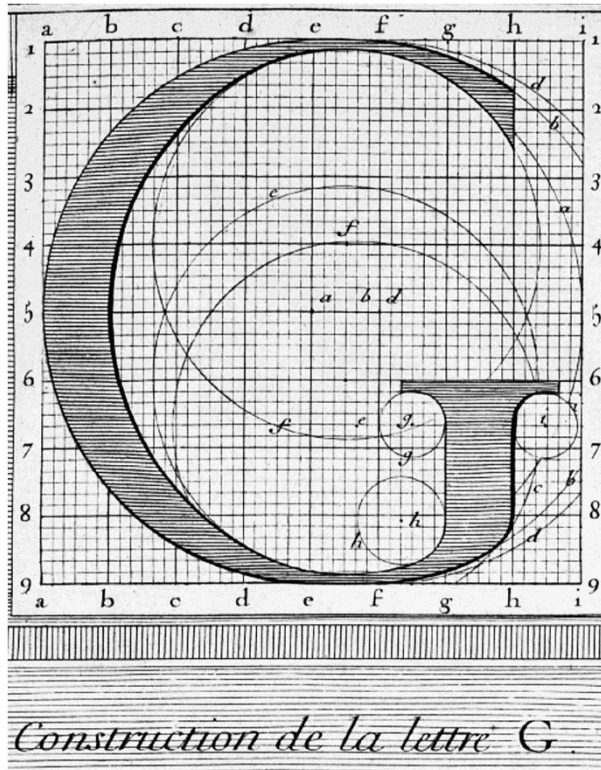


Typography

the art and science



Chris Taylor
President, OPCUG

Purist note

Most info presented should be of interest to anyone who wants their text read



Fascinating stuff only purists will care about is marked with green asterisk

Style notes

Text in blue:

example of a specific typeface

name of typeface (usually) in parenthesis

Old-style Serif

(Garamond)

Handgloves as sample text

short word

highlights many characteristics of a typeface

Handgloves

(Univers)

Style notes

Lorem text in some samples

Microsoft Word

=lorem()

press Enter

LibreOffice Writer

Tools | AutoText | Standard | Lorem Ipsum

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas porttitor congue massa. Fusce posuere, magna sed pulvinar ultricies, purus lectus malesuada libero, sit amet commodo magna eros quis urna.

Nunc viverra imperdiet enim. Fusce est. Vivamus a tellus.

Most typefaces used are in Windows 10

Base typeface in presentation: **Book Antiqua**

Typography on opening slide: Camigata
(available for free at dafont.com)

Typography

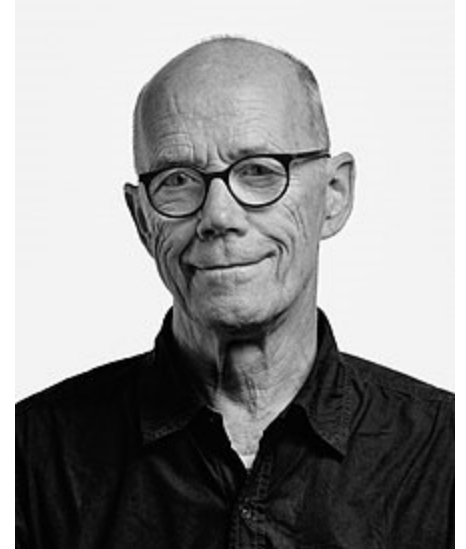
*The **style**, **arrangement**, or **appearance** of typeset matter*

— Merriam-Webster

*The **art** and **technique** of arranging type to make written language **legible**, **readable** and **appealing** when displayed*

— Wikipedia

Typomania

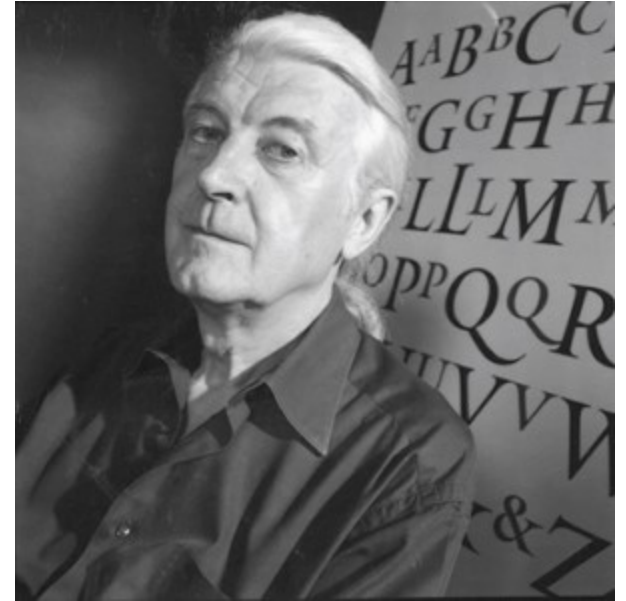


An obsession with typography

*Typomania is a sickness that is incurable...
but not lethal*

— Erik Spiekermann

Type



*Type is a beautiful group of letters,
not a group of beautiful letters*

— Matthew Carter

letters assembled into a word,
a sentence, a paragraph, a
page become type

Why care about typography

Clarity

- makes it **easier to read** text information
-

Clarity comes from

Legibility

- how easy it is to **distinguish one letter from another**

Readability

- how **easily** words, sentences, & blocks of **text can be read**

Why else

**CAPTURE
ATTENTION**

(Cooper Black)

Convey an emotion

(Edwardian Script ITC)

Typeface

Glyphs (letters, numbers, punctuation, etc.)
that share a **common design**

Handgloves

(Barlow)

Handgloves

(Goudy Old Style)

Handgloves

(Skeena)

Handgloves

(Bell MT)

Typeface family

Different **styles** of a given typeface

weight

light, thin, (regular), medium, bold, heavy, black, etc.

slant

(roman), italic/oblique

width

(regular), condensed, expanded, etc.

If style is unspecified, the style in parenthesis is normally what's used

Barlow

Barlow condensed light

Barlow Semi-Condensed ExtraBold Italic

A large typeface family

Weights (9)

Thin
Extra light
Light
Regular
Medium
Semi-bold
Bold
Extrabold
Black

Slants (2)

Roman
Italic

Widths (3)

Normal
Semi-condensed
Condensed

Barlow

Thin
Thin Italic
ExtraLight
ExtraLight Italic
Light
Light Italic
Regular
Italic
Medium
Medium Italic
SemiBold
SemiBold Italic
Bold
Bold Italic
ExtraBold
ExtraBold Italic
Black
Black Italic

Barlow Semi Condensed

Thin
Thin Italic
ExtraLight
ExtraLight Italic
Light
Light Italic
Regular
Italic
Medium
Medium Italic
SemiBold
SemiBold Italic
Bold
Bold Italic
ExtraBold
ExtraBold Italic
Black
Black Italic

Barlow Condensed

Thin
Thin Italic
ExtraLight
ExtraLight Italic
Light
Light Italic
Regular
Italic
Medium
Medium Italic
SemiBold
SemiBold Italic
Bold
Bold Italic
ExtraBold
ExtraBold Italic
Black
Black Italic

Available for free at
github.com/jpt/barlow

Font

Glyphs

from **one typeface**
using **one style** (weight, slant, width)
at **one size**

Franklin Gothic Heavy 36 point

Bahnschrift Light Condensed 40 point

Bodoni MT Condensed Bold Italic 48 point

Font

For the *non-pedantic*...

a *typeface*

- is a *font*

a *typeface* in a given *style*

- is a *font*

a *typeface* in a given *style* at a specific *size*

- is a *font*

Gabriola ...is a font

Garamond Italic ...is a font

Franklin Gothic Medium Cond Italic 32 point ...is a font

Typeface categories

Serif

Handgloves (Century)

Display

Handgloves (Elephant)

Sans serif

Handgloves (Univers)

Decorative

Handgloves (Western)

Slab serif

Handgloves (Rockwell)

Monospaced

Handgloves (Courier New)

Script

Handgloves (Freestyle Script)

Symbol

☞ ☞ ■ ☞ ☞ (Wingdings)

Serif vs. sans-serif

Serif

may make text easier to read
especially in smaller fonts
eye guided along long lines



Bodoni MT



Calisto MT

Sans serif

stands out more, starker
especially in larger,
shorter text



Verdana



Gill Sans MT

Anatomy in type: parts of glyphs

serifs
Apxh



ascender
Apxh



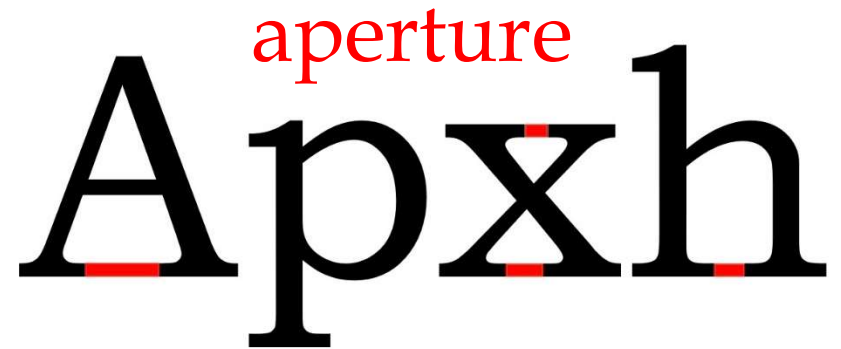
descender
Apxh



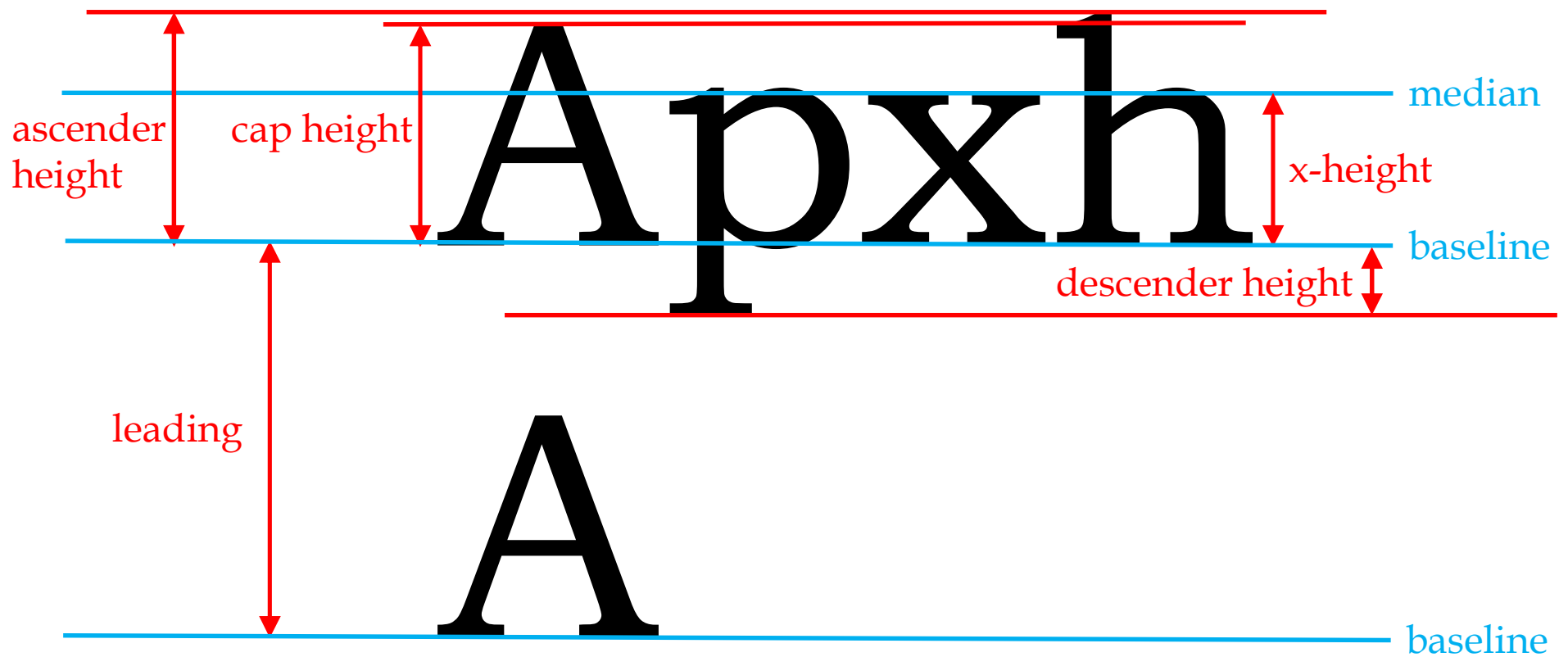
counter
Apxh



aperture
Apxh



Anatomy in type: dimensions



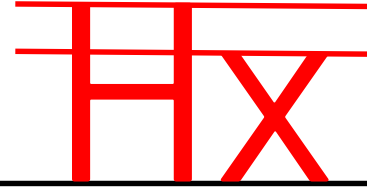
Anatomy in type: x-height

The image shows the uppercase letter 'H' and lowercase letter 'x' in Goudy Old Style. The 'H' has a tall ascender and a short x-height. The 'x' has a short ascender and a short x-height. Horizontal lines indicate the relative heights of the letters.

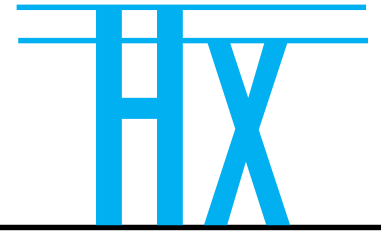
Goudy Old Style (.60)

The image shows the uppercase letter 'H' and lowercase letter 'x' in Gill Sans. The 'H' has a tall ascender and a short x-height. The 'x' has a short ascender and a short x-height. Horizontal lines indicate the relative heights of the letters.

Gill Sans (.66)

The image shows the uppercase letter 'H' and lowercase letter 'x' in Barlow. The 'H' has a tall ascender and a short x-height. The 'x' has a short ascender and a short x-height. Horizontal lines indicate the relative heights of the letters.

Barlow (.77)

The image shows the uppercase letter 'H' and lowercase letter 'x' in Antonio. The 'H' has a tall ascender and a short x-height. The 'x' has a short ascender and a short x-height. Horizontal lines indicate the relative heights of the letters.

Antonio (.85)

Handgloves

Goudy Old Style

Handgloves

Antonio

Many *normal* typefaces have x-height close to .7
(Times New Roman, Arial, Cambria)

X-height

Small x-height

with small fonts lowercase letters
more cramped
more airy feeling overall

Lorem ipsum dolor sit amet,
consectetuer adipiscing elit.
Maecenas congue massa. Fusce
posuere, magna pulvinar
ultrices, purus lectus
malesuada. (Goudy Old Style)

Large x-height

small fonts: space within letters
more **legible**
however as ascenders get smaller
it can cause **readability** issues

Lorem ipsum dolor sit amet,
consectetuer adipiscing elit.
Maecenas congue massa.
Fusce posuere, magna pulvinar
ultrices, purus lectus
malesuada. (Antonio)

Mixing faces

if mixing faces, a similar x-height can create harmony

Ascenders and readability

How easily can you read the following

u1s1u1u1g1u1s1u1 u1u1c1s1c1 v1v1u1u1s1

Ascenders and readability

How easily can you read the following

dictinguish these words

Ascenders and readability

How easily can you read the following

uisinguish these words

dictinuish these words

Counters

Handgloves (Onyx)

Closed counters can be difficult to read. They give a compact appearance.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas porttitor congue massa. Fusce posuere, magna sed pulvinar ultricies, purus lectus malesuada libero, sit amet commodo magna eros quis urna (Onyx)

Handgloves (Corbel)

Open counters tend to be more readable. They are legible even at small sizes.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas porttitor congue massa. Fusce posuere, magna sed pulvinar ultricies, purus lectus malesuada libero, sit amet commodo magna eros quis urna (Corbel)

Strokes

Handgloves (Goudy Old Style)



Strokes can be stressed, with uneven strokes for different parts of the glyphs

- see the weight of the stem vs. the crossbar of the letter H

Stressing can also apply to a directional slant

- see the slant of the letter o

Stressed typefaces are meant to mimic pre-printing-press calligraphic style

Handgloves (Barlow)



Unstressed typefaces have even strokes, with no changes in weight throughout the glyphs

They can be easier to read, especially at all sizes

When *legibility* outweighs *character*

Slant

Italic

angled glyphs with
different characteristics
from Roman version

a e f k w z Calisto MT
a e f k w z Calisto MT Italic

Oblique

angled glyphs that *share*
characteristics of Roman
version

a e f k w z Arial
a e f k w z Arial Italic

Typefaces in a slanted style are called
Italics even when they are **Obliques**

Figures (form)

Lining figures

uniform height

nice in tables

1234567890

(Book Antiqua)

Oldstyle figures

ascenders on 6 & 8

descenders on 3, 4, 5, 7 & 9

nice in running text

1234567890

(Candara)

Subtle oldstyle figures

123456789

(Harmonique)

Figures (form)

Lining figures

Born May 17, 1856 and died July 26, 1943 at age 87
(Book Antiqua)

Oldstyle figures

Born May 17, 1856 and died July 26, 1943 at age 87
(Candara)

Lining Figures - Book Antiqua	
1,367,296	2,437,901
2,598,321	3,476,731
7,286,229	7,257,930
6,201,961	5,321,952

Oldstyle Figures - Candara	
1,367,296	2,437,901
2,598,321	3,476,731
7,286,229	7,257,930
6,201,961	5,321,952

Figures (spacing)

Tabular

uniform width

Proportional

non-uniform width

Tabular figures

He sold 1,181,197 books
(Gill Sans MT)

Proportional figures

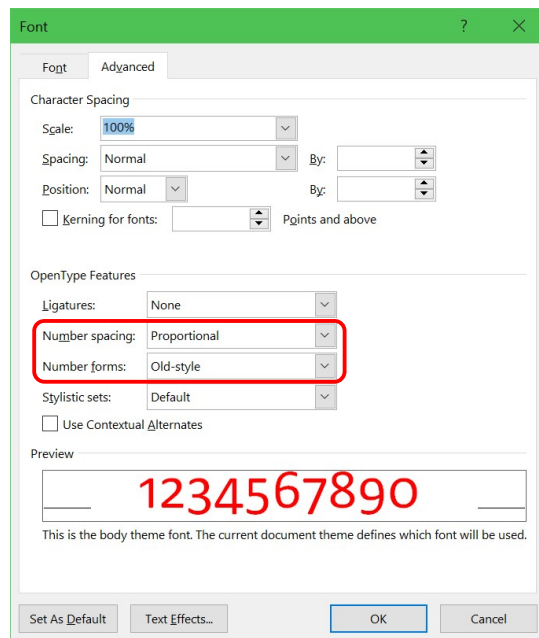
He sold 1,181,197 books
(Bahnschrift)

Tabular figures - Gill Sans MT	
3,347,286	2,237,968
2,897,328	6,116,131
7,191,211	7,357,830
9,211,161	1,121,152

Proportional figures - Bahnschrift	
3,347,286	2,237,968
2,897,328	6,116,131
7,191,211	7,357,830
9,211,161	1,121,152

Figures in OpenType

*Some OpenType
typefaces support
tabular or proportional
lining or oldstyle*



LibreOffice Writer
Format | Character | Font tab | Features

1,121,391	9,732
8,735,243	1,211,191

Table of figures
- tabular, lining
(Calibri)

Born July 26, 1913 at age 87

Running text
- proportional, oldstyle
(Calibri)

Calibri default: tabular, lining



Talking about OpenType



TrueType Font vs. OpenType Font

TrueType

developed by Apple and Microsoft early 1980s

OpenType

developed by Adobe and Microsoft late 1990s

supports more advanced typesetting features

smallcaps, alternate characters, stylistic sets, fractions,
ligatures, contextual alternatives, etc.

Designers

OpenType

You and me

why not OpenType?



OpenType stylistic sets

Handgloves

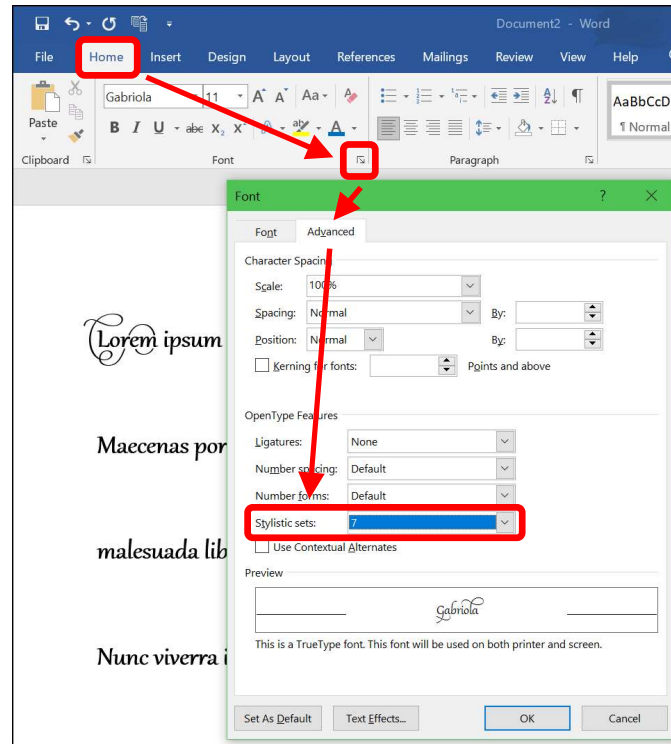
(Gabriola—stylistic set 1)

Handgloves

(Gabriola—stylistic set 4)

Handgloves

(Gabriola—stylistic set 7)



Handgloves

(Impact—stylistic set 0)

HANDGLOVES

(IMPACT—STYLISTIC SET 1)

HANDGLOVES

(IMPACT—STYLISTIC SET 2)

aefltwyzA EFGMNQTUWYZ

(Montserrat—stylistic set 0)

aefltwyzA EFGMnQTUWYZ

(Montserrat—stylistic set 1)

LibreOffice Writer

Format | Character | Font tab | Features



Anatomy in type: font size

Somewhat arbitrary!

72 points to the inch

Height of lead mold

not the height of glyphs

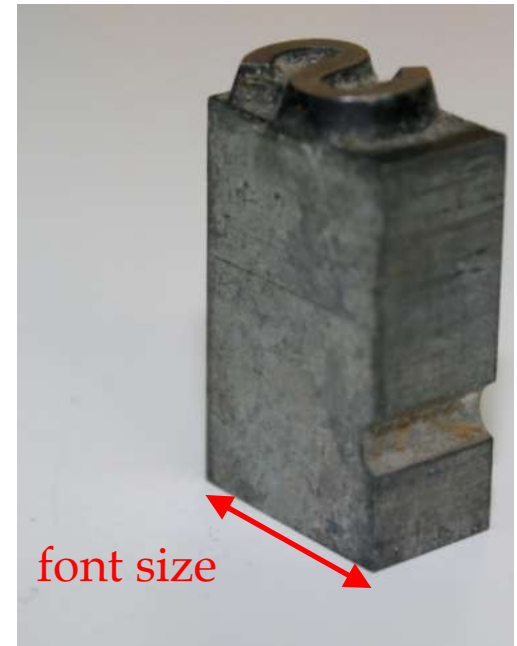
few points bigger than distance

between ascender & descender

avoids collisions between characters

in multiple lines of text

Type designer free to define differently



Anatomy in type: font size



All four set to 96 points

considerable difference in cap heights

*There is no universally valid basis for body height usage
and the font size this ultimately delivers*

– Claudia: <https://www.onlineprinters.co.uk/magazine/font-sizes/>

Character width

Typefaces have different glyph widths

abcdefghijklmnopqrstuvwxyz

Calisto MT

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

Georgia

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

Book Antiqua

ABCDEFGHIJKLMNOPQRSTUVWXYZ

Character width

Shapes, strokes widths, serif shapes, etc. can also affect readability and character/feel

abcdefghijklmnopqrstuvwxyz Calisto MT
ABCDEFGHIJKLMNOPQRSTUVWXYZ **Q**

abcdefghijklmnopqrstuvwxyz Georgia
A**B**CDEFGHI**J**KLMNOP**Q**RSTUVWXYZ

abcdefghijklmnopqrstuvwxyz Book Antiqua
A**B**CDEFGHI**J**KLMNOP**Q**RSTUVWXYZ

Leading (line spacing)

Increased leading can help readability

compact typefaces

large x-height typefaces

long lines

Helps your eye

stay on line

get from end of one
line to start of next

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas porttitor congue massa. Fusce posuere, magna sed pulvinar ultricies, purus lectus malesuada libero, sit amet commodo magna eros quis urna. Nunc viverra imperdiet enim. Fusce est. Vivamus a tellus. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Proin pharetra nonummy pede. Mauris et orci. Aenean nec lorem. In porttitor. Donec laoreet nonummy augue. Suspendisse dui purus, scelerisque at, vulputate vitae, pretium mattis, nunc. Mauris eget neque at sem venenatis eleifend. Ut nonummy. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas porttitor congue massa. Fusce posuere, magna sed pulvinar ultricies, purus lectus malesuada libero, sit amet commodo magna eros quis urna. Nunc viverra imperdiet enim. Fusce est. Vivamus a tellus. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Proin pharetra nonummy pede. Mauris et orci. Aenean nec lorem. In porttitor. Donec laoreet nonummy augue. Suspendisse dui purus, scelerisque at, vulputate vitae, pretium mattis, nunc. Mauris eget neque at sem venenatis eleifend. Ut nonummy.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas porttitor congue massa. Fusce posuere, magna sed pulvinar ultricies, purus lectus malesuada libero, sit amet commodo magna eros quis urna. Nunc viverra imperdiet enim. Fusce est. Vivamus a tellus. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Proin pharetra nonummy pede. Mauris et orci. Aenean nec lorem. In porttitor. Donec laoreet nonummy augue. Suspendisse dui purus, scelerisque at, vulputate vitae, pretium mattis, nunc. Mauris eget neque at sem venenatis eleifend. Ut nonummy.

|

Tracking

Tracking adjusts spacing between all letters

- useful to avoid large blank areas on justified text

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas porttitor congue massa. Fusce posuere, magna sed pulvinar ultricies, purus lectus malesuada libero, sit amet commodo magna eros quis urna.

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas porttitor congue massa. Fusce posuere, magna sed pulvinar ultricies, purus lectus malesuada libero, sit amet commodo magna eros quis urna.

Kerning



Kerning

Adjust space between certain letters

make volume between letters visually similar

not all fonts have kerning tables

Arial

NM To AV

Roboto

NM To AV



W I R E D

White on black looks heavier than black on white

Choosing a typeface

Considerations

- original design intent/ criteria

- clarity (legibility & readability)

- effect / emotion of a face

 - bold, casual, formal, fun...

 - intended use

- if different typefaces for headings & body

 - don't make them too similar

- don't mix too many faces

 - one or two best

Times New Roman

Times New Roman

Designed for Times of London in 1931

Stanley Morison, Monotype Corp.

Based on Plantin

modified for economy of space

newspapers wanted to fit in lots of text

Times printed on better paper than other papers

allowed for sharp serifs, stressed letterforms, etc.

Horizontally compact

suited to narrow columns

One of the most over-used typefaces

*Times New Roman is not so much a font choice as
an absence of font choice* – Matthew Butterick

Frutiger



- Designed for Charles de Gaulle airport for directional signs in 1970
 - Swiss type designer Adrian Frutiger
- Inspired by Univers and Peignot
 - Peignot designed by Cassandre for Paris Orly airport
- Design criteria
 - legibility at various angles, sizes, and distances
 - ascenders and descenders very prominent
 - wide apertures: easily distinguish letters from one another
 - *What was important was total clarity – I would even call it nudity – an absence of any kind of artistic addition* – Adrian Frutiger
- Popular for corporate and transportation branding
- Currently the best-selling Linotype foundry typeface

Transport

Created in 1957 for the U.K.
Department of Transport

Part of design criteria

open counters

letterspace yet retain word shape

offset effect of 'halation' when

viewed at decision-making

distance, in full headlight glare

Only good for road signs?

used exclusively on website <https://gov.uk>

download Transport for free <https://roads.org.uk/fonts>



halation

Pavement

Vertically-stretched version of
Transport Medium

only 74 glyphs

ABCDEFGHIJKLMNOPQRSTUVWXYZ & 1234567890
ABCDEFGHIJKLMNOPQRSTUVWXYZ & 1234567890

download **PAVEMENT** for free

<https://roads.org.uk/fonts>

KM H

40

MAX



Bell Centennial



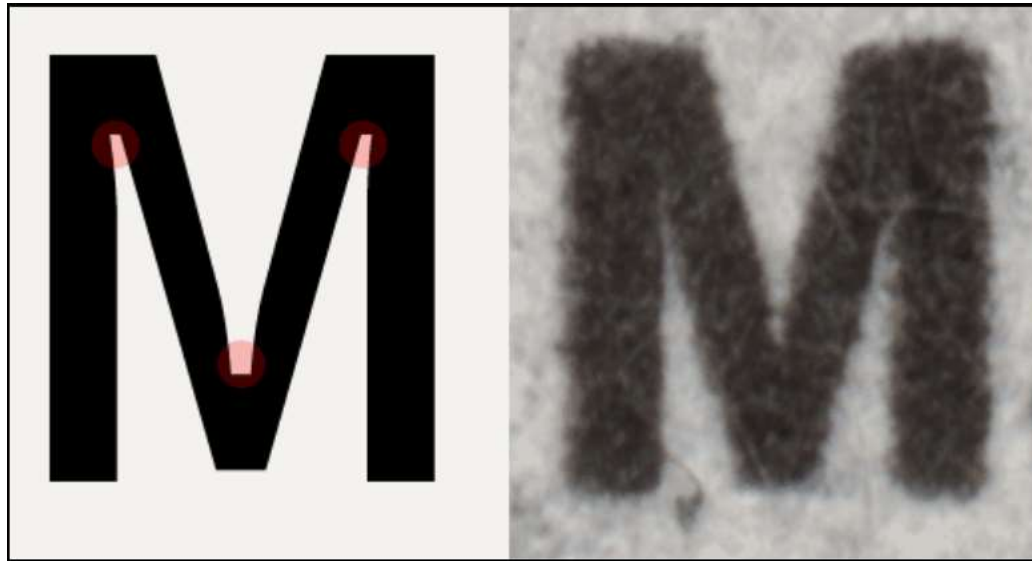
- Designed by Matthew Carter for AT&T to replace Bell Gothic for use in phone books
- Design criteria
 - more characters per line without loss of legibility at small point sizes
 - reduce effects ink spread on poor quality paper

Ink traps



160 pt

Bell Centennial



Only useful in tiny sizes on cheap paper?

Mazda UK used it at huge sizes in mid-1990s ads

English National Opera advertised production
of *Katya Kabanova* in 2010

Retina

Retina

Designed by Tobias Frere-Jones in 2000 for
the Wall Street Journal

design criteria

legible at small point sizes (5.5 pt)

ink traps

equal width despite different weights

numbers still line up

Updated in 2016

design criteria

hinted for onscreen viewing

align with pixel grid

Retina

Retina

Retina

Retina

Retina

Cross purposes

Times New Roman was designed for tight text in narrow columns

So I can't use it for page-width body text?

Frutiger and Transport were designed for big signs

So I can't use them for subheads in a book?

Of course you can!

Just be aware of what it was originally designed & optimized for and why

Cross purposes

Retina was designed for columns of tiny numbers

So I can't use it for body text?

Pavement was designed for road lettering viewed at an angle

So I can't use it for captioning an illustration?

Probably not the best choices

plus, Retina will set you back US\$900 for the complete family of 72 fonts!

Corporate
meeting room door





Using Comic Sans is like turning up to a black-tie event in a clown costume

— Holly Combs, co-founder *Ban Comic Sans*

Comic Sans walks into a bar.
The bartender says, “We don’t serve your type.”

If you love Comic Sans, you don't know much about typography. If you hate it, you really don't know much about typography either, and you should get another hobby.

— Vincent Connare, Comic Sans designer

Using Comic Sans is like turning up to a black-tie event in a clown costume

Maybe using Times New Roman is like turning up in black-tie for the circus



Dogs don't talk in Times New Roman
— Vincent Connare, Comic Sans designer

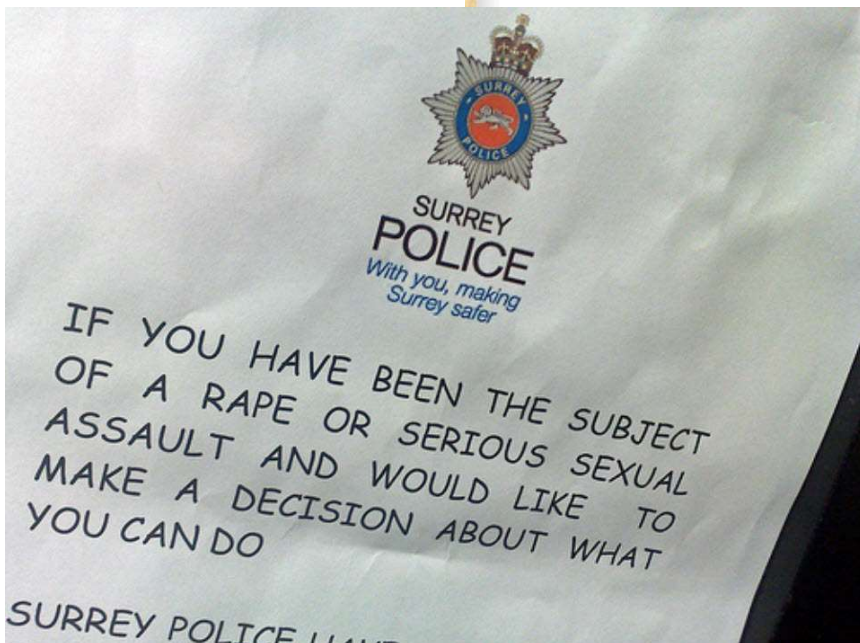


Comic Sans used in strange places



I am now facing the last chapter of my life and I do not know what awaits me. I know, however, that the light of God exists, that he is Risen, that his light is stronger than any darkness, that the goodness of God is stronger than any evil in this world. And this helps me to go forward with certainty. May this help us to go forward, and at this moment I wholeheartedly thank all those who have continually helped me to perceive the "yes" of God through their faith. [...](#)

The universal mission involves all, all things and always. The Gospel is not an exclusive possession of whoever has received it but a gift to share, good news to communicate. And this gift-commitment is not only entrusted to a few but on the contrary to all the baptized... [...](#)



CERN



News › News › Topic: At CERN

CERN to switch to Comic Sans

From today, all of CERN's official communication channels are switching to exclusive use of the font Comic Sans

1 APRIL, 2014 | By [Cian O'Luanaigh](#)

Display typefaces

**BIG
AND
BOLD**
(GOUDY STOUT)

Choice of typeface
has dramatic effect

Body text

effects of typefaces still there in text typefaces, just more subtle

Lorem ipsum dolor amet, consectetur adipiscing elit. Maecenas porttitor Ucongue massa. Fusce, magna sed, purus lectus malesuada libero (Candara)

t p o M

t p o M

Lorem ipsum dolor sit amet, consectetur adipiscing. Maecenas porttit. Fusce, magna ultricies, purus malesuada libero (Montserrat)

Character / feeling

Typefaces have different character or feeling

They can feel formal, relaxed, playful, or evoke a mood

CANADIAN FINANCE

CASTELLAR

Canadian Finance

Verdana

Colonial Furniture

Chiller

Colonial Furniture

Old English

Character / feeling

Typefaces have different character or feeling

They can feel formal, relaxed, playful, or evoke a mood

Sally's Lemonade Stand

Impact

Sally's Lemonade Stand

Andy

THE LAVA LAMP SHOP

RETROPHILE

The Lava Lamp Shop

Perpetua

Character / feeling

Typefaces have different character or feeling

They can feel formal, relaxed, playful, or evoke a mood

Poetry tea house

Lucida Handwriting

Poetry tea house

Noto Sans

Foothills Bar & Grill

Magneto

Foothills Bar & Grill

Western



Garamond



Century Gothic



Highway Gothic



Penna



Forte

Wordmarks



Avenir Black
- fruit for the vowels



Futura Black / Garamond Italic
- sturdy but comfortable



Bodoni
- elegance
- protected by heavy square brackets

Zara wordmark

Z A R A

Linotype Didot Pro Bold

ZARA

ZARA

- tightened letterspacing
- thinned strokes
- brought "A" to a point
- opened counters

Zara wordmark



New Zara logo has been kerned into oblivion

— www.creativebloq.com

...worst piece of type I've seen in years. Was this done by one of those new robots that will replace humans?

— Erik Spiekermann

Zara wordmark

Z A R A

2011

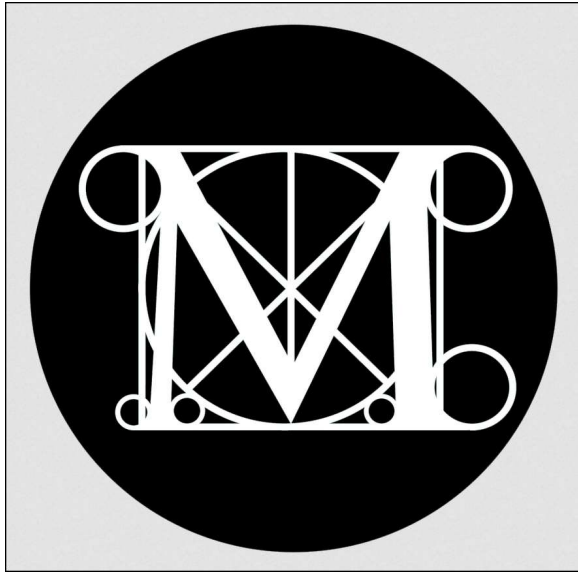
ZARA

2019



2027

The Metropolitan Museum of Art



*The new logo is a
typographical bus crash*
— Justin Davidson

Why did you do this?
— Alan Peckolick

From a distance, the old logo couldn't be simpler, just a capital letter emblazoned in a solid-colored circle. Move in closer, and the M sits at the center of a delicately drawn circle-in-a-square, cut by diagonals and fringed with six smaller circles.

— Justin Davidson

Headings/subheadings and body text

Make headings/subheadings stand out

same typeface for headings and body

different size, weight, placement, etc.

pairing fonts

avoid pairing typefaces too similar

especially if both serif or both sans serif

use different typefaces sparingly (2 best)

<https://www.creativebloq.com/typography/20-perfect-type-pairings-3132120>

<https://visme.co/blog/pairing-fonts/>

Making subheads stand out

Vivamus a tellus

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas porttitor congue massa. Fusce posuere, magna sed pulvinar ultricies, purus lectus malesuada libero, sit amet commodo magna eros quis urna.

Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Proin pharetra nonummy pede. Mauris et orci. Aenean nec lorem. In porttitor. Donec laoreet nonummy augue. Suspendisse dui purus, scelerisque at, vulputate vitae, pretium mattis, nunc. Mauris eget neque at sem venenatis eleifend. Ut nonummy.

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Same typeface, heavier weight

Body
Barlow 14 point

Subheads
Barlow bold 14 point

Making subheads stand out

Vivamus a tellus

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas porttitor congue massa. Fusce posuere, magna sed pulvinar ultricies, purus lectus malesuada libero, sit amet commodo magna eros quis urna.

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Different typeface, same size,
heavier weight

Body
Bookman Old Style 14 point

Subheads
Arial Rounded MT Bold 14 point

Making subheads stand out

Vivamus a tellus

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Same typeface, larger size

Body
Calisto MT 14 point

Subheads
Calisto MT 20 point

Making subheads stand out

Vivamus a tellus

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas porttitor congue massa. Fusce posuere, magna sed pulvinar ultricies, purus lectus malesuada libero, sit amet commodo magna eros quis urna.

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Different typeface, same size,
different colour

Body
Dante 14 point

Subheads
Corbel 14 point, orange

Making subheads stand out

Vivamus a tellus

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Different typeface, larger size, outdented, coloured

Body paragraphs first line indent

Body
Sitka Text 14 point

Subheads
Gill Sans 16 point, gold

Making subheads stand out

Vivamus a tellus

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quis urna. Nunc viverra imp

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Mauris et orci. Aenean nec l
nonummy augue.

**They ... and more
can all work**

Typography “rules”

Hyphens & dashes

No space before/after

2019–2020 *not* 2019 - 2020

Hyphen

join words

up-to-date antivirus, rock-hard candy, ex-wife

En dash

separate a range (think “through”)

the 2019–2020 fiscal year

Alt-0150 (on numeric keypad)

Microsoft Word/LibreOffice Writer auto-correct “word - word” to “word – word”
(en dash, but leaves the spaces in)

Em dash

break in sentence (think comma or parenthesis)

the fee increase – opposed by all – went ahead

Alt-0151 (on numeric keypad) or

In Microsoft Word Ctrl-Alt-minus (on numeric keypad)

Microsoft Word/LibreOffice Writer auto-correct “word--word” to “word — word”
(em dash, no spaces)

Indents vs. line spacing

First-line indents and space between paragraphs have the same relationship as belts and suspenders. You only need one to get the job done. Using both is a mistake.

— Matthew Butterick

✓
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas porttitor congue massa. Fusce posuere, magna sed pulvinar ultricies, purus lectus malesuada libero, sit amet commodo magna eros quis urna.

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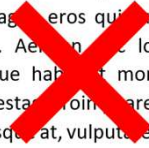
Justified vs. ragged right

General consensus

Subtle word-spacing
and letter-spacing
algorithms required for
justified text

Professional typesetting
can do it

Microsoft Word can't



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Rags

Rag should be irregular

Don't want rag to have noticeable shape



Rags are the right edge of left-justified text. They should run in and out without a pattern, a distracting look which should be avoided as it can be more difficult to read when your eye might get caught up looking at the pattern rather than seeing the words which you want them to read. Fix them by adjusting tracking, or by changing hyphenation. Or simply break some lines before they were breaking.



Rags are the right edge of left-justified text. They should run in and out without a pattern, a distracting look which should be avoided as it can be more difficult to read when your eye might get caught up looking at the pattern rather than seeing the words which you want them to read. Fix them by adjusting tracking, or by changing hyphenation. Or simply break some lines before they were breaking.

More “rules”

One space after a period

Foot and inch marks rather than smart quotes

6'3" (wrong – Microsoft Word/LibreOffice Writer do this by default)
ctrl-z to undo

6'3" (right)

Multiplication symbol

don't use letter x – its shape follows the typeface design.

use Unicode 00D7 ×

to enter Unicode 00D7 in Word, type D7 then press Alt-x

Division

don't use keyboard slash /

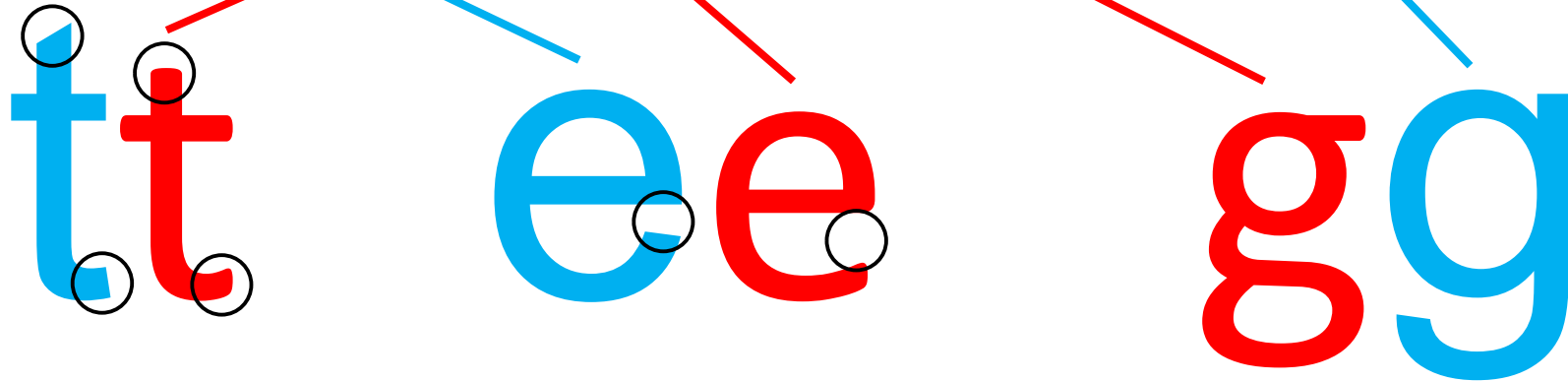
use Unicode 2215 ÷

Lots of math symbols in Unicode (Cambria Math)

<https://www.compart.com/en/unicode/category/Sm>

Copying/pasting

there is something odd going on here...



Arial 11 pt. Calibri 11 pt.

Be careful copying/pasting
don't want to carry over formatting
typeface
size
style

Paste special | unformatted text

Missing font

Problem:

you choose a typeface

you give resulting document to a friend

they don't have the typeface

Result:

font substitute

Solution:

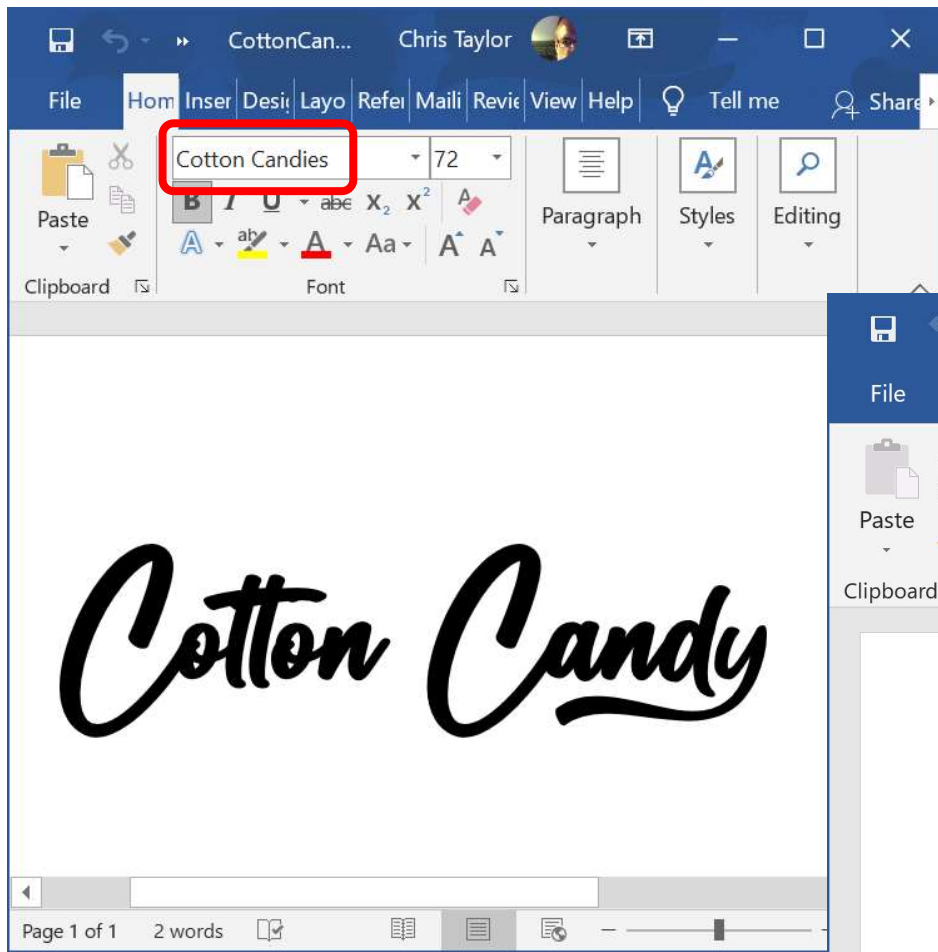
embed fonts in document

if you can...

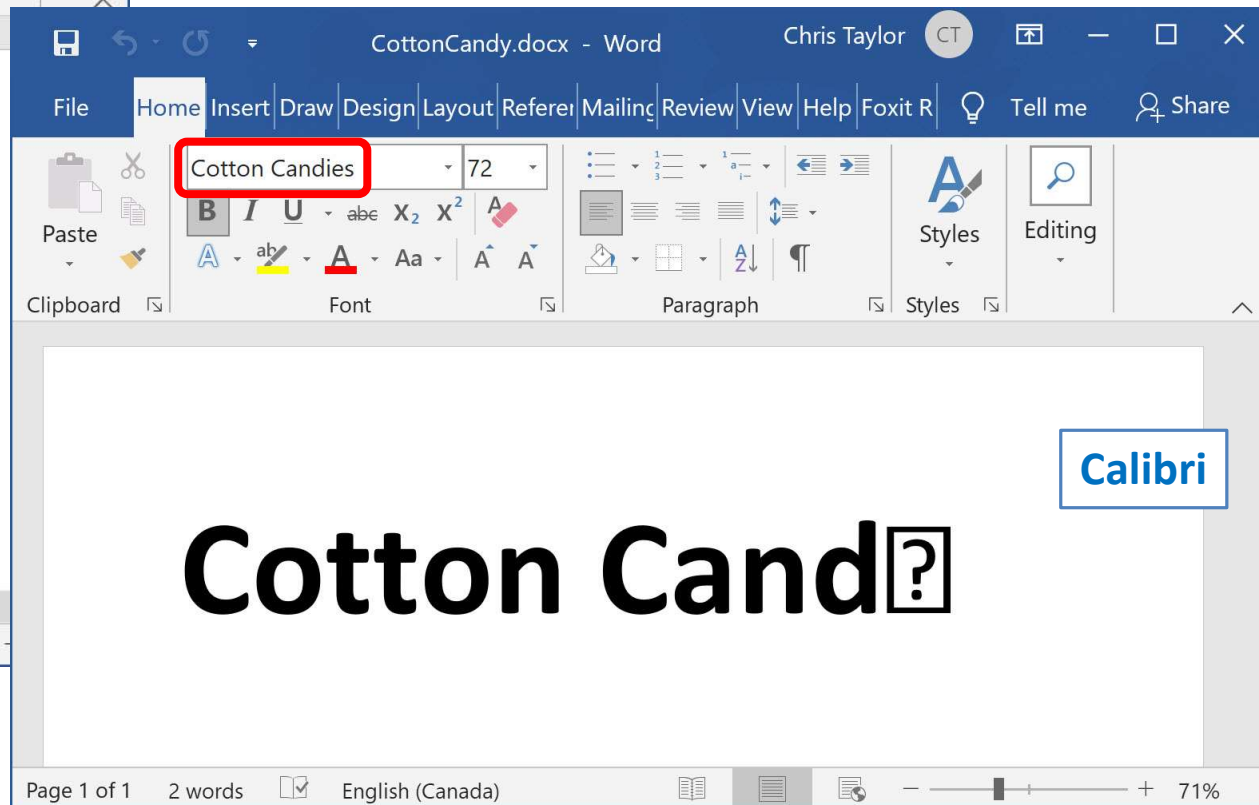
...I am not a lawyer

Missing font

“Cotton Candies” font installed

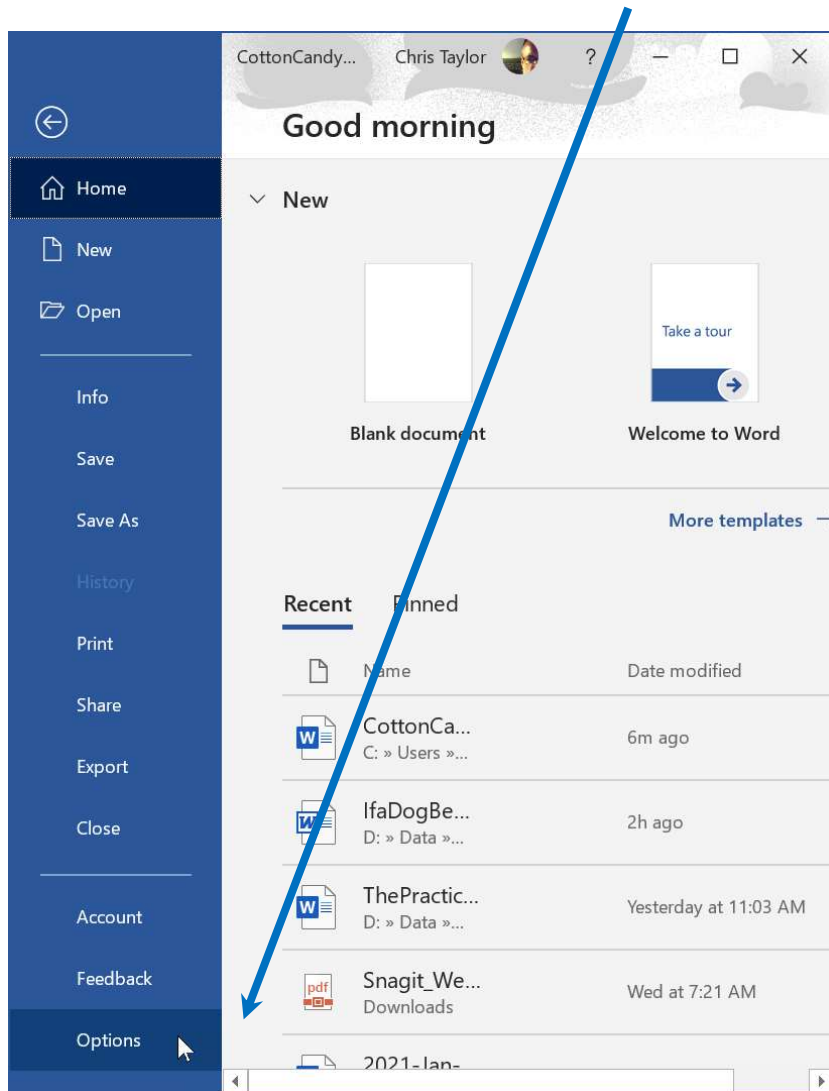


**Document sent to someone where
“Cotton Candies” font not installed**



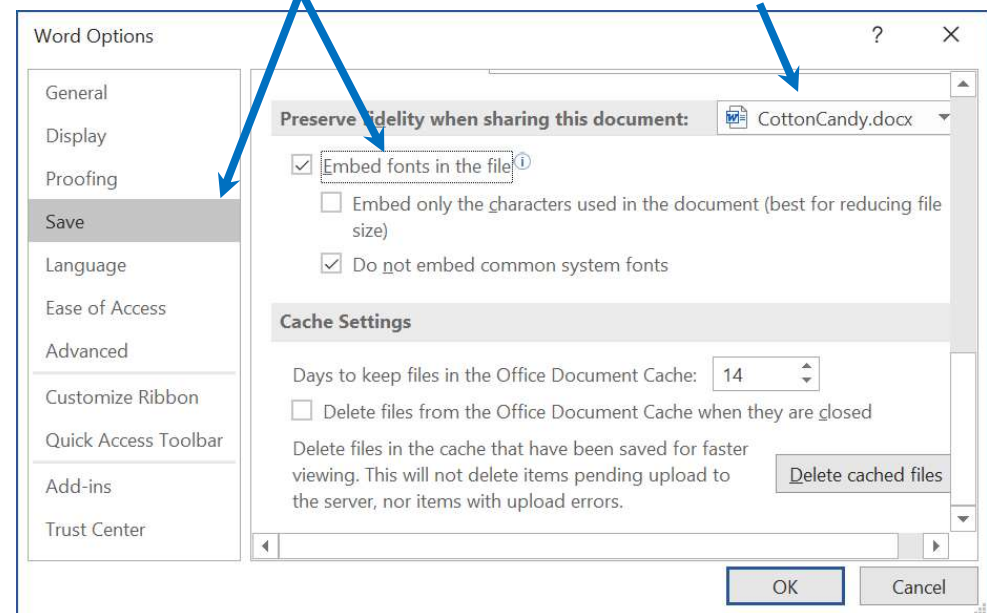
Embed font

Microsoft Office *File | Options*

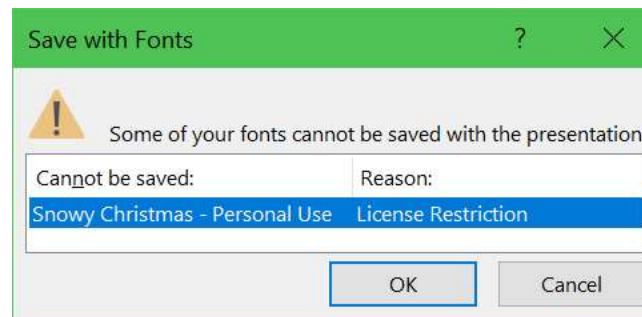
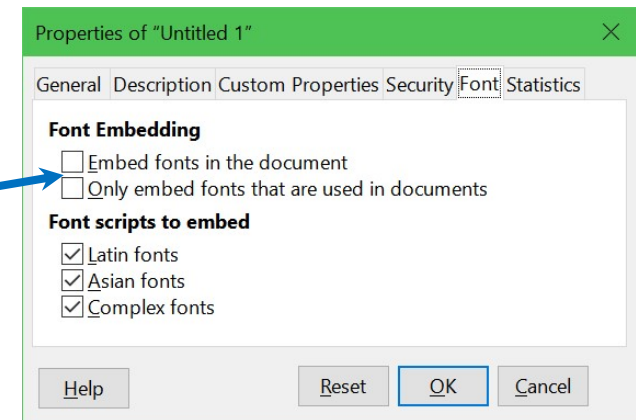


Save | Embed fonts

**Current document or
all new documents**



LibreOffice Writer *File | Properties* *Font tab*



**Oops
license restriction**

Anatomy of a newsletter

Typefaces / styles

Arial Bold

Arial Italic

Arial Bold Italic

Times New Roman

Times New Roman Bold

Times New Roman Italic

Columns

2 ($\frac{1}{3}, \frac{2}{3}$ split)

2 (even split)

3 (even split)

depending on content

Justification

ragged right



OTTAWA

PC NEWS

Volume 37, Number 9

November 2020

ARTICLE

ISP Blocking

by Chris Taylor

Should an Internet Service Provider (ISP) block any of the traffic going between your computer and the Internet? As they say, its complicated.

Disclaimers: This is personal opinion. I am not speaking on behalf of the Ottawa PC Users' Group or anyone else. Your mileage may vary. Do not read while using heavy machinery. Do not fold, spindle or mutilate. May contain nuts. May be written by one.

Slippery slope?

On its face, some people might tend toward thinking it's fine for an ISP to block content that is illegal or malicious. But this begs the question; who decides what is illegal or malicious? If it's a commercial enterprise such as an ISP, that may be a problem.

Bell has been pushing to establish an anti-piracy agency with the responsibility of approving site blocking without court oversight. That makes me nervous. They want to be the judge and jury, with consumers being affected. Are they going to try to block things like pornography? Would they get to define what constitutes pornography? What about gambling sites that are not government-sanctioned online casinos? What about a white hat hacker site? And what if that site publishes proof-of-concept exploit code? What happens when the inevitable mistakes are made with site blocking?

Some ISPs have asserted that use of some services such as VPNs (which en-

hance privacy but also allow circumventing [geo-blocking](#)) constitutes theft. I think that position is far from being clearly and universally correct.

One of the problems with allowing an ISP to block traffic is that they are very opaque about exactly what they are doing and why. Ask yourself if they could possibly have ulterior motives.

Your responsibility

Even if you agree that you want malicious or illegal content blocked, consider the value of the blocking. I've had people tell me that they are not worried about the security of their Internet connection because their ISP is "taking care of security". Ouch – that's a dangerously naïve position to take!

This is your computer that you are trying to protect. Ultimately, you have to implement controls to protect it; anti-virus, firewall, patch management, and account & identity management.

On the other hand

I am a big fan of defence in depth, with multiple layers of security. If one layer fails, another may protect me. In the [November, 2018 issue](#) of the newsletter, I wrote [Security – It's all about layers](#). In the [October, 2018 issue](#), I extolled the virtues of having your DNS server block access to malicious sites. But, pretty much every level of security can backfire. Quad9 may mis-categorise a web site as malicious and block me from getting to it. My anti-virus may have false positives and re-

move a benign program. A security patch for a program may introduce an unforeseen conflict.

How do these differ from having an ISP protect me by blocking content they have decided I shouldn't be permitted to access? I think it comes down to motives and control.

Motives

I am far more suspicious of the motives of ISPs than the motives of security organizations. Security companies providing products and services are trying to help you protect your computing devices. I don't recall them ever making moral judgements about what they block or allow.

I believe ISPs are making moral judgements or coming to conclusions that favour their own financial interests. When they block VPNs because they can be

(Continued on page 7)

Inside this issue:

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Technical Solutions / 2021 Nominations	6
Contact Information	7

Next Meeting: **WEDNESDAY, November 11th, 2020**

Enhancements

Article header:

white on blue

Article lead:

3-line drop-cap

Subheads:

bolded body font

Index:

black on blue

Next meeting:

black on blue

Logo

OTTAWA

Benguiat Book Italic

PC NEWS

Benguiat Bold



Optimized for size

Sitka typeface family – 24 font files

faces optimized for different sizes

six sizes, each in

regular

italic

bold

bold italic

Style	Size range
Sitka Small	0-9.5pt
Sitka Text	9.5-13.5pt
Sitka Subheading	13.5-18.5pt
Sitka Heading	18.5-23.5pt
Sitka Display	23.5-27.5pt
Sitka Banner	27.5-∞

Sitka: A collaboration between type design and science

https://www.researchgate.net/publication/309754147_Sitka_A_collaboration_between_type_design_and_science

Most widely used font

Calibri

Designed in 2002 by Luc(as) de Groot for Microsoft

In 2007 it became the default for:

Word (replacing Times New Roman)

Outlook, PowerPoint, Excel (replacing Arial)

But did this make it the best font?

Or the most versatile?

Or the most seductive, surprising and beautiful?

— Simon Garfield, author *Just my type*

Of course not. That font is yet to come.

Beyond Calibri: Finding Microsoft's next default font

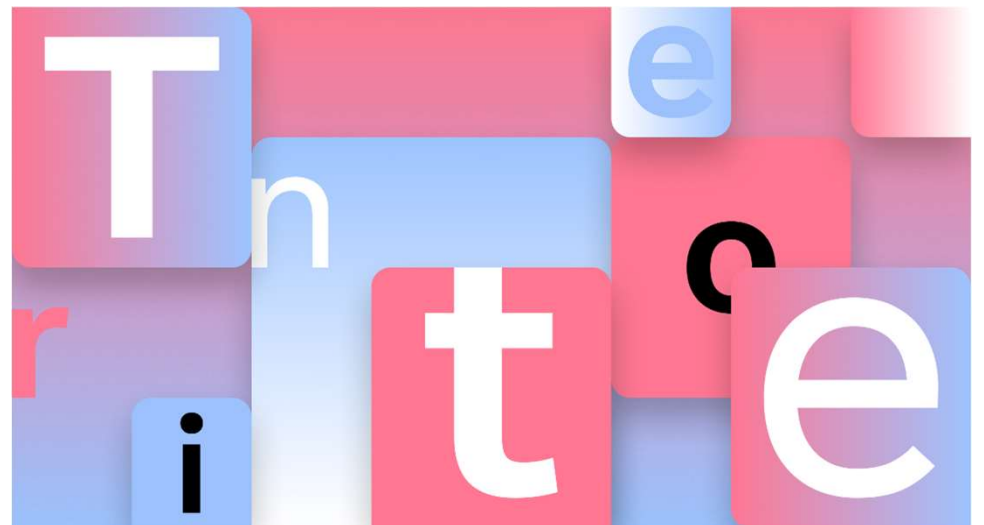
Microsoft commissioned five new fonts

One will become the new default
for Microsoft Office applications

<https://www.microsoft.com/en-us/microsoft-365/blog/2021/04/28/beyond-calibri-finding-microsofts-next-default-font/>

Tenorite *by Erin McLaughlin and Wei Huang*

Sans serif, with a warm, friendly style. Large dots, accents, and punctuation make Tenorite comfortable to read at small sizes onscreen, and crisp-looking shapes & wide characters create an open feeling.



Bierstadt *by Steve Matteson*

Precise, contemporary sans serif typeface inspired by mid-20th-century Swiss typography. A versatile typeface that expresses simplicity and rationality in a highly readable form, Bierstadt is also notably clear-cut with stroke endings that emphasize order and restraint.



Skeena *by John Hudson and Paul Hanslow*

Humanist sans serif based on the shapes of traditional serif text typefaces. Strokes are modulated, with noticeable contrast between thick and thin and a distinctive slice applied to the ends of many of the strokes. Ideal for body text in long documents, as well as in shorter passages in presentations, brochures, tables, and reports.



Seaford *by Tobias Frere-Jones, Nina Stössinger, Fred Shallcrass*

Sans serif rooted in the design of old-style serif text typefaces and evokes their comfortable familiarity. Its gently organic and asymmetric forms help reading by emphasizing the differences between letters, thus creating more recognizable word shapes.



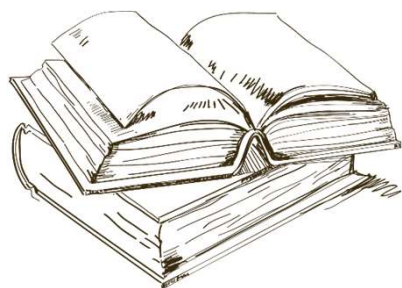
Grandview *by Aaron Bell*

Sans serif typeface derived from classic German road & railway signage (designed to be legible at a distance and under poor conditions.) Designed for use in body text but retains the same qualities of high legibility, with subtle adjustments made for long-form reading.



Resources

books



free fonts

Fontastic!

online information



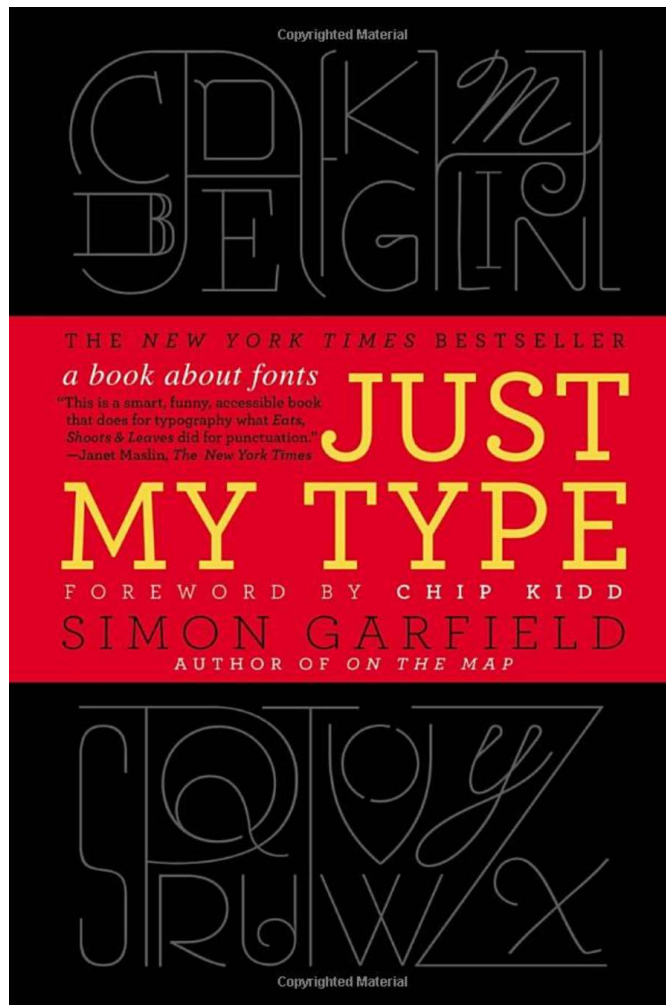
create/edit fonts



a few more things...

- how to examine fonts in Windows
- how to install/remove fonts in Windows
- ligatures
- oblique vs. fake oblique
- more stylistic sets
- a typographical trainwreck

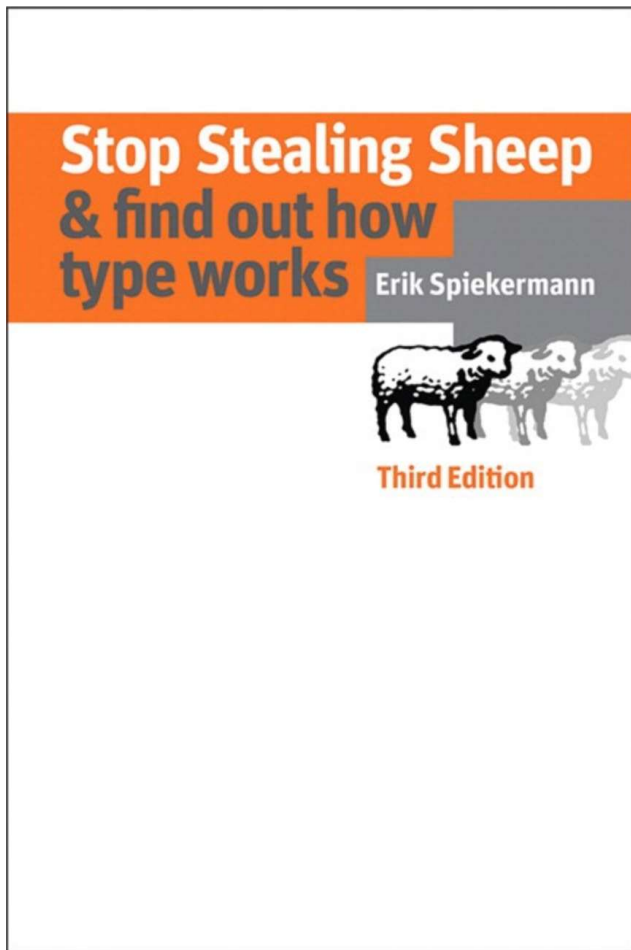
Books on typography I have read



Highly entertaining...Garfield takes readers on a rollicking tour of the world or typography, from book jackets to road signs, TV shows to computers.

— USA Today

Books on typography I have read

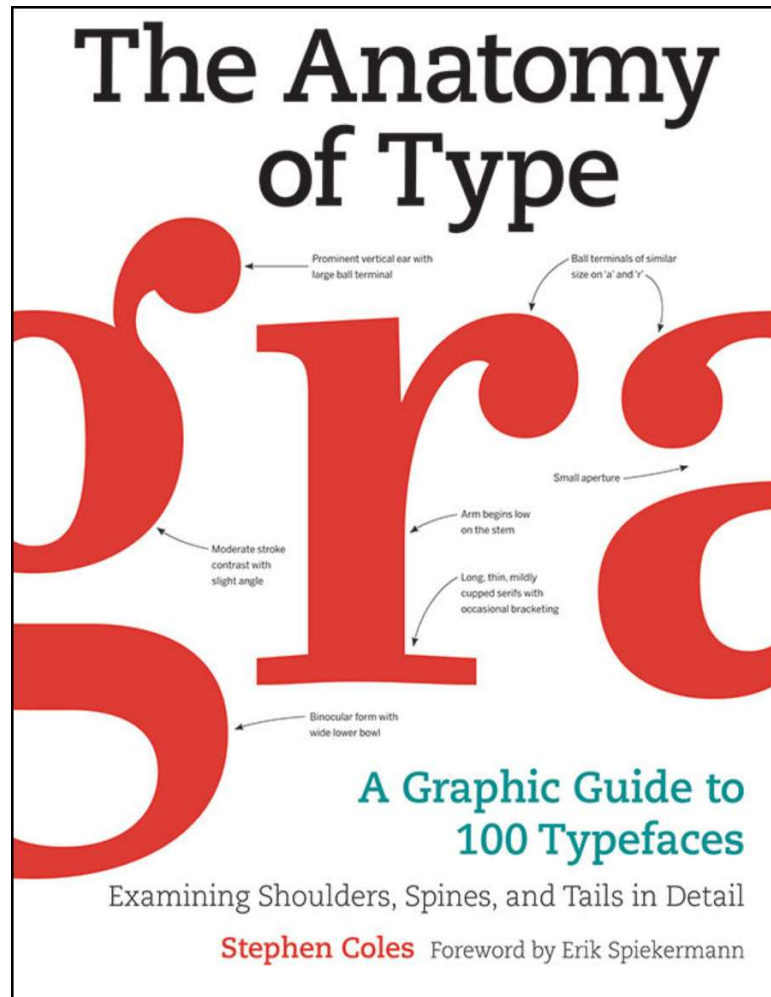


*Anyone who would letterspace
blackletter would steal sheep*
— Frederic Goudy

Unfortunately out-of-print
30 pages of the book

<https://ptgmedia.pearsoncmg.com/images/9780321934284/samplepages/0321934288.pdf>

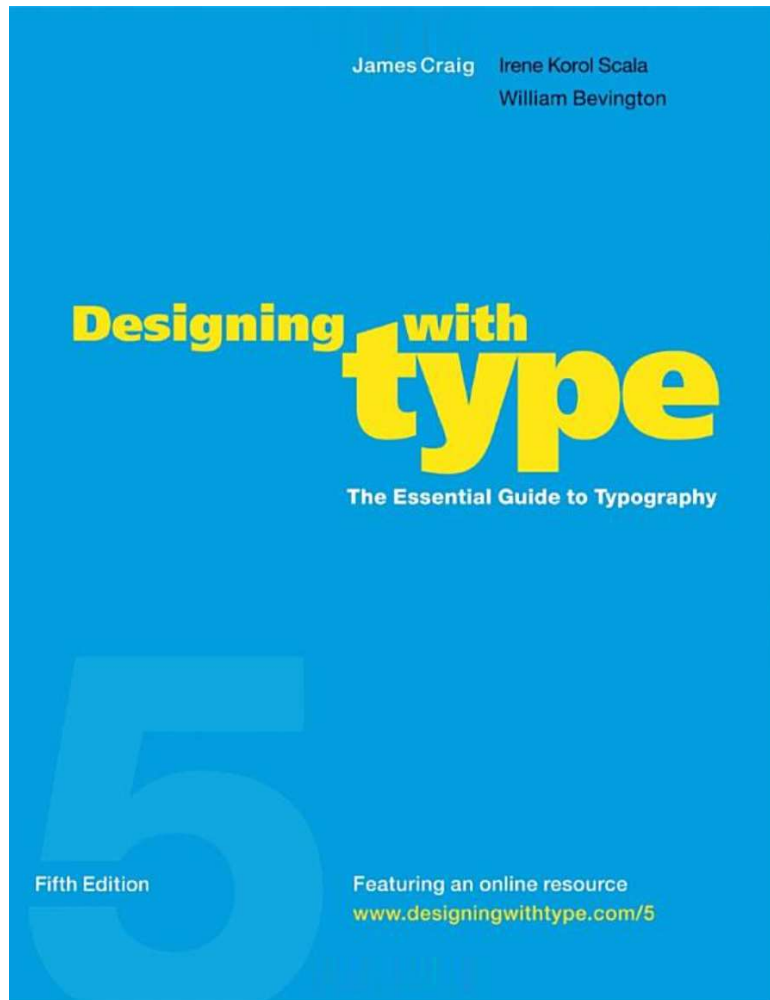
Books on typography I have read



Stephen Coles selected 100 influential typefaces and dissected them to analyse what makes them distinctive. He shows a large sample of each typeface, and analyses its features in intimate detail. It also gives a brief history of the typeface, and suggested uses.

— Amazon.ca reviewer

Books on typography I have read



Part textbook and part reference work... thumbnail history of the development of written language...in-depth looks at five classic typefaces, lessons on designing with text type, display type and color, and plenty of project assignments.

— Amazon.ca reviewer

Books on typography I have read

The Designer's Dictionary of Type

By Sean Adams

**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 1 2 3 4
5 6 7 8 9 0 & !**

It clearly breaks down the families into categories and subcategories with a detailed analysis of specimens, showing the characteristics for identification. Many examples are given for typical uses in the real world.

— Anonymous reviewer

Only typeface made into a movie



The real achievement of the film is the way it sharpens your eye in general and makes connections between form and content, and between art and life.

— Chicago Tribune

Trailer: <https://vimeo.com/ondemand/helvetica3>

Microsoft

- Lots of info on typography
 - <https://docs.microsoft.com/en-gb/typography/>
- Windows 10 font list
 - includes history, usage guides, and more
 - https://docs.microsoft.com/en-us/typography/fonts/windows_10_font_list
- Font redistribution FAQ
 - the legal stuff
 - <https://docs.microsoft.com/en-us/typography/fonts/font-faq>

Resources on typography

- I love typography
 - tons of articles, free fonts, font games
 - <https://ilovetypography.com/>
- Thinking with type
 - tons of articles, how-to's
 - <http://thinkingwithtype.com/>
- Typedia
 - details about different typefaces
 - <http://typedia.com/>

Resources on typography

- Digital design & media production
 - info on typography
 - <https://arlington.instructure.com/courses/64908/pages/typography-lesson-1>
- Learning hub
 - A comprehensive Guide to Typography Terms
 - <https://learn.g2.com/typography-terms>
- Visme
 - A Visual Guide to the Anatomy of Typography
 - <https://visme.co/blog/type-anatomy/>

Resources on typography

- Myfonts.com (Monotype)
 - everything you ever wanted to know about Monotype fonts
 - <https://www.myfonts.com/>
- Identify fonts
 - WhatTheFont
 - <https://www.myfonts.com/WhatTheFont/>
 - Android/iOS app (Google Play Store / Apple App Store)
 - WhatFontIs.com
 - <https://www.whatfontis.com>

Resources on typography

- Eugene Sadko
 - Guide to 10 font characteristics and their use in design
 - <https://medium.com/@eugenесadko/guide-to-10-font-characteristics-and-their-use-in-design-b0a07cc66f7>
- Cameron Chapman
 - Understanding the Nuances of Typeface Classification
 - <https://www.toptal.com/designers/typography/typeface-classification#:~:text=Typography%20Basics,are%20only%20used%20for%20headlines>

Resources on pairing typefaces

- Fontjoy
 - How it works: Font pairing in design, font pairing with machine learning
 - <https://fontjoy.com/pairing/>
- Canva
 - Typography made easy: Find a font combination for your design needs
 - <https://www.canva.com/font-combinations/>

Resources on page design

- Collection by Alisa Aronson
 - <https://www.pinterest.com/alisaaronson/typographic-layout/>
- Smashing magazine
 - Creative Print Typography Layouts
 - <https://www.smashingmagazine.com/2009/04/creative-print-typography-layouts/>

Free fonts

There are *lots* more!

- Google Fonts
 - over 1,000 free, open source typefaces
 - many typefaces with multiple styles
 - many have no/limited alternate characters etc.
 - html code for embedding on web site
 - also downloadable/installable
 - advice on pairing
 - <https://fonts.google.com>
- dafont.com
 - over 58,000 typefaces
 - not all free
 - mixed quality
 - <https://dafont.com>

Create/edit fonts for free

- Free and open source
 - BirdFont (Windows, Linux, macOS, BSD)
 - <https://birdfont.org/>
 - FontForge (Windows, macOS, Linux)
 - <https://fontforge.org/en-US/>
 - TTFEdit (Windows, Linux, macOS)
 - <https://sourceforge.net/projects/ttfedit/>
- Free (but not open source)
 - Glyphr Studio (browser-based)
 - <http://www.glyphrstudio.com/>
 - FontArk (browser-based)
 - <https://fontark.net/farkwp/>
 - Calligrapher (convert handwriting to font – scanner reqd)
 - <https://www.calligraphr.com/en/>
 - Microsoft Font Maker (handwritten – Windows 10)
 - Search for *Microsoft Font Maker* in Microsoft Store



Tonight's deck available at:
<https://opcug.ca/presentations/typography.pdf>

How to examine fonts

Double-click .ttf / .otf file in Explorer

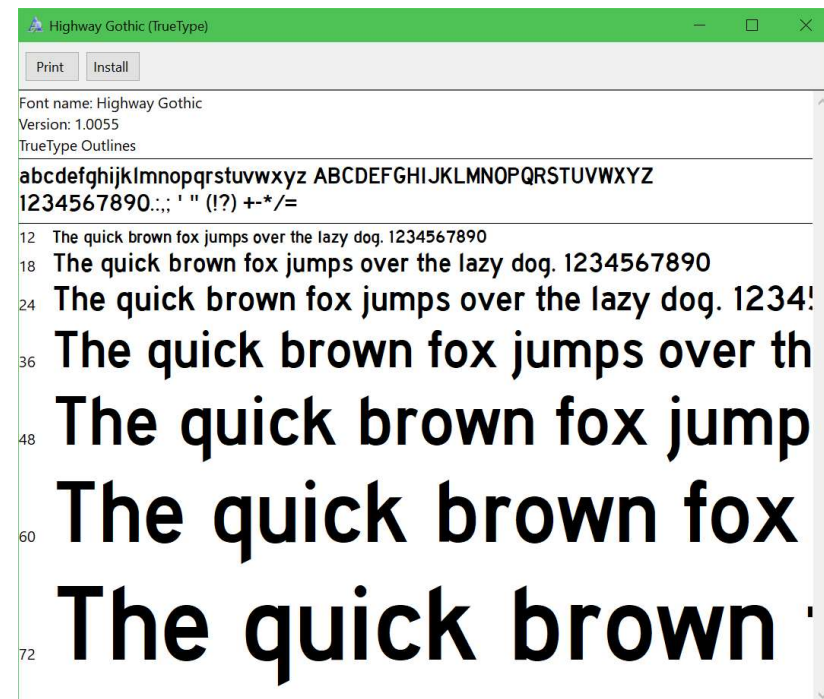
can examine before installation

font name & version

TrueType or OpenType

entire alphabet, numbers,
some punctuation

the quick brown fox
(12 pt–72 pt)



How to examine fonts

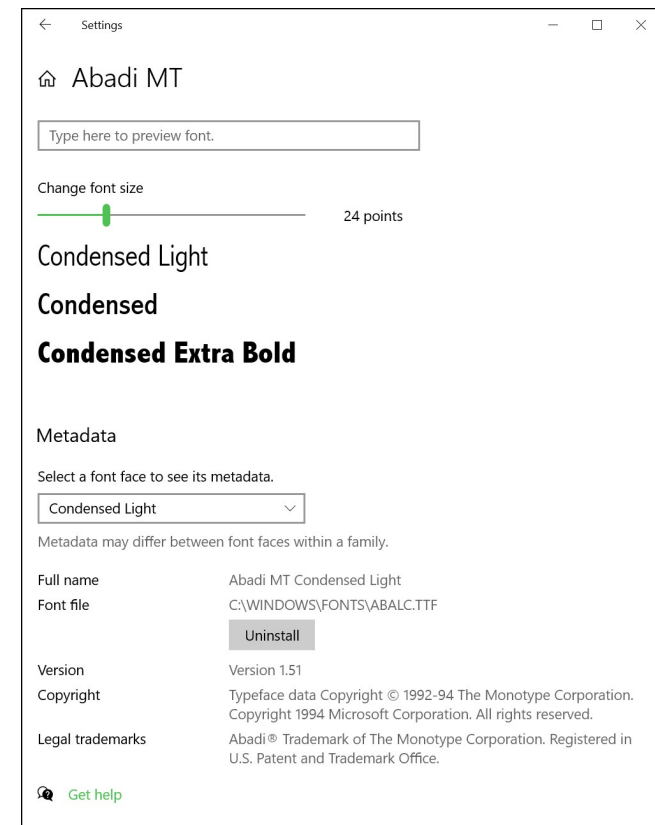
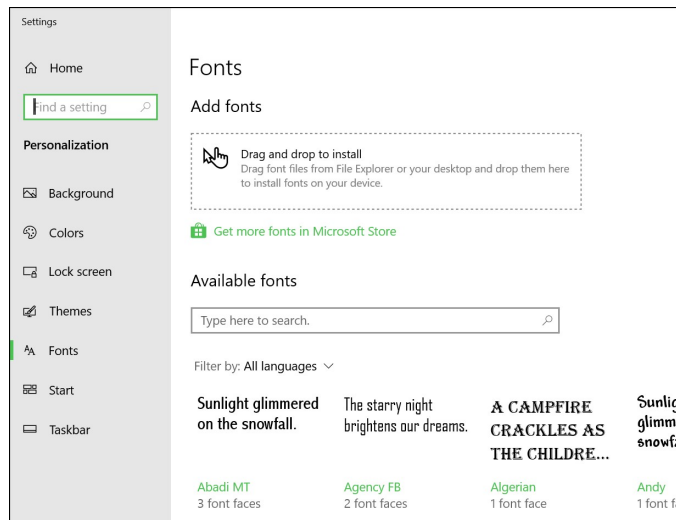
Settings | Personalization | Fonts

see all installed fonts

click for details

enter preview text you want

adjust size for preview



How to examine fonts

Character Map

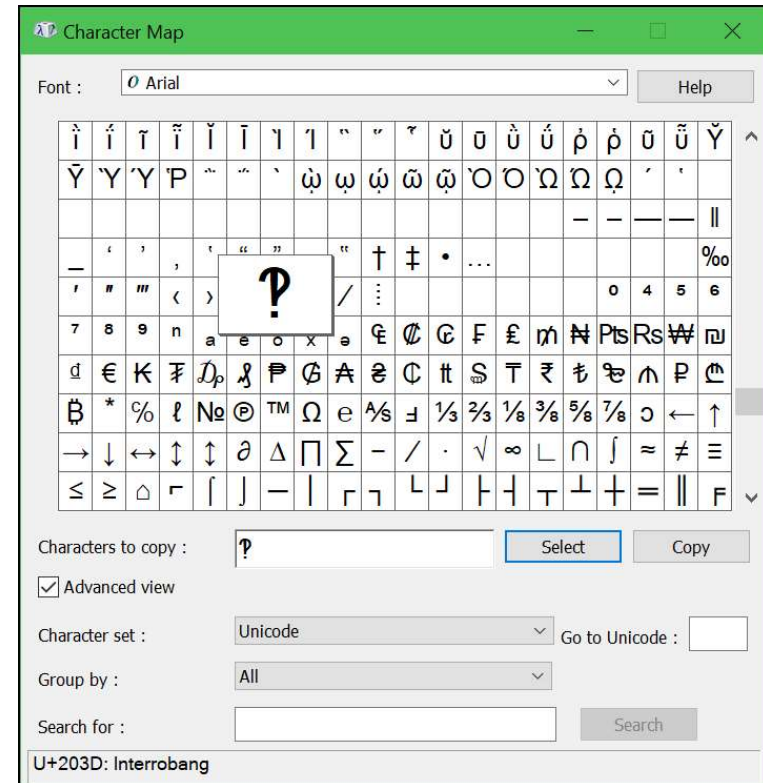
see all installed fonts

see all glyphs

copy characters to clipboard

find odd characters

eg. Interrobang



How to install fonts

Right-click the font file (.ttf or .otf)

select *Install* to install for just you

or select *Install for all users*

Windows 10, version 1809 or greater

Drag the .ttf or .otf file

drop it in the *C:\Windows\Fonts* folder

drop at *Settings | Personalization | Fonts | Add Fonts*

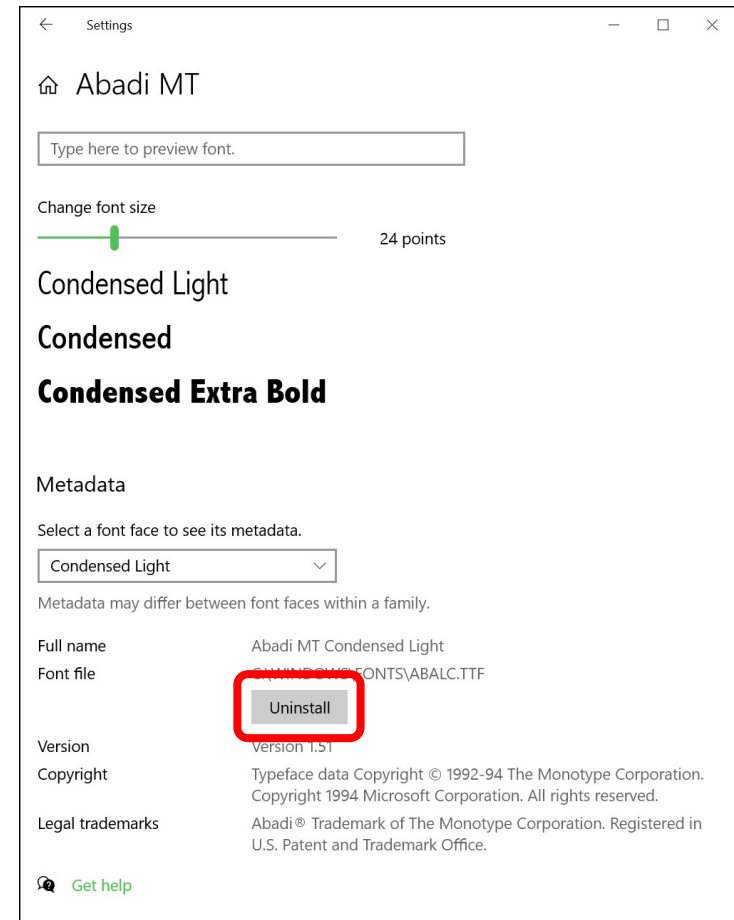
How to uninstall fonts

Settings | Personalization | Fonts

select the font you want to remove

in *Metadata* section

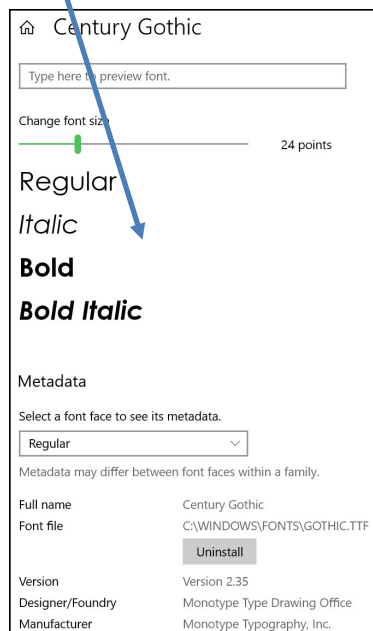
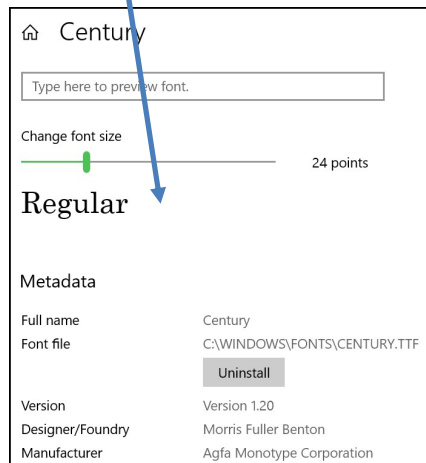
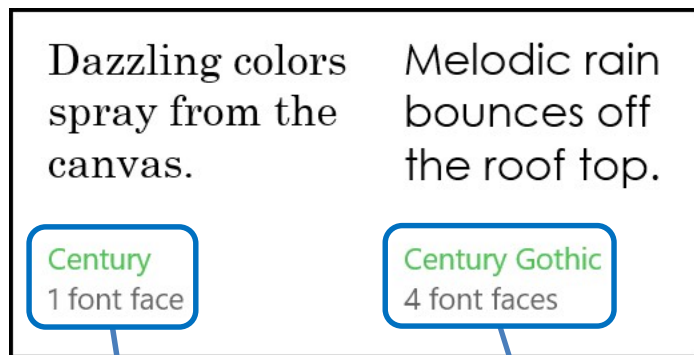
select *Uninstall*





Oblique or fake oblique

Settings | Personalization | Fonts



Neither has a true italic

Century

only “Regular” font file
“italic” - fake oblique

Century Gothic

includes “Italic” font files
may be tuned for oblique



Ligatures

Certain letter combinations
may crash together

fī fi

may look more elegant when
combined into a single glyph

Th Th

fi ij fi ü

OE oe Œ œ

Encyclopædia Britannica



Ligatures and tracking

✓	Thank	No ligature, normal tracking
✓	Thank	Ligature, normal tracking
✗	Thank	Ligature, expanded tracking
✓	Thank	No ligature, expanded tracking

Avoid ligatures if
tracking changes

OpenType supports composition and decomposition of ligatures
eg. if you expand tracking it can break them into separate characters





OpenType stylistic sets

AaBbIiMmNnUu

(Arial—stylistic set 1)

aABBIimmnnuu

(aRIAL—STYLISTIC SET 2)

Arial

strange stylistic set 2

lowercase is cap height

some lowercase take uppercase form

some uppercase take lowercase form

Handgloves

(Comic Sans—stylistic set default)

Handgloves

(Comic Sans—stylistic set 1)

HANDGLOVES

(COMIC SANS—STYLISTIC SET 2)

Handgloves

(Comic Sans—stylistic set 2)

Could mix in characters
from different sets for
more random appearance

Typographical trainwreck

Vengeance Van
commercial enterprise

Entire website uses this
typeface!

<https://vengeancevan.com/>

What is the
Vengeance Van?

The Vengeance Van is a mobile room where you are permitted to destroy items we provide (Or items of your own) using different “Weapons” we also provide such as baseball bats, sledge hammers, golf clubs, crow bars and more. This activity is great for your mental health and relieving stress – ask anyone who has tried it!

Great exercise, immense fun for families and friends while still safe. We take all of the necessary safety & sanitary steps to ensure all participants have a healthy experience.



Tonight's deck available at:
<https://opcug.ca/presentations/typography.pdf>