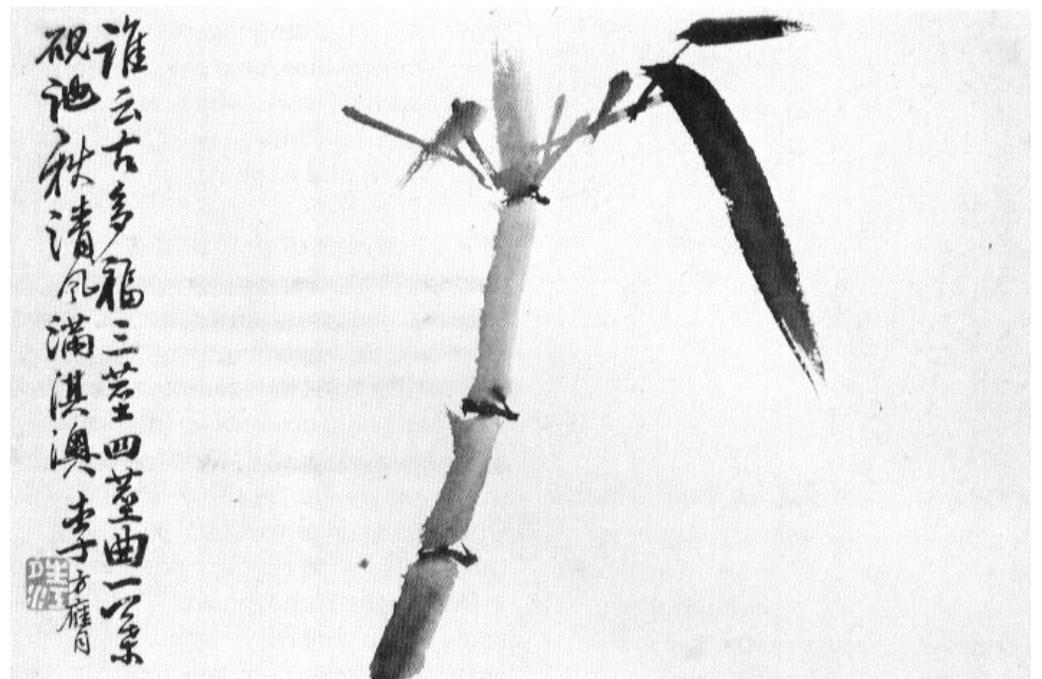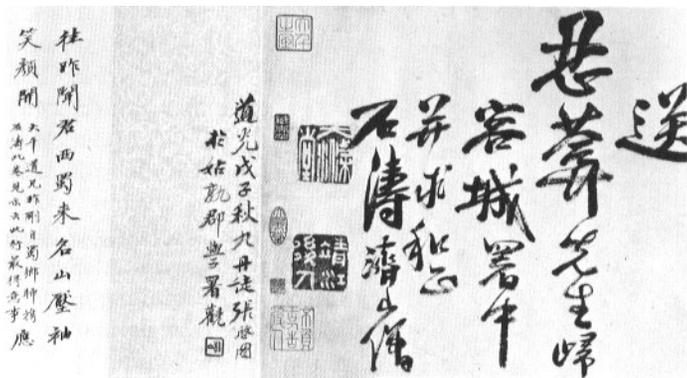
but it is the emptiness inside them that makes the essence of the pot.Walls with windows and doors form the house,

the immaterial imparts essence.[Text is from the eleventh aphorism of Lao-Tse, images from Li Fang-Yin, Chu-Yun-Ming, and Tao Chi, from works of their own]

O e c

large aperture makes **e** and **c**
easily distinguishable from the **o**

abcdefghijklmnopqrstuvwxyz1234567890
ABCDEFGHIJKLMNOPQRSTUVWXYZ

Frutiger

believed Helvetica and
Univers were becoming
dated. He sought
a renewed
sans-serif
approach
by blending
properties
of Univers with
organic and prop-
ortional aspects found in
less geo-metric sans-serif
typefaces such as Gill Sans.

G

wide
aperture

BEFH

narrow, reflecting classical Roman proportions

distin
guishing
typefaces

This is just a handful of
the more popular sans-
serif typefaces. **Univers**
and **Futura** are discussed
on their own pages, so
they are not included here.
Serifs are a whole nuther
ballgame, and aren't
included here for clarity's
sake.

square dots

ij

Helvetica

is a rounded sans-
serif typeface with
a large x-height.

oval-shaped counterforms

R

curved leg

O C Q

abcdefghijklmnopqrstuvwxyz1234567890
ABCDFGHIJKLMNOPQRSTUVWXYZ

G

The various weights (Regular, Bold, Black, etc.) for
Helvetica were created by different type designers, at
varying time periods, leading to a lack of visual cohesion
between the fonts.

straight,
angled tail

spur

Gill Sans

is a humanist face meticulously patterned after classic roman character proportions; this gained it a reputation as the most legible sans-serif design of the time. It does not set well as book text, however, because the Book face is too heavy, and the Light face is too light.

WV
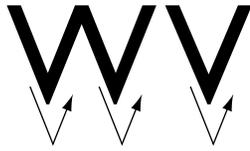
ouch! pointed bases for **v** and **w**

ij R

j with a short tail

curved leg

M

high, pointed central juntion

abcdefghijklmnopqrstuvwxyz 1234567890
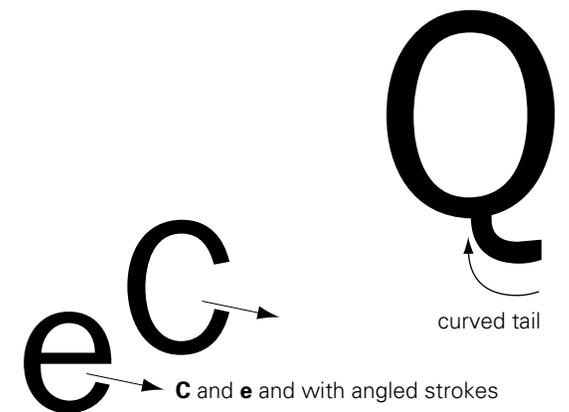ABCDEFGHIJKLMNOPQRSTUVWXYZ

Though most people are of the opinion that all type looks the same, they can generally tell the difference in how a printed page in one typeface feels from a page in another face. **They may not be able to describe the subtleties of it, but understand** where one is darker, or the face feels larger, and even which of the two pages might be the more readable. Anyone can make better typographic decisions, even without a lot of anal training and terminology in their ends.

Q

eC

curved tail

C and **e** and with angled strokes

ag Franklin Gothic

was influenced by Akzidenz-Grotesk, and borrows heavily upon Roman letter- ing, as noted by the forms of the **a** and **g**. The term **gothic** was erroneously given to sans-serif typefaces originating in the U.S. at the beginning of the 20th century. Aside from the weight of the letters, there is no true relationship with the black letter gothics of the mediaeval period.

abcdefghijklmnopqrstuvwxyz 1234567890 ABCDEFGHIJKLMNOPQRSTUVWXYZ

"With the **mind-numbingly dull 1970s and 80s behind us**, designers are waking up and starting the next millenium. Emigre is documenting where graphic design is going. And it's going to be interesting." [J. Keedy]"Zuzana's mastery of a limited palette is quite elegant. To consider Emigre, the San

Zuzana Licko's type

Francisco born **purveyor of a new dialogue for graphic design**, appeared around 1984. During the time, its layout was highly unconventional, and they were one of the first to see the computer as a design medium. Along with other designers of the time (like April Greiman) used chunky-looking computer generated type and heavy layering of imagery to create new spaces. The style has since been copied, rehashed and regurgitated with results that vary from **interesting improvements to ignorant perversions.**

(A Magazine for Exiles)
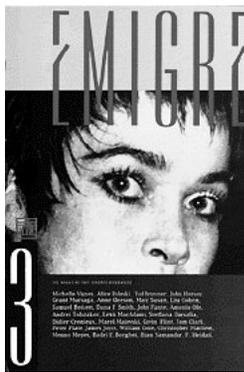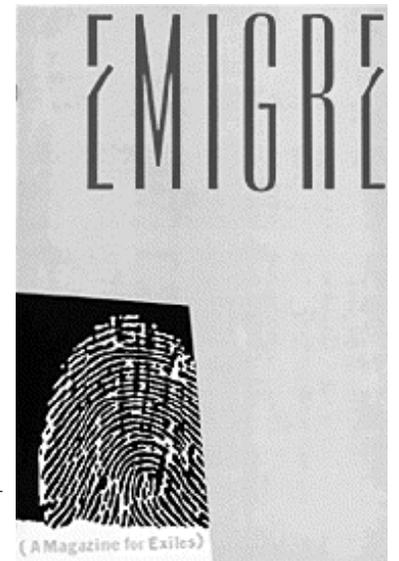
design as crude or illegible (non-functional), weird or radical, would be incredibly **shortsighted and historically ignorant**. Her preference for reductivist strategies in form and her expression that allows the functioning of the computer, put her in the category of **"classical modernist," not radical reactionary.**" [J. Keedy]"It's too hard to read" — **a curious excuse coming from someone that is presumably "visually literate."** [J. Keedy]Arbitrary, designed by Barry Deck

The discourse of Emigre magazine goes hand in hand with the typefaces exposéd in each issue. Most of the original faces were **designed by Zuzana Licko** (who is in fact married to Rudy Vanderlans), including the better known low-resolution faces like Oakland and Emperor.
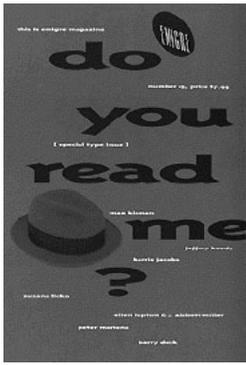
Matrix, designed by Zuzana Licko

(Regular) AaBbCcDdEeFfGgHhIiJjKkLlMmNnOoPpQqRrSsTtUuVvWwXxYyZz(1234567890) *(Bold)* AaBbCcDdEeFfGgHhIiJjKkLlMmNnOoPpQqRrSsTtUuVvWwXxYyZz(1234567890)
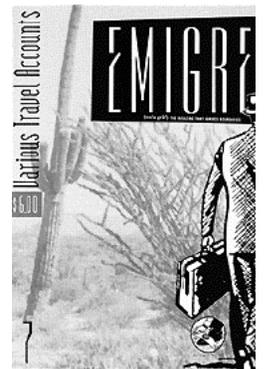
emperor ten, making the restrictions of the medium integral to the design

"Emigre is now in a curious position, **straddling opposite view-points**. While still regarded as insignificant and down right detrimental to graphic design (underground, alternative, reactionary, rebellious) by some, others complain abou tthe **ubiquity of Emigre's typefaces** (mainstream, establishment). [Emigre The Book]
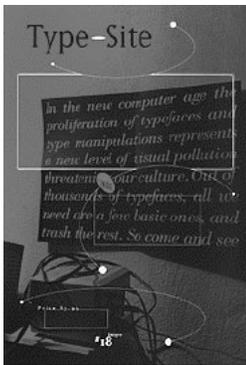
(Inline Script) AaBbCcDdEeFfGgHhIiJjKkLlMmNnOoPpQqRrSsTtUuVvWwXxYyZz (1234567890)   (Inline Bold) AaBbCcDdEeFfGgHhIiJjKkLlMmNnOoPpQqRrSsTtUuVvWwXxYyZz(1234567890)
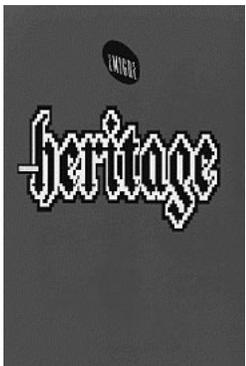
"I am really interested in type that isn't perfect. Type that **reflects more truly the imperfect language** of an imperfect world inhabited by imperfect beings." [Barry Deck]

Circle stick, circle stick, stick,
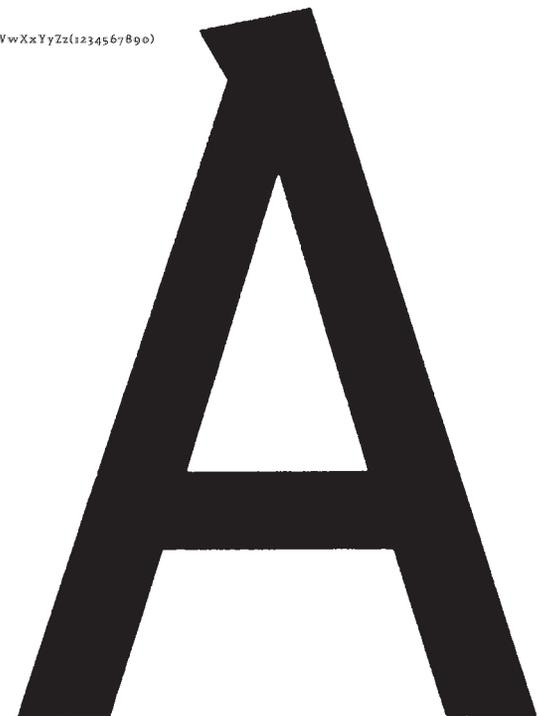
Inspired by the Dutch De Stijl and Russian Constructivist movements - along with the Bauhaus school and its dictum that "form follows function" - European designers explored elemental geometry during the 1920s. **Futura reflects this passion.**

It was designed by the German book designer and educator Paul Renner, who applied elementary geometric form to a typeface design by **constructing Futura with a T-square, triangle, and compass**. Renner's original concept was quite abstract; numerous changes occurred before the Bauer foundry released it from 1927-30.

The readability of Futura suffers considerably because each of the letters are overly geometric, which makes them less distinguishable from one another.

Geometric sans serifs were extremely popular **until the 1960s, when sans serifs such as Helvetica and Univers** became dominant. Futura is widely used by contemporary designers for its crisp geometry and formal simplicity.
[Philip Meggs]

Futura and the host of other geometric sans-serif fonts were embraced during the late 1920s and 1930's as an expression of modernism and industrial culture. Type **companies rushed to bring out competing fonts**; similar faces include Jakob Erbar's **Erbar**, Rudolf Koch's **Kabel**, Willam A. Dwiggins' **Metro**, R. Hunter Middleton's **Tempo** and Sol Hess's **Spartan**.

Futura
and its
geometry

The actual forms for the **A** are constructed using two ellipses, slightly off-center from one another, and a vertical bar that is of different thickness.

The edges of the **C** get slightly thicker at the ends, which means that the **counter** is not even a perfect ellipse - the left and right halves are different widths
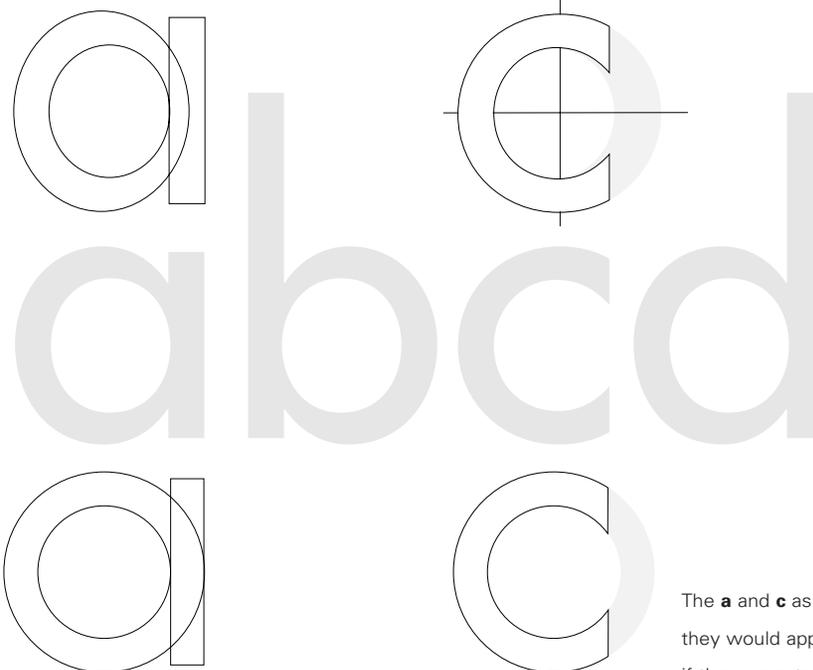
Similar to Helvetica and others, the face is not actually made up of perfect circles or lines of uniform thickness, even though many of the letters appear that way. Some books **give most of the credit for to the engravers** who cut the original Futura face made adjustments to each letter so that they would look more optically correct.

The **a** and **c** as they would appear if they were to be constructed with perfect circles and lines.

Garamond is a heavily over-used typeface for those who are mildly typographically inclined. It is a beautiful face, designed by Claude Garamond, during the 16th century. **Did you know that the 16th century in France was the "golden age of typography?"** Just ask Philip Meggs. Anyways, not only has Garamond been copied and re-copied by

g

foundries and type houses for many years (American Type Founders, LinoType, and most recently Adobe) but it is used everywhere, whether in book text, headlines, and now appearing in the awful (and perhaps even more popular) condensed or narrow version of the face. Back in 1592 **Claude didn't design Garamond Narrow**, instead it

came about by some modern day (computer-based) type designer's deviance. The artistic integrity of many faces are lost through such (apparent) ignorance and poor judgement. Typographic perversion, I say.

wouldn't it be

wouldn't it be cool if my ~~handwriting~~ handwriting were on the computer?

im not sure how i feel about having
the computer write like me

but i did it anyways.

During the Fall of last year, I decided
that I would like learn about design-
ing typefaces. So, I took on the
project of making a font
based on my handwrit-
ing. I wrote a few alpha-
bets using my favorite
pen and writing in my
sketchbook (a news-
print pad at the time-the ink hits the
page nice and softly, just enough to
keep the pen moving across it quick-
ly an evenly), scanned them in at
high resolution, and then traced over
them in Adobe Illustrator. Then, each
character was brought into a font edi-
tor, and I tweaked it until the stroke
weight actually looked close to my
own handwriting.

i could even ~~change~~ re-program it so that
it printed a little differently each time its used.
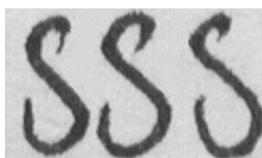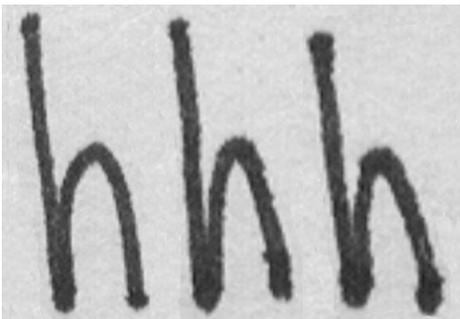
There are a lot of problems with the face -
the reverse oblique (it slants to the left rather
than the right) of my own handwriting, the lack
of kerning pairs (see page **K**) to
make it look a little more even,
as well as numerous inconsisten-
cies and a large number of missing
characters.

Eventually I'd like to evolve this
into a better face. Something
between Meta and Tekton per-
haps. Tekton is kind of a weenie
font
because

architecture or fiction?

it's so tight and inhuman, even
though it's supposed to be like the
handwriting of an architect. Meta
is much nicer, and the ratios -
**kind of tall and
thick** - fit closely to that of
my own handwriting.

I'm not terribly fond of handwriting faces. When is one really needed, that one could not just write some text by hand and then perhaps scan it for inclusion in their printed work? Certainly there are those with poor penmanship, but then **providing a crutch is the solution for the lack of skill** - indeed, is this not what a large percentage of computer-based typography actually is? Aren't a lot of people making money off of this? Are there any ethics that can interrupt commercialism for the sake of fine art? Not in the United States, certainly. One must no longer learn kerning, or typesetting, or understand anything about a font before they use it, or begin doing **graphic design**. And people show little interest in learning such things. For the most part, are these same people not going to be ones who might use a handwriting typeface with the same indiscretion?

making the computer imitate something handmade?

mmm

ErikRightHand (top right) and JustLeftHand (direct right) are two of the nicer handwriting faces that I've seen. They were designed by the same pair that did Beowulf (see the **B** page) and Trixie (but we'll forgive them for the latter).

Handgloves

Handgloves

[Type samples taken from Stop Stealing Sheep, by Erik Spiekermann & E.M. Ginger]

The letters i and j are close rel-atives. "The **j is an out-growth of i, which was length-ened** in fourteenth-cen-tury manuscripts to indicate use with consonant force, particularly as the first letter of some words." [Phillip Meggs, History of Graphic Design]
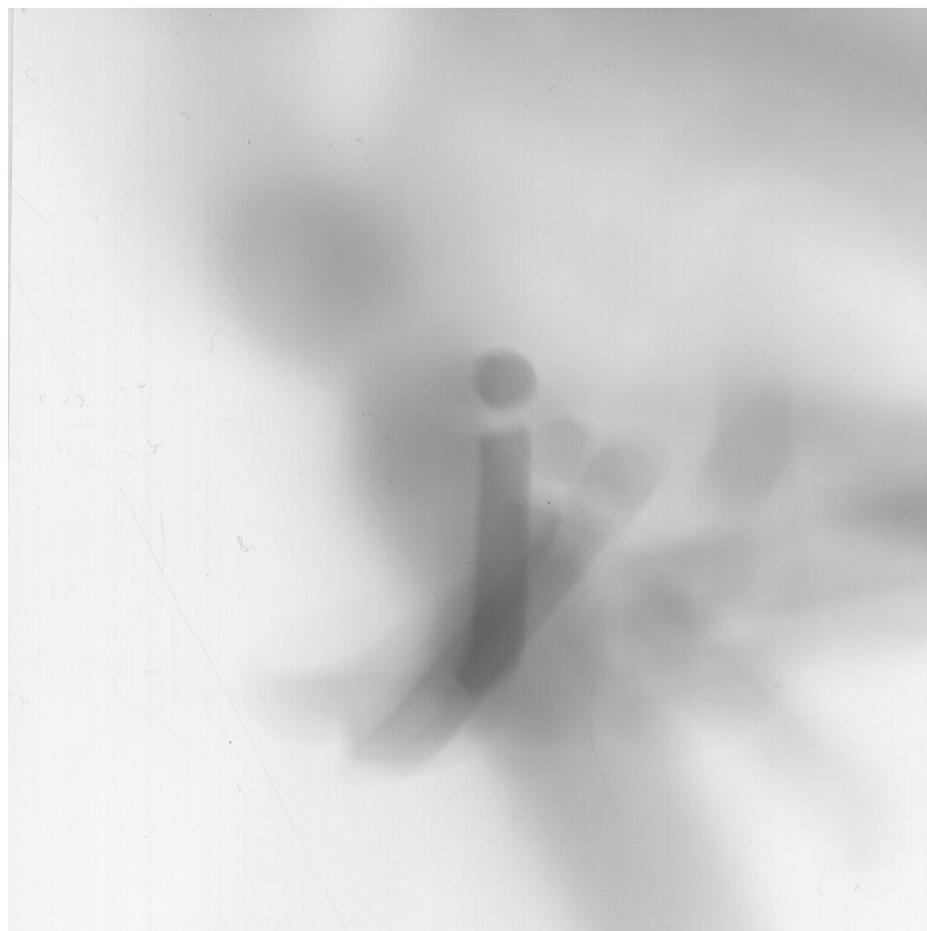
From left to right, the Cretan pictograph, the Phoenician form, the Early Greek, and then the recognizable shape from the Classical Greek and Latin alphabets.

The early name for the glyph we know of as **i** was **Yōd**, which probably meant **Hand**, the Greek name was later **Iōta**. The chicken scratches seen on this page trace the heritage of the **i** and **j**, based on the debated theory that our alphabet evolved from early Cretan pictographs. The theory is based on the similarities between these forms and the Phoenician alphabet.

K er nnig

Anything seem wrong with that title? How about the word kerning up above. It is in fact an idiotic oxymoron for the concept that we are trying to demonstrate. Certain pairs of letters, like **To** or **AV** look very poorly together if they have not been kerned properly. In this example, the **o** sits just slightly under the **T**, actually moving in on its letter space, but it does so to improve the overall feel for the printed page. Similarly, the **V** and the **A** are quite closely situated.

Kerning

Does this feel any better? Compare this with the headline above. **Think about rhythm**. Examine what's happening in the white space. Squint at it a bit - do you see an even gray? Alright, now stop. You're making me nervous. You might find mistakes.

& the analities of fine typography

If kerning were not being used, the result would be like so: **A V** and **To**. **So how would that look?** In a word like **HA VE** the **A** and **V** would feel like they were a week away from each other, hurting readability and disrupting the **rhythm** of the line. Tomorrow would look like **T omorrow**. **People might wonder who T. Omorrow was**.

Text should have a nice even feeling.

Back in the times when a **printer** referred to a person, they would insert thin pieces of metal in between each piece of character (see the **M** page) to adjust for kerning words. Luckily for us, most typefaces on the computer have kerning built into them. Decent ones have large sets of **kerning pairs** so that people don't have to **figure out the space between each letter by hand**. This would be a major annoyance for a three page English assigment.

A decent typographer's eye is far better than the computer, and unfortunately, automatic kerning **doesn't always do the job**, especially for text in large type sizes. Often, you'll see advertisements where kerning problems go unnoticed. The moral of this story is that it is important to **keep an eye out** for potential problems with letterspacing.

The term for **uppercase** and **lowercase** come from the printer's cases that were used during the times of type set by hand. The type case had small compartments for each letter, and the case was separated in half, with an upper and lower sec-
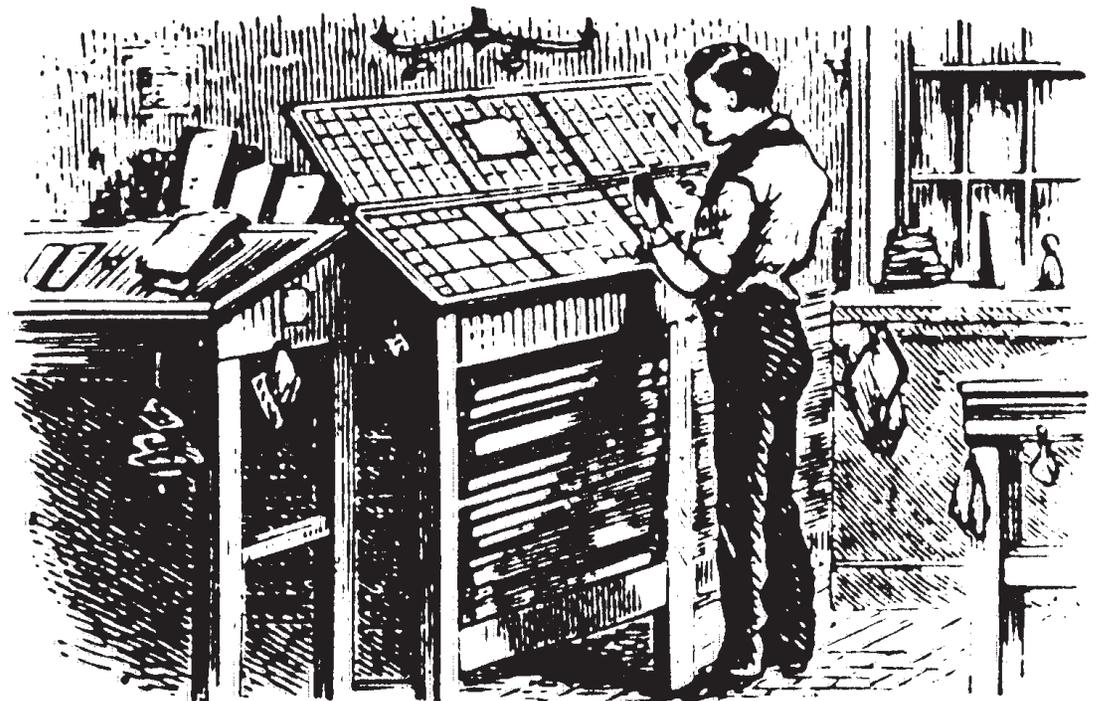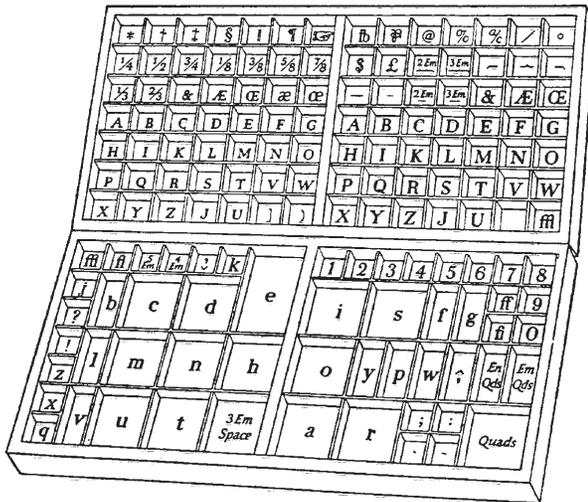
Detail of a printer's type case
[Diagram by Rudolph Ruzicka for
Printing Types — Their History,
Forms and Use, by D. B. Updike]

tion. Capitals were put in the upper case because they were less frequently used, **miniscules** (what we know as lowercase today) were put down below, and closer to the typograher. The technical term for capitals or upper case letters are **majuscules**.

Mechanical Typesetting

In the late 1800s, thousands of tired and weary hand type-setters were given a break. The invention of the **Linotype** machine, by Ottmar Mergenthaler in 1886, and later the **Monotype**, by Tolbert Lanston, in 1893. The machines replaces the process of hand typesetting with mono-lithic machines with countless moving parts all run by a keyboard.

Mergenthaler had been working on the Linotype machine for more than a decade. In 1880, the New York newspa-pers offered half a million dollars to any inventor who could create a machine that would reduce the hand typesetter's time by 25 to 30 percent. The **Linotype machine could do the work of seven or eight** hand compositors. On July 3, 1886, the thirty-two-year-old inventor demonstrated his keyboard-operated machine in the office of the New York Tribune. Whitelaw Reid, the editor of the Tribune, reportedly exclaimed **"Ottmar, you've done it! A line 'o type."** [Paraphrased from A History of Graphic Design, by Phillip Meggs]
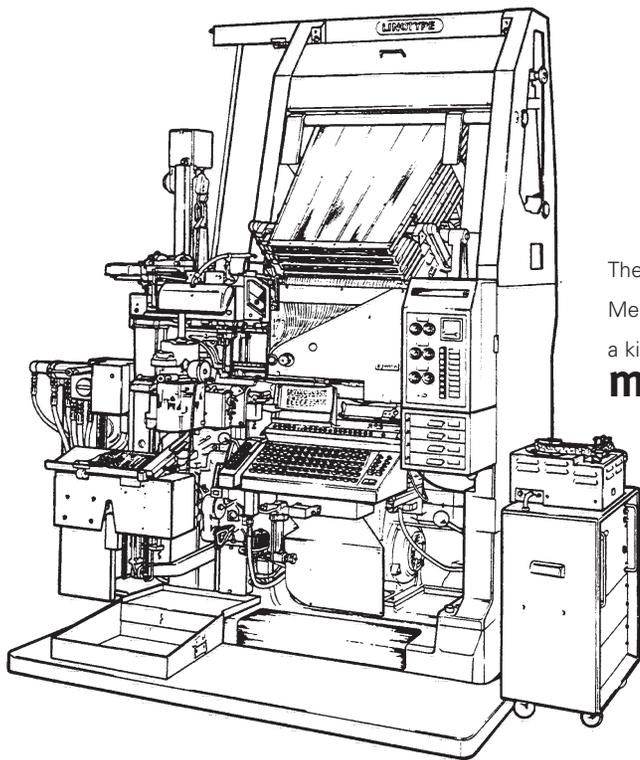
The Linotype machine, invented in the 1880s by Ottmar Mergenthaler and much modified overthe years, is a kind of cross between **a casting machine, a typewriter, a vending machine and a backhoe**. It con-sists of a series of slides, belts, wheels, lifts, vices, plungers and screws, con-trolled from a large mechanical keyboard. Its complex mechanism composes a line of matrices, justifies the line...then casts the entire line as a single metal slug for letterpress printing. [R. Binghurst, The Elements of Typographic Style]
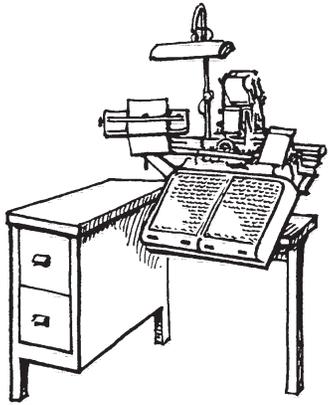
The other machine in this story, the **Monotype, had two parts**. The keyboard, which is to the left, and the the caster which is down below. The keyboard machine makes perforations in a tape, which is then fed into the caster to be turned into a line of type. The caster uses a system of compressed air running through pipes, and the perforated tape to pick what matrices need to be used for the composition. Each letter is set separately from, and cools as the line is being completed. The Monotype machine was **easier to make corrections with, whereas the Linotype was cheaper for a single** proof. [Such facts were taken from A History of the Printed Word, by Warren Chappell]

The invention of these machines led to an enormous surge in production of printed materials. Newspapers could now be longer than eight pages, and their price fell from the cents **down to one or two cents- cheap enough for the everyday person**. Books became popular as well, because their price fell considerably as well.
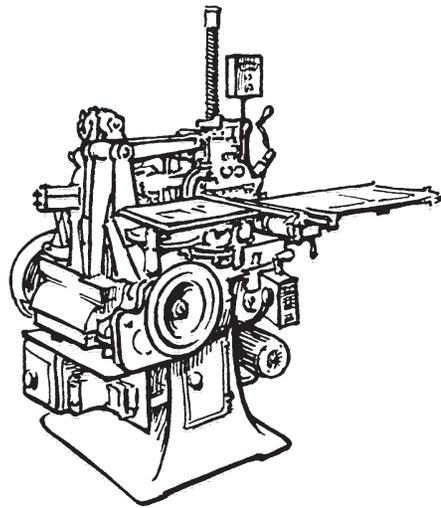
the original Macintosh type-faces

Monaco, a mono-spaced font which is highy unreadable on a computer screen (because each letter is the same width). The unknowing seem to think it's some sort of emigre-esque face.

Never

Chicago, whose intended uses are titles on pull down menus, or text in dialog boxes.

meant to be used in this context

(or in any other graphic design work.)

Geneva, a cheap helvetica rip-off, that falls apart at larger sizes

In 1990 some poorly thought out decision was made by Apple to make scalable versions of the fonts available. Ugly ugly ugly.

A short history of type and the Macintosh

1984 Original Macintosh is introduced with a minimum of fonts, all at specific sizes, for use on the screen only.

1985 Release of the Laserwriter, and with it, scalable fonts using PostScript technology, the mac is introduced to fonts like Times, Helvetica, Symbol, and Zapf Chancery

1990 Apple introduces System 7, with its built in TrueType technology, a rival to PostScript fonts. TrueType versions of Chicago, Monaco, Geneva, and New York were included, which began open season for poorly informed typographic design.

Several fonts were designed **for use only on the original Macintosh, to be seen only on the screen, at specified sizes.**

This was 1984. Postscript did not exist. Desktop Publishing did not exist. Chuck E. Cheese was still in business. The Mac had a 9-inch black-and-white screen. There were 72 pixels to an inch, and the dots on the screen were slightly tall, not perfect squares. Each of the fonts accounted for this fact.

The fonts were created by Susan Kare, who also created most of the original icons for the Mac.

Chicago works well for its intended use, but the

Chicago was designed for use in menus and windows.

scalable version (see short history at right) of it is implemented very poorly. The result is a muddy (to be mild) looking typeface that adheres to the same proportions as the small face that used to be for screen use only.

Geneva was to be used in 9 point size, or 12 point. It was for simple screen reading and applications where a smaller typeface was needed.

Geneva was something of a Helvetica ripoff, since the original macs did not have typefaces like Helvetica or Times, because the technology came later with the advent of the Laserwriter.

Monaco was created because a "fixed-width" typeface would be needed for programs where the Mac had to behave more like a traditional computer, whose screen had no icons or buttons, but instead was 80 characters wide, and 24 lines tall.

Fonts that problem with fixed-width fonts like Monaco, then, is that the **W** must be just as wide as the **i**. This makes for a smooshed **W** and a lot of space on either side of the **i**. These sorts of problems hurt readability considerably because the text does not flow very well.

New York was a nicer, more readable, serif typeface. Six sizes were available, though 12 point was the primary.

New York comes out oddly wide looking, and feels very unsure of itself, because it must, like all the other fonts, keep the proportions of the 12 point size, while at the same time, make something that looks good at a larger size. The result is as sort of fat version of Times.

OLD STYLE
FIGURES

1234567890

❧

The section on
"What's left out of Typography today"

❧

*O*LD STYLE FIGURES, ALSO KNOWN AS NON-LINING NUMBERS, GO largely unused in most graphic design work today. They are found mostly in "colonial" typefaces like Caslon. The numbers vary in their proportion when compared to lining numbers, which are most typically used. Old style figures are generally found much more pleasing to the eye, and have a very formal appearance.
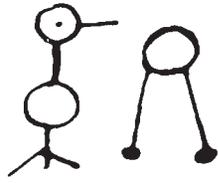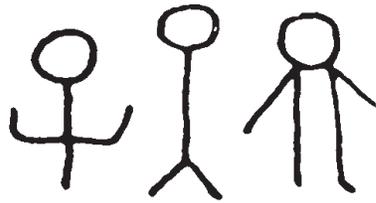
1 2 3 4 5 6 7 8 9 0

Old style figures and small caps go best with abbreviations (e.g. 3:00 PM or AD 450), with the exception of people's name or names of locations (Washington, DC or JFK). However, when writing an address, one would be able to get away with using small caps for the state abbreviation, like in Ann Arbor, MI 48105.
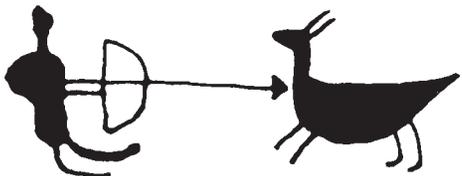
ct fh fi k fl f ft v w st ff

Ligatures are glpyhs (letterforms) that are combined to form a more pleasing looking glyph. For example the fi is used instead of putting an f and an i next to one another, which would normally produce an fi with the i looking ugly and smashing into the f. Before computer-based typography, these sorts of things were taken care of by hand, by literally cutting up the letterforms a little so that it would overlap nicely, or using a ligature if one was available in the type case. It is debated whether ligatures are left over from calligraphic writing (note the ct above) but they are generally considered to have been created as a matter of visual necessity.

The old style figures and ligatures are found today in type collections often referred to as "expert sets" or "old style faces." This particular page was set in Adobe Caslon, using Adobe Caslon Expert for the old style figures and small caps, and Adobe Caslon Alternate for the ligatures themselves. It's kind of a pain to change the typeface for individual letters, but worth it visually. Newer printing and display technology (such as Apple's Quickdraw GX on the Macintosh) will automatically figure out ligatures when needed, and use appropriate figures as such.
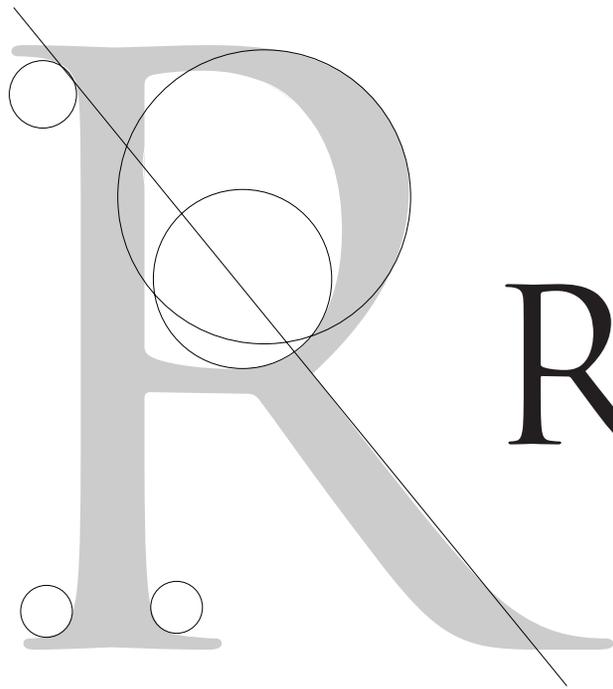
PREHISTORIC

vs PostScript

```
%!PS-Adobe-3.0 EPSF-3.0
%%Creator: Photoshop Version 2.5.1b21
%%Title: pre1.eps
%%CreationDate: 12/18/95 5:42 AM
%%BoundingBox: 0 0 424 77
%%HiResBoundingBox: 0 0 424.32 76.56
%%SuppressDotGainCompensation
%%DocumentProcessColors: Black
%%EndComments
%%BeginProlog
%%EndProlog
%%BeginSetup
%%EndSetup
%ImageData: 1768 319 1 1 0 221 1 "beginimage"
%BeginPhotoshop: 198
%3842494D03E90000000000780003000000480048000000002DA0228FFE1FFE2
%02F902460347052803FC0002000000480048000000002D8022800010000064
%000000010003030300000001270F0001000100000000000000000000006808
%0019019000000000000000000000000000000000000000000000000000000
%000000003842494D03ED000000000010012C000000010001012C000000010001
%3842494D03F300000000000070000000000000000003842494D03FD000000000006
%020100000000
%EndPhotoshop
gsave
40 dict begin
/_image systemdict /image get def
/_setgray systemdict /setgray get def
/_currentgray systemdict /currentgray get def
/_settransfer systemdict /settransfer get def
/_currenttransfer systemdict /currenttransfer get def
/blank 0 _currenttransfer exec
1 _currenttransfer exec eq def
/negative blank
{0 _currenttransfer exec 0.5 lt}
{0 _currenttransfer exec 1 _currenttransfer exec gt}
ifelse def
/inverted? negative def
/level2 systemdict /languagelevel known
{languagelevel 2 ge} {false} ifelse def
gsave
/rows 319 def
/cols 1768 def
72 65536 mul 19660800 div dup cols mul exch rows mul scale
level2 {
/DeviceGray
setcolorspace} if
/picstr1 221 string def
/readdata {currentfile exch readstring pop} def
/image2 level2 {/image load def} {{begin
Width Height BitsPerComponent ImageMatrix
/DataSource load image end} def} ifelse
/beginimage {
image2
} def
12 dict begin
/ImageType 1 def
/Width cols def
/Height rows def
/ImageMatrix [cols 0 0 rows neg 0 rows] def
/BitsPerComponent 1 def
/Decode [0 1] def
/DataSource {picstr1 readdata} def
currentdict end
%%BeginBinary: 70510
beginimage
%%EndBinary
grestore end
grestore
```

At the right is the amount of stuff that a printer needs before it can even think about actually printing any of the images on the lefthand page. This is a program that gets sent to the printer, describing an image and its contents. **Every time any of the images at left is output, 35 pages of PostScript code would be sent to your printer**. Consider what a heavy level of over-abstraction (and perhaps waste?) this is, when compared to the complexity of the image itself. Perhaps there is a solution besides faster computers? Maybe we should consider further how far bogged down by technology such a process has become. However it is the nature of electronics to make these things faster, quicker and easier. Do today's models of technology and electronics perhaps perpetuate this kind of waste?

Q

QQQ
QQQ

ROMAN

Roman inscriptional letters - written with a flat brush, held at an angle like a broad-nib pen, then carved into the stone with mallet and chisel - have served in their turn as models for calligraphers and type designers for the past 2000 years. They have a modest **aperture**, a **modulated stroke** (a stroke whose thickness varies with direction), and they have lively but full and formal serifs. [Robert Bringhurst, from The Elements of Typographic Style]

Aperture refers to letters, such as **S** and **C**, and how open or closed they are - the size of the inner space, or **counter** on the **C**.

ABGH

Lithos, a typeface based on Greek inscriptions and lettering

Most serif typefaces today (as well as many sans-serif) are patterned after the same proportions as the letterforms we get from the Romans. **Like most of Rome's achievements, these letters were derived from the Greek** letterforms, "which were drawn freehand (versus using a compass and ruler) and had no serifs. As the Greek letterforms evolved into the Roman, line-weight got heavier, apertures got smaller, and serifs eventually appeared." [quoted portion excerpted from R. Binghurst]

Lowercase letters, or **miniscules** didn't come until later - they were an invention of scribes. Roman today generally refers to upright, serifed faces, such as Times-Roman. Other faces, such as Times-Italic, are of a different group. **Italics** weren't invented unti l the Renais-sance, and came from script writing. The first italics were had only lower case letters, and were used with Roman capitals for headlines. It wasn't until still later that the true connection was made between Romans and Italics.

Since I've got a minute, I'd like to make another note about italics: the difference between and italic typeface and and **oblique** face. An italic is an entirely new face, the usually looks like a script version of the same. An oblique face, on the other hand, is simply slanted (or **sheared**) at an angle.

Futura *Oblique* Times *Italic*

Sans serif typefaces were made popular in the 1920s and 1930s, during as the International Typographic Style was starting to take shape. In the 1950s, the formerly **generic faces constructed with compass and ruler** (see discussion of **F**utura in this volume)

were replaced with the more organic forms of typographers like Adrian Frutiger (**U**nivers, also in this volume, as well as the self-entitled Frutiger, discussed in the **d**istinguishing typefaces section) and Edouard Hoffman, who with Max Miedinger created the Helvetica typeface.

It's generally accepted that (for our culture) serifs are more readable than sans-serifs. This is in part because of the soft visual connection that the serifs of one letter make with the letter next to it. A popular saying, (The kids at Emigre really like this one) is **"we read best what we read most,"** so with this argument, it could simply be that most text (books, newspapers and most magazines) is set using serif typefaces. Univers (the type you are reading) is pretty close to the serifs in readability as well.

Sans

Theories on serifs, and **where they came from**: (two of these exist)(1) Roman stonecutters used them to **finish off an incision in the stone**. This would explain why they aren't a uniform shape and have no mathematical proportions to them. (2) Stone engravings were first painted onto the stone using red paint. It is thought that perhaps the serif is **the painter making "a short gesture"** with the brush as they finished off a stroke in a letter. (3) J. Zieserl invented them on her fiftieth birthday in 1211, "because of feet." This would explain everything.

Serif

Bradbury Thompson

Bradbury Thompson spent some twenty-two years with the Westvaco paper company. Most of his work there was on **Westvaco Inspirations**, a publication for that the company used to advertise its various papers. **Bradbury Thompson had creativity to match the freedom he was given by Westvaco**.

Thompson's work pushes the limit using low-cost techniques and exploits the printing process to the fullest. He often cut apart printing films, separated colors and scaled halftone screens to enormous sizes. The amount of play in the work exceeds perhaps even that of Wolfgang Weingart. The work is a prompts designers to wonder **"Am I having that much fun with my own work?"** If the answer is no, then one needs to dig a little deeper and take a few tips from Mr. Thompson.
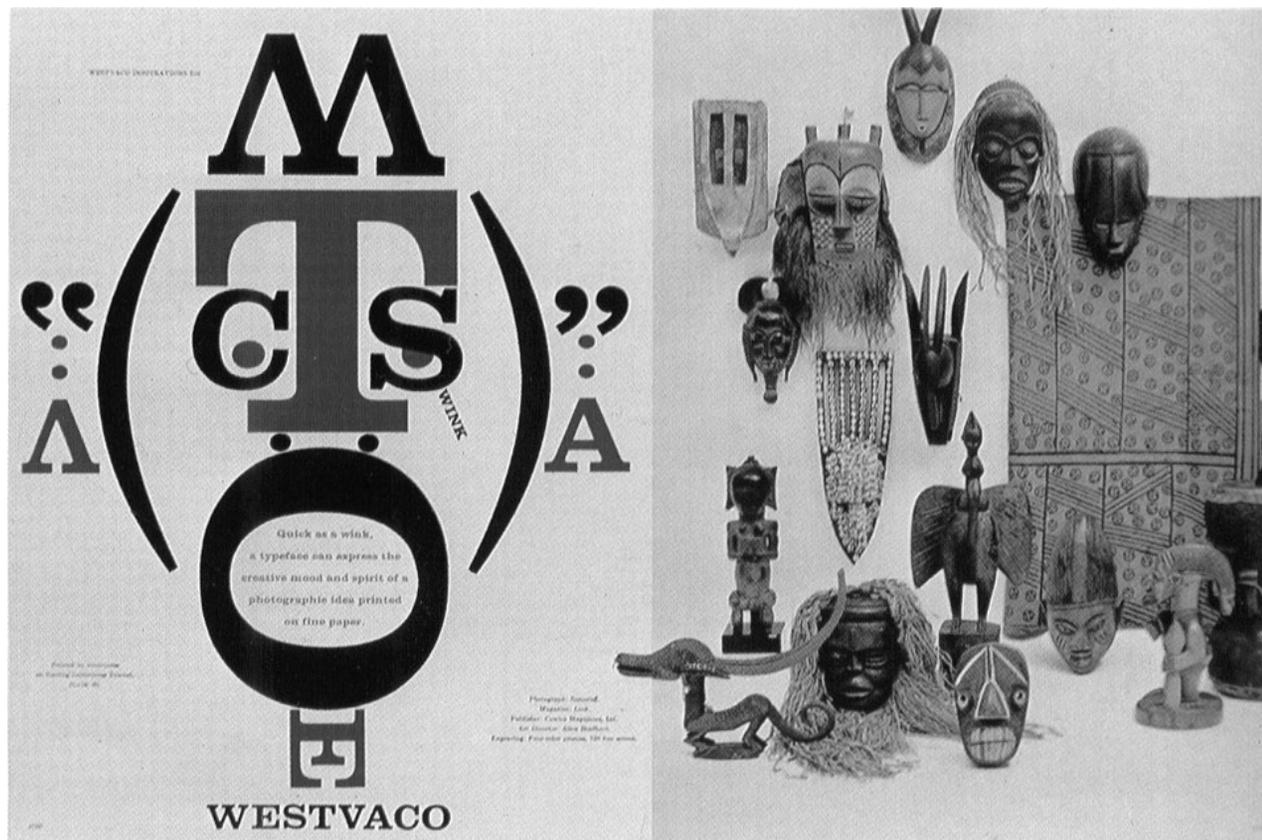
Mask spelling Westvaco winks at the African masks in Somoroff's photograph at the right.
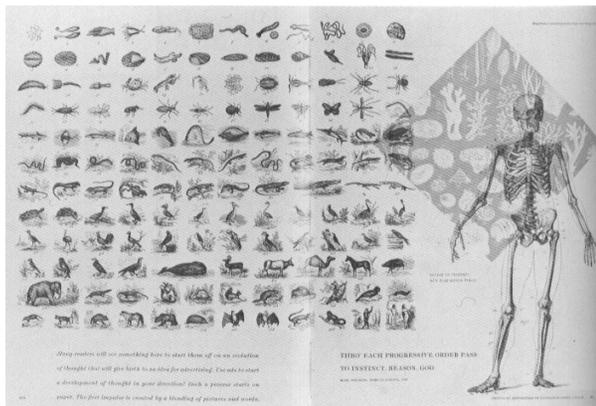
The saxophone player on the left side is a negative, then the image is exposed multiple times as it "rolls" around in a circle at the right.
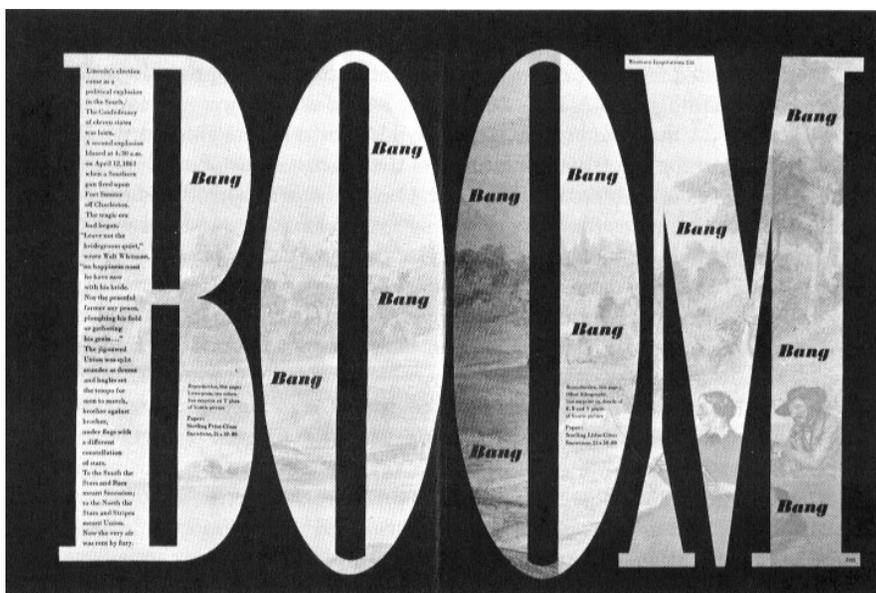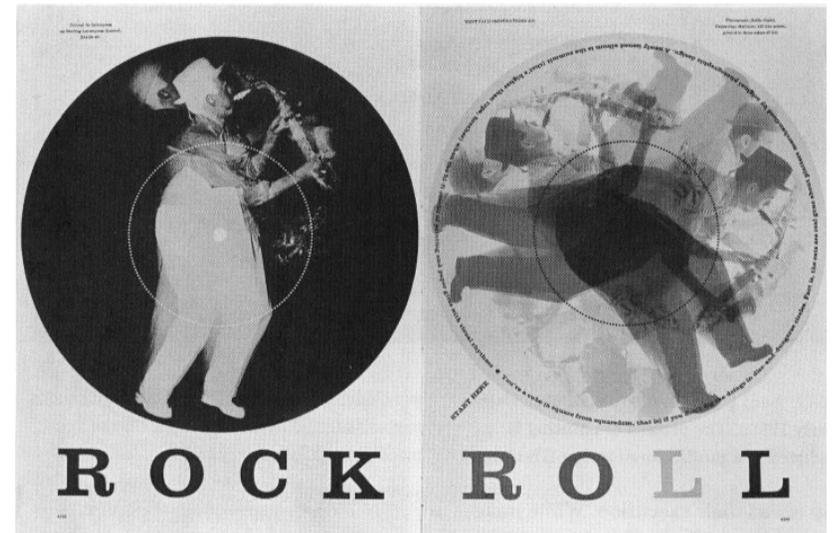
A reference to the Civil War

u

uni

univers

vers

ers

It took Adrian Frutiger three years to design Univers (it was finally released in 1954). It is an entire typeface family where the weights (bold, black or light) are **each based on the**

same mathe-matical pro-portions. This was an amazing feat - most type-faces at the time relied on the tweaking of the type designer to make the face "look right" at each weight. In this light, it is even that much more impressive that Univers has been found to be the most readable of the sans serif typefaces. It took 200,000 hours to design and create the final 35,000 type matrices to be used for actual printing. This mostly because of the large size of the family—

twenty-one faces in all.

45   *46*   47   *48*   49

53   *54*   55   *56*   57   *58*   **59**

63   *64*   65   *66*   67   *68*

73   74   75   76

83   *84*   85   *86*

Along with the typeface family, Adrian Frutiger developed a numbering system for classifying font styles. The **regular** weight is **55**, and the face becomes heavier/lighter as the left hand number gets higher/lower. Similarly, as the left hand numeral moves from 3 (expanded) up to 9 (extra condensed) the width of each glyph gets smaller. [The above diagram taken from Stop Stealing Sheep]

Today there exists technology, invented by the type department at Adobe Systems, known as **multiple-master typefaces**, which are based on this idea of different **axes** in a font. Univers uses width and stroke weight, though multiple masters have the ability to change any variable that the type designer may want to incorporate. One of the more intriguing faces actually **changes from serif to sans serif**, with serifs of varying sizes in between. For fine typography other fonts have been designed with axes such that **optical size can be modi-fied** so that type can be modified to look better at a very small or very large size, similar to the way they used to cut type back in the day of printing presses.
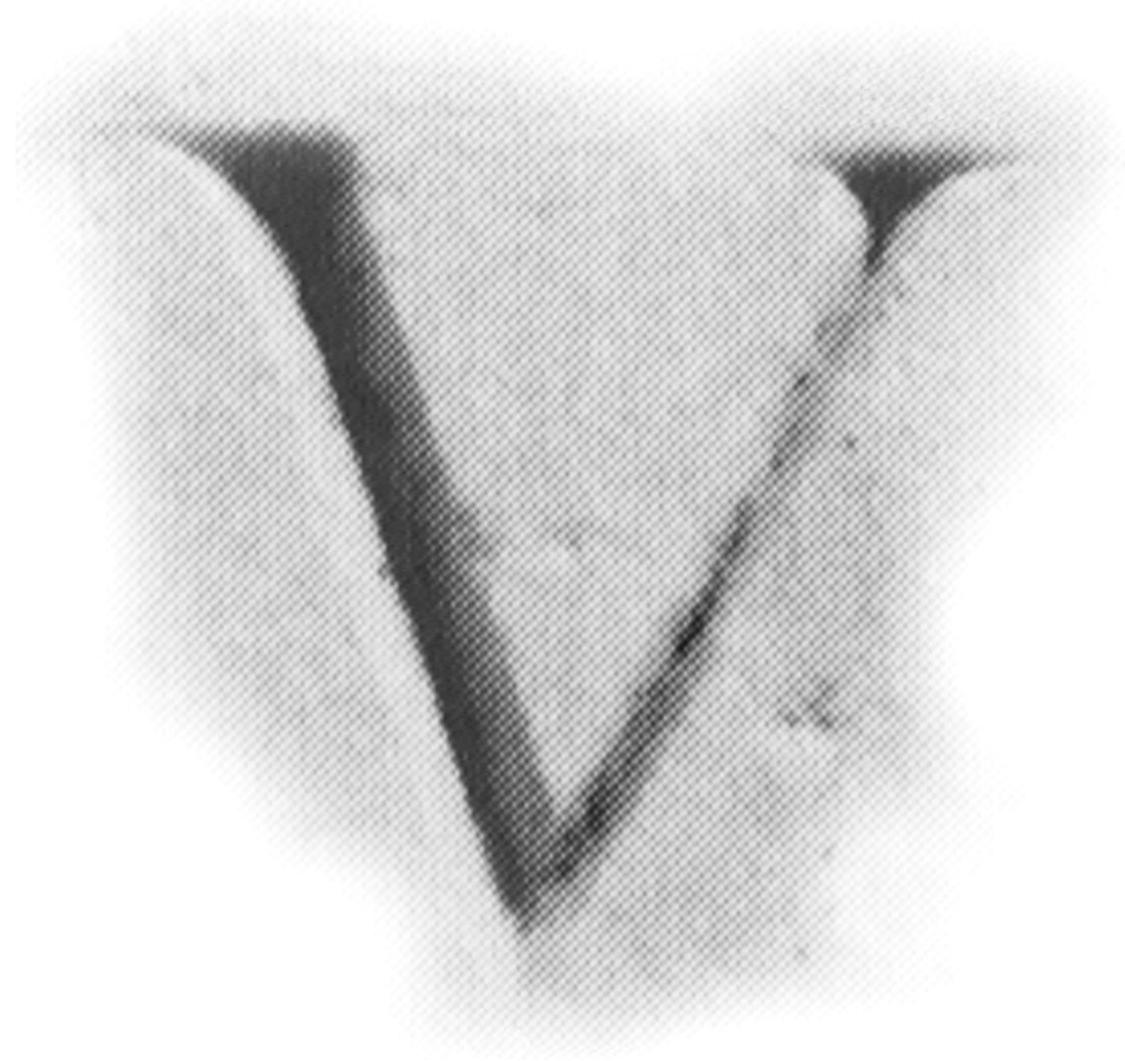
Around the 10th century (in medieval England) **a variation of V** was needed for when it was used for a softer vowel sound, the result was the letter **U** that we use today.

Later, in the 12th century, the **W**

The **i** and **j** page has similar information about the history of these letters, and the **R** gives an explanation of our Roman lettering system.

History of the alphabet

A B C D E F G H I K L M N O P Q R S T V X
(Latin alphabet)

A B C D E F G H I K L M N O P Q R S T V X **Y Z**
(added after the Romans took over Greece,
to accomodate for their alphabet)

(a cheat sheet)

A B C D E F G H I K L M N O P Q R S T **U** V X Y Z
(10th century)

A B C D E F G H I K L M N O P Q R S T U V **W** X Y Z
(12th century England)

A B C D E F G H I **J** K L M N O P Q R S T U V W X Y Z
(14th century, see the **i** and **j** page)

...my teaching approach, which is about the process of **learning rather than the philosophy of teaching**. It is a learning process that engages a simple, direct and open attitude toward typography and life, a process not of making typography while suffering pain, but rather having fun exploring all the possibilities of classical typography, systematic typography, ugly typography, do-it-yourself typography, Swiss typography, letterspacing typography... Although we enjoy great freedom in our work, a careful observer will see that **serious care, critical judgement, and visual sensitivity are our highest priorities** throughout the design process. When I began teaching in 1968, classical, so-called "Swiss typography" (dating from the 1950s), was still commonly practiced by designers throughout Switzerland and at our school. Its conservative design dogma and strict limitations stifled my playful, inquisitive, experimental temperament and I reacted strongly against it. Yet at the same time I recognized **too many good qualities in Swiss typography to renounce it altogether**. Through my teaching I set out to use the positive qualities of Swiss typography to renounce it altogether. Through my teaching I set out to use the positive qualities of Swiss typography as a base from which to pursue radically new typographic frontiers. I try to teach students to view typography from all angles: type must not always be set flush left/ragged right, nor in only two type sizes, nor in necessarily right-angle arrangements, nor printed in either black or red. **Typography must not be dry,**

Typografische Monatsblätter — Schweizer Grafische Mitteilungen — Revue suisse de l'Imprimerie

Ist diese Typografie noch zu retten?
Oder leben wir auf dem Mond? Is This Typography Worth Supporting, Or Do We Live On The Moon?

"To teach is not difficult. But you must **be careful not to teach [the students] dumb things**, that's all. You must not teach them fashion, you must teach them how to create clean, clear, structured text. Nobody can structure text these days."
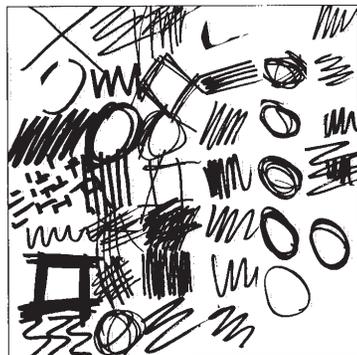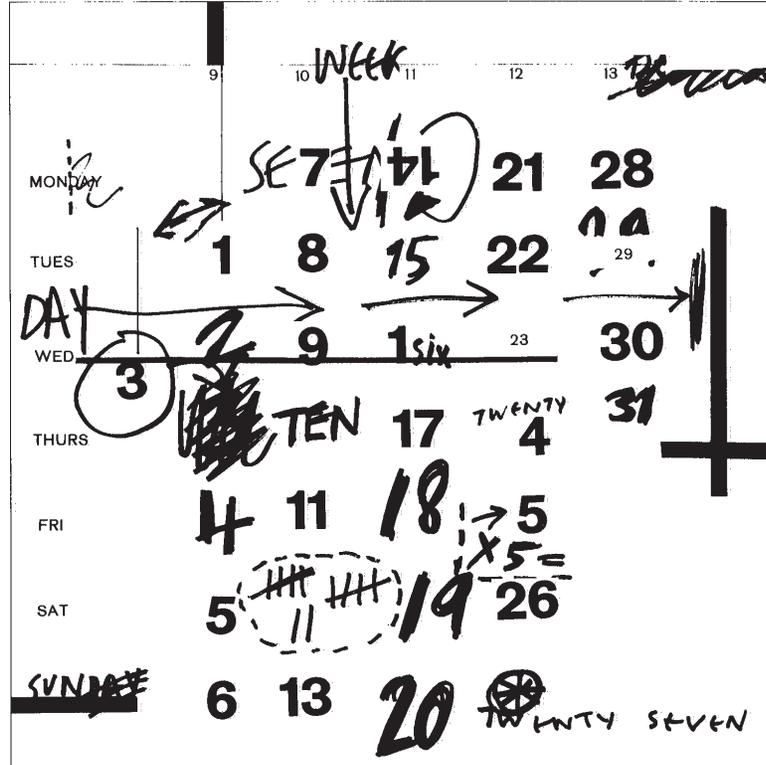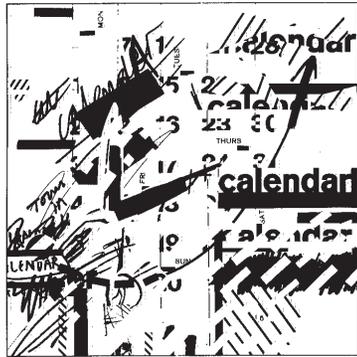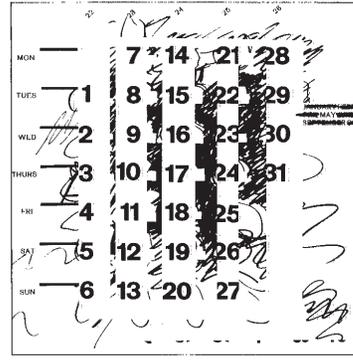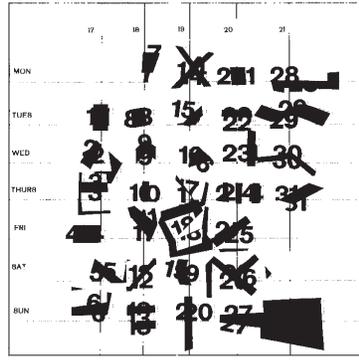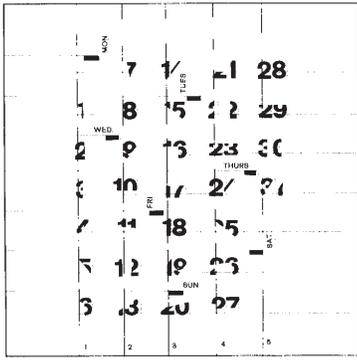
A great typographer and educator. Known to history as the father of **New Wave** typography. Sort of a dumb name for a revolution in the Swiss rules born out of the earlier part of the century, and still very prevalant today.

tightly ordered or rigid. Type may be set center axis, ragged left/ragged right, perhaps sometimes in a chaos. But even then, typography should have a **hidden structure and visual order**. [Wolfgang Weingart]

This was supposed to be a page about x height

how do you feel about this new typographic silliness?

typography

typography

childish?

experimental typography

readable

typography

come on, the sound starts with x

and uh, yeah, that's all part of the concept

perhaps i'd say Xperimental typography, but god that'd sound like some boring radio station

perhaps i'd say Xperimental typography, (for the book's title) and that'd sound like some annoying radio station

Imagine that you have before you a flagon of wine. You may choose your own favorite vintage for this imaginary demonstration, so
that it be a deep shimmering crimson in color. You have two goblets before you. One is of solid gold, wrought in the most exquisite
patters. The other is of crystal clear glass, thin as a bubble, and as transparent. Pour and drink; and according to your choice of goblet,
I shall know whether or not you are a connisseur of wine. For if you have no feelings about wine one way or another, you will want the
sensation of drinking the stuff out of a vessel that may have cost thousands of pounds; but if you are a member of that vanishing tribe,
the amateurs of fine vintages, you will choose the crystal, because everything about it is calculated to reveal rather than to hide the
beautiful thing it was meant to contain. ¶ Bear with me in this long-winded and fragrant metaphor; for you will find that almost all virtues
of the perfect wine-glass have a parallel in typography. There is the long, thin stem that obviates the fingerprints on the bowl. Why?
Because no cloud must come between your eyes and the fiery hearth of the liquid. Are not the margins on book pages similarly meant to
obviate the necessity of fingering the type-pages? Again: The glass is colorless or at the most only faintly tinged in the bowl, because
the conniseur judges wine partly by its color and is impatient of anything that alters it. There are a thousand mannerisms in
typography that are as impudent and arbitrary as putting port in tumblers of red or green glass! When a goblet has a base that
looks too small for security, it does not matter how cleverly it is weighted; you feel nervous lest it should tip over. There are
ways of setting lines of type which may work well enough, and yet keep the reader subconsciously worried by the fear
of "doubling" lines, reading three words as one, and so forth. ¶ Printing demands a humility of mind, for the
lack of which many of the fine arts are even now floundering in self-conscious maudlin experiments.
There is nothing simple or dull in achieving the transparent page. Vulgar ostentation is twice
as easy as discipline. When you realise that ugly typography never effaces itself,
you will be able to capture beauty as the wise men capture happiness
by aiming at something else. The "stunt typographer"
learns the fickleness of rich men who hate to
read. Not for them are long breaths
held over serif and kern, they
will not appreciate your
spitting hair spaces.
Nobody (save the
other
craftsmen) will
appreciate
half your skill.
But you may
spend
endless
years of
happy
experiment
in devising
that crystalline
goblet which is
worthy to hold the
vintage of the human
mind. [Taken from Beatrice
Ward's lecture to the British Typographer's Guild]

We use the letters
of our alphabet every day
with the utmost ease

ABC

and unconcern,
taking them almost

DEFGHI

as much for granted
as the air we breathe.
We do not realize,

JKLM

NOPQ

that each of these letters
is at our service today
only as the result

RSTUVW

of a long & laboriously slow
process of evolution in the
age-old art of writing.

XYZ

Douglas C. McMurtrie.

We conclude with **Herman Zapf, the German calligrapher** whose

contributions to

graphic design

include a number of

highly used

typefaces, as well as

some amazing

calligraphic pieces.

Zapf's typefaces include Palatino, Melior, Optima and

others. Palatino is still highly used as a digital type-

face today as a welcome alternative to the over-used

Palatino

Times Roman. Optima

is an organic typeface

Times Roman

that employs the ideas

of calligraphic style and roman

Optima

letterforms to a sans serif face.

If you look closely, you will

notice that the top and the bottom of each stem

is just slightly wider, similar to the proportions of a

serif letterform. It's too bad this face has been so

badly overused (or overused so badly) in past years,

because the concept behind it is quite nice.

Hermann Zapf

taught at

Carnegie

Mellon

University dur-

ing the 1960s.

This book was set in Univers 45 (Light for the kids who didn't read the **U** spread) at 8.5 point, with 15 points of leading, Callout text was set in FF Meta Plus Bold (by Erik Spiekermann of FontFont) at 18 point, with the same 15 point leading as the body text.

Countless other typefaces are used throughout the book, though they are for the most part identified throughout.

The majority of this book was set on Reese machine #7, the Quadra 800 and Babel the LaserJet who was my best friend for many many hours. It all came together using QuarkXPress 3.31, Adobe Illustrator 5.5, and Adobe PhotoShop 2.5.1. Hehe. This'll be a funny paragraph in five years.

Sources include just about any typography book in my own collection, or that I could get ahold of from anyone else (Thanks to R. Pietri for lending his big stack). Again, these are noted where quoted. Other sources included web pages like the Emigre home page, or the resources available from the home page and FAQ from the internet newsgroup comp.fonts.

There could be countless errors in this book, ranging from simple typos to blatant ignorance and messed up facts on my part. I am, after all, a partially ignorant twenty and a half year old. Today is in fact my half birthday. Anyways, if I'm wrong then correct me. Thanks.

Hope you dug it.
Well, I've got Christmas shopping to worry about. Good night.

December 18, 1995