

## Alphabet

---

- elemental visual signs
- 26 characters
- frozen sounds



# Evolution

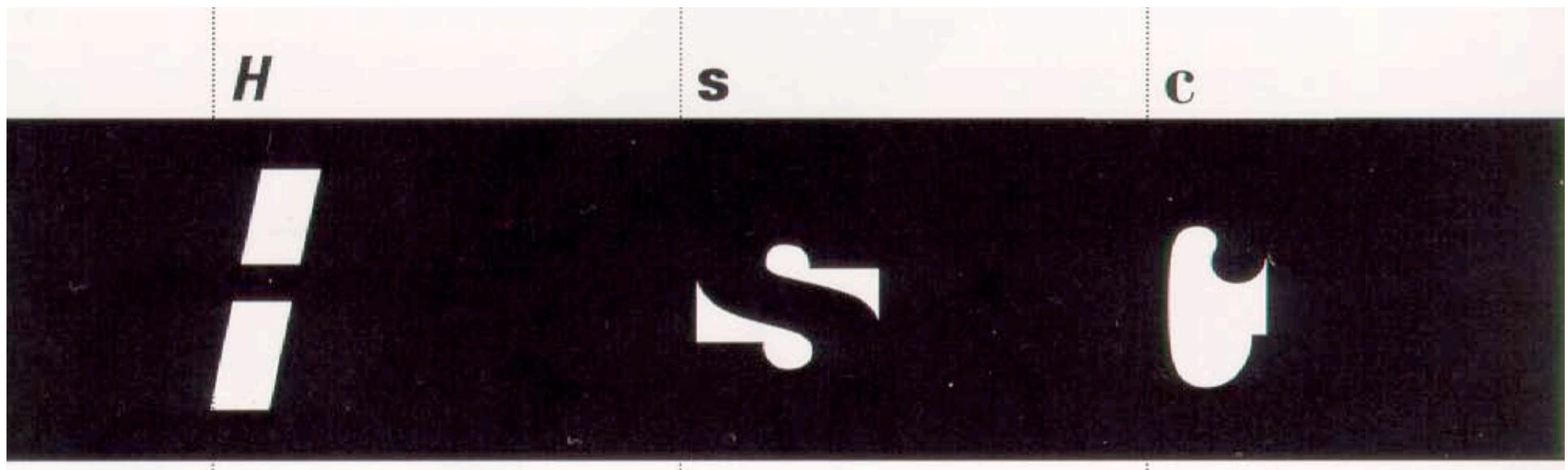
- Handwriting
  - > minimum number of strokes
  - > lowercase
- Engraving
  - > minimum number of curved lines
  - > capitals

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

## Letterforms

---

- Appearance of the individual letter: Form
- White space around: Counterform



H

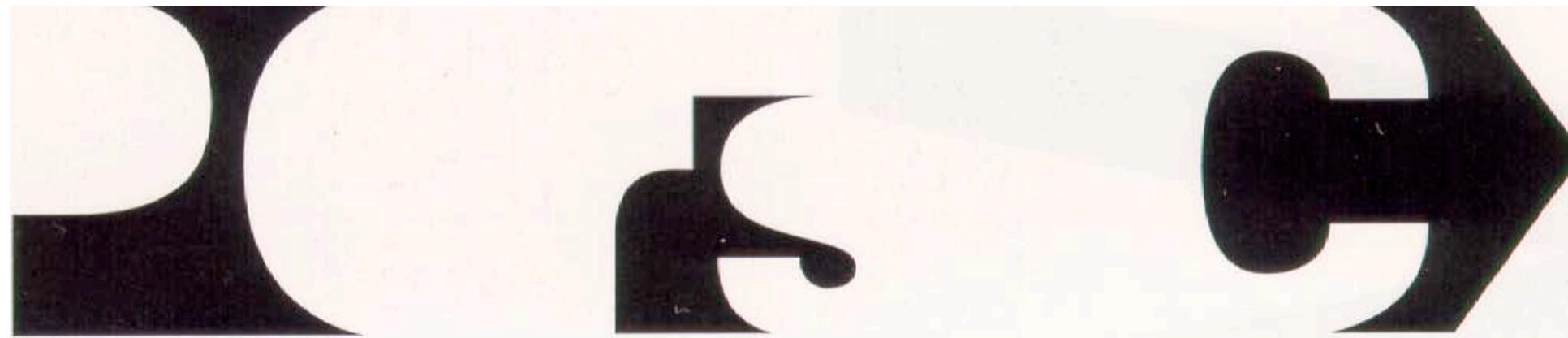
s

c

H

s

c



BY ERIC

q

su

1h

## Combination Letterforms:

Deconstruction and reconstruction creates new and potentially meaningful solutions. Shape of exterior form very important.

vw

z1

27

F

ø

R

‡

P

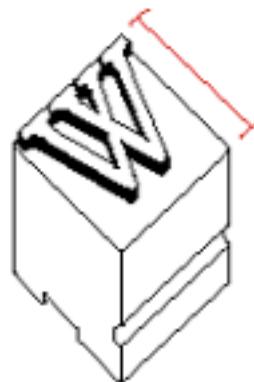
L7

## Letter Height

- The point system, used to measure the height of a letter as well as the space between lines (leading), is the standard measurement for type.
- One point equals 1/72 inch or .35 millimeters.
- Twelve points equal one pica, the unit commonly used to measure column widths.

12 points  
equal 1 pica

6 picas  
(72 points)  
equal 1 inch.



*A typeface is measured from the top of the capital letter to the bottom of the lowest descender, plus a small buffer space.*

*In metal type, the point size is the height of the type slug.*

**Make it bigger.** Paula Scher

*Amateur typographers tend to make their type too big. In contrast, experienced typographers tend to make it too small. Clients will often ask you to "Make it bigger."*

## Height

---

- Typography also can be measured in inches, millimeters, or pixels. (A point is roughly equivalent to a pixel.)
- Most software applications let the designer choose a preferred unit of measure; picas and points are a standard default.

## Width

---

- The horizontal dimension of a letter is its set width.
- The set width is the body of the letter plus a sliver of space that protects it from other letters.
- The width of a letter is intrinsic to the proportion of the typeface.
- Some typefaces have a narrow set width, and some have a wide one.

# WIDE LOAD

*The set width is the body of the letter plus the space beside it.*

# TIGHT WAD

*The letters in the condensed version of this typeface (Interstate) have a narrower set width.*

# WIDE LOAD

# TIGHT WAD

---

#### TYPE CRIME:

#### HORIZONTAL OR VERTICAL SCALING

*The proportions of the letters have been digitally distorted in order to create wider or narrower letters. This senseless torture alters the line weights of the font as well as its proportions.*

## Width

---

- You can change the set width of a letter by fiddling with its horizontal or vertical scale.
- This distorts the proportion of the typeface, forcing heavy elements to become thin, and thin elements to become thick.
- Instead of torturing a letterform, choose a typeface with the proportions you need, such as condensed, compressed, or extended.
- Type families such as Helvetica, Univers, and Interstate include a variety of widths.

# WIDE LOAD

*The set width is the body of the letter plus the space beside it.*

# TIGHT WAD

*The letters in the condensed version of this typeface (Interstate) have a narrower set width.*

# WIDE LOAD

# TIGHT WAD

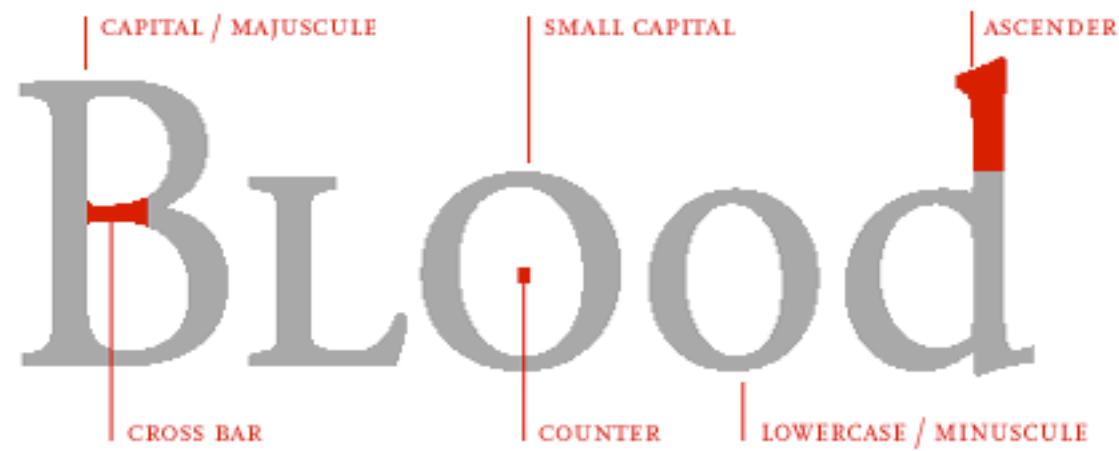
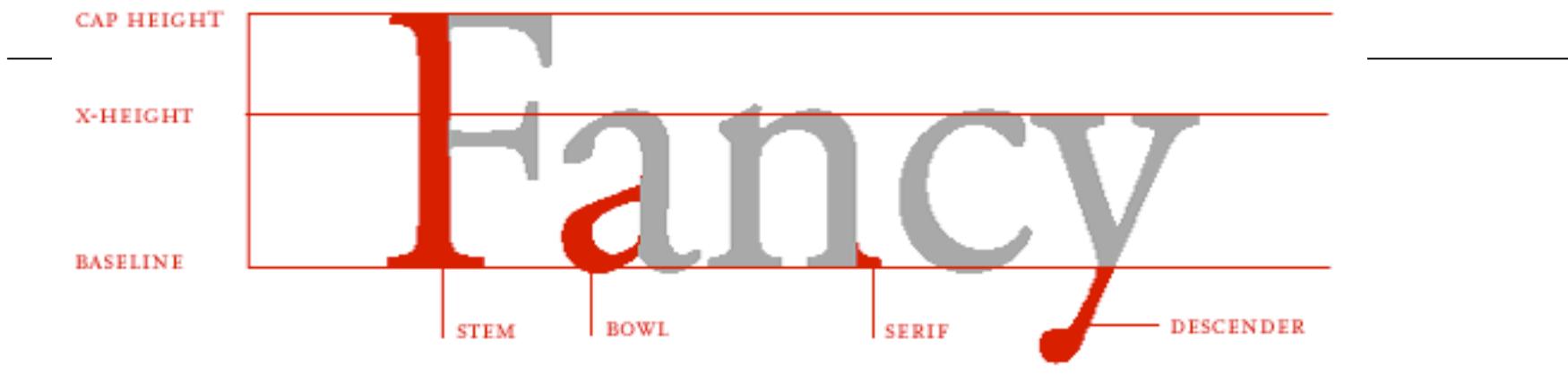
---

#### TYPE CRIME:

#### HORIZONTAL OR VERTICAL SCALING

*The proportions of the letters have been digitally distorted in order to create wider or narrower letters. This senseless torture alters the line weights of the font as well as its proportions.*

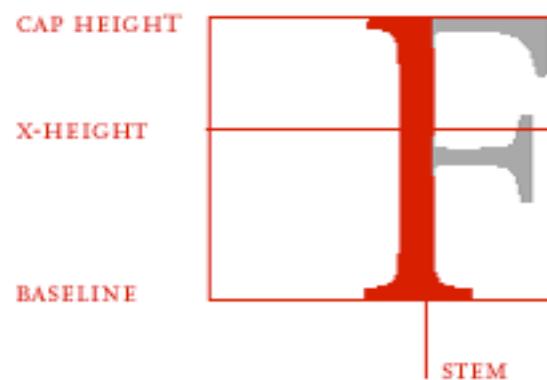
# Anatomy of Typography



## The cap height

---

is the distance from the top of the capital letter to its bottom. Some vertical elements (ascenders) may extend slightly above the cap height.



## The x-height

---

- is the height of the main body of the lowercase letter (or the height of a **lowercase x** ), excluding its ascenders and descenders.
- The bigger the x-height is in relation to the cap height, the bigger the letters will look.



SCALA

INTERSTATE

BODONI

MRS EAVES

# Do I look fat in this paragraph?

*These letters are all the same point size, but they have different x-heights, line weights, and proportions.*

nice x-height

HELVETICA

MRS EAVES

Every typeface wants to know, "Do I look fat in this paragraph?" It's all a matter of context. A font could look perfectly sleek on screen, yet appear bulky and out of shape in print. Helvetica isn't fat. She has a big x-height.

Every typeface wants to know. "Do I look fat in this paragraph?" It's all a matter of context. A font could look perfectly sleek on screen, but appear bulky and out of shape in print. Mrs Eaves isn't scrawny. She has a small body and a short waist.

## X-height

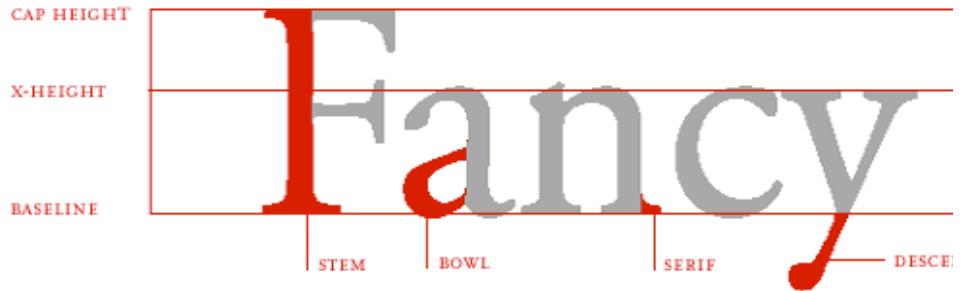
---

- When two typefaces are set in the same point size, one often looks bigger than the other.
- Bigger x-heights, introduced in the twentieth century, make a typeface appear larger.
- Differences in line weight and character width also affect the letters' apparent scale.

Mrs Eaves, designed by Zuzana Licko in 1996, rejects the modern appetite for supersized x-heights. The font is inspired by the eighteenth-century designs of John Baskerville.

## The baseline

---

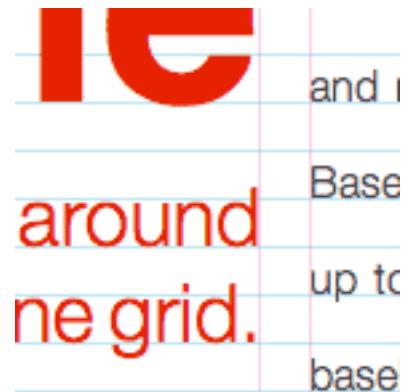


- Letters “sit” on baseline
- It is the most stable axis along a line of text.
- The curves at the bottom of letters such as a or c hang slightly below the baseline.
- Commas and semicolons also cross the baseline.
  - If a typeface were not positioned this way, it would appear to teeter precariously, lacking a sense of physical grounding.

Two blocks of text are often aligned on a shared baseline.

---

- Example 14/18 Scala and 7/9 Scala
- (= 14pt letter size on 18 pt leading / line spacing)



## When creating letters consider their optical relationships

---

- pointed & curved extend beyond baseline and capline

OV

- 2-storied: center bar raised higher than math. center, top narrower:

E

- horizontal strokes thinner

H

---

- tight junctions opened

M

- NK width and angles adjusted to look right
- Q smaller than H, curved strokes thinner

## Typeface x Font

---

- **Typeface:** The distinctive, design of an alphabet (and accompanying numbers and punctuation). All point sizes of that typeface.
- **Font:** All the letters, numbers and punctuation of a single size of a single typeface (12-point Helvetica)

**Type Family:** light, *light italic*, medium, **bold (Futura)**

## Font

---

- Set of characters of the same size and style containing all the letters, numbers and marks needed for typesetting
  - For example, the complete set of all the characters for “9-point Bulmer” is called a font
  - the “10-point Bulmer” would be another separate font, but part of parts of the same font family
  - Whereas “9-point Bulmer boldface” would be another font in a different font family of the same typeface.
  - One individual font character might be referred to as a “piece of font” or a “piece of type”.

## Font consists of

---

- UPPERCASE/CAPITALS
- lowercase
- SMALL CAPS
- Lining Figures: 1234567890
- OLD-STYLE FIGURES 1234567890
- Fractions 1/2
- Ligatures fl fi
- Punctuation ,.?;!;:”{}[]
- Symbols @#\$%^&\*

## Visual features of typefaces

---

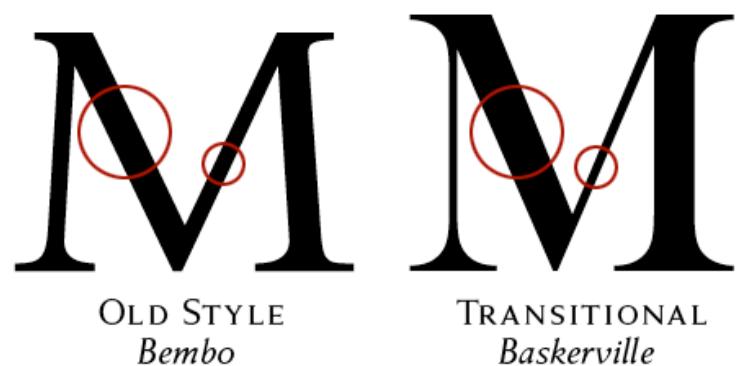
- Serifs
- **Weight**
- Width (expanded, **condensed**)
- *Posture* (Italic, oblique, script)
- Thick/thin contrast
- x-height **x-height**
- Ascenders & descenders length
- Stress (axis)

## Proportions of the letterforms in different typefaces

---

- stroke to height ratio
- contrast in stroke weight
- expanded x condensed style
- x-height & proportion

STROKE CONTRAST



A B C D E F G

## Serif x Sans Serif

---

- A traditional **roman book face** typically has a small family-- a "nuclear" group consisting of roman, italic, small caps, and possibly bold and semibold (each with an italic variant).
- **Sans-serif** families often come in many more weights and sizes, such as thin, light, black, compressed, and condensed.

Times New Roman

*Times New Roman Italic*

**Times New Roman Bold**

*Times New Roman Bold Italic*

MUSEO **MUSEO**  
MUSEO **MUSEO**  
MUSEO MUSEO  
MUSEO MUSEO  
**MUSEO** MUSEO  
**SANS**

*Adobe Garamond type family, designed by Robert Slimbach, 1988*

The roman font is the core or spine from which a family of typefaces derives.

*Adobe Garamond Regular*

*Italic fonts, which are based on cursive writing, have forms distinct from roman.*

*Adobe Garamond Italic*

SMALL CAPS HAVE A HEIGHT THAT IS SIMILAR TO *the lowercase x-height*.

*Adobe Garamond Expert (Small Caps)*

**Bold (and semibold) typefaces are used for emphasis within a hierarchy.**

*Adobe Garamond Bold and Semibold*

***Bold (and semibold) typefaces each need to include an italic version, too.***

*Adobe Garamond Bold and Semibold Italic*

A full family has two sets of numerals: *lining* (123) and *non-lining* (123).

*Adobe Garamond Regular and Expert numerals*

---

---

- In the 1990s, many type designers created families that include both serif and sans-serif versions.
- Small capitals and non-lining numerals (a courtesy traditionally reserved for serif fonts) are included in the sans-serif versions of **Thesis**, **Scala**, **Quadraat**, and many other big contemporary families.

Interstate Light  
Interstate Light Compressed  
Interstate Light Condensed  
**Interstate Regular**  
Interstate Regular Compressed  
Interstate Regular Condensed  
**Interstate Bold**  
Interstate Bold Compressed  
Interstate Bold Condensed  
**Interstate Black**  
Interstate Black Compressed  
**Interstate Black Condensed**

*Tobias Frere-Jones, Font Bureau, 1993*



h n n p p p

Scala Scala Sans  
Scala Italic Scala Sans Italic  
SCALA CAPS SCALA SANS CAPS  
Scala Bold Scala Sans Bold  
*Martin Majoor's Scala began as serif typeface. He later added a sans-serif sub-family as well as an ornamental "jewel" set. Majoor's diagram (above) shows how the serif and sans-serif forms have a common spine.*  
SCALA JEWEL CRYSTAL  
SCALA JEWEL DIAMOND  
SCALA JEWEL PEARL  
SCALA JEWEL SAPHYR

## THESIS FAMILY

*serif*

*Designed by Lucas de Groot, Lucas Fonts, 1994*

*Thesis is one of the world's largest type families.*

This is not a site about fonts. It is a site about how to use them. Typefaces

THESES SERIF ROMAN

*are essential resources for the graphic designer, just as glass, stone, steel, and*

THESES SERIF IOMAN ITALIC

OTHER MATERIALS ARE USED BY THE ARCHITECT. SOME DESIGNERS CREATE

THESES ROMAN SMALL CAPS

**their own custom fonts, but most**

THESES SERIF BLACK ROMAN

regard to the audience or situation.

THESES SERIF ROMAN

**graphic designers will tap the vast**

THESES SERIF EXTRA BOLD

Selecting type with wit and wisdom

THESES SERIF SEMI LIGHT

**store of already existing typefaces,**

THESES SERIF BOLDROMAN

requires knowledge of how and why

THESES SERIF LIGHT ROMAN

**choosing and combining each with**

THESES SEMI BOLD ROMAN

letterforms have evolved. The history

THESES SERIF EXTRA LIGHT

## THESES FAMILY

*sans serif*

*Designed by Lucas de Groot, Lucas Fonts, 1994  
Thesis is one of the worlds largest type families.*

of typography reflects a continual tension between the hand and the machine,

THESES SANS ROMAN

*the organic and geometric, the human body and the abstract system. These tensions*

THESES SANS ROMAN ITALIC

MARKED THE BIRTH OF PRINTED LETTERS FIVE CENTURIES AGO, AND THEY CONTINUE TO

THESES SANS ROMAN SMALL CAPS

## **energize typography today. writing**

THESES SANS BLACK

## **in the west was revolutionized early**

THESES SANS EXTRA BOLD

## **in the renaissance, when Johannes**

THESES SANS BOLD

## **Gutenberg introduced movable type**

THESES SANS SEMI BOLD

in Germany. Whereas documents and

THESES SANS

books had previously been written by

THESES SANS SEMI LIGHT

hand, printing with type mobilized all

THESES SANS LIGHT

of the techniques of mass production

THESES SANS EXTRA LIGHT

A *type family* CAN BE faked by *slanting*, **inflating**, or SHRINKING letters.

ITALIC

BOLD

SMALL CAPS

TYPE CRIME:  
PSEUDO ITALICS

*These skewed  
letters are wide,  
ungainly, and  
unnatural.*

TYPE CRIME:  
PSEUDO BOLD

*Padded letters  
look blunt  
and dull.*

TYPE CRIME:  
PSEUDO SMALL CAPS

*Shrunken caps  
appear puny  
and starved.*

## : Anatomy

### FONTS FOR PRINT

Helvetica, created in Switzerland in 1957, is one of the most popular typefaces in the world.

Although Helvetica is the sans-serif default font for many computer users, it was designed for print.

**HELVETICA** *Designed by Max Miedinger, 1957*

Times Roman, created for a London newspaper, is also hugely popular, owing largely to its broad distribution. This font is a default for many Web sites, because users can be expected to have it on their own computers.

**TIMES** *Designed by Stanley Morison, 1931*

### FONTS FOR THE SCREEN

Verdana is a sans-serif font designed by Matthew Carter especially for digital display. Verdana has a larger x-height, simpler curves, and more open forms than Helvetica.

**VERDANA** *Designed by Matthew Carter, 1996*

Georgia is a serif screen face that is designed with simple curves, open forms, and generous letterspacing. Georgia and Verdana, commissioned by Microsoft, have been widely distributed, making them useful Web fonts.

**GEORGIA** *Designed by Matthew Carter, 1996*