THIS IS A BOOK ABOUT TYPOGRAPHY

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TEXTURE of TEXT

TYPEFACE

What's In a Letter?

cap height the distance between the baseline and the top of a capital letter

ascender this part of the lower case letter rises above the x-height

x-height the height of a lower case x or the height of lower case letters

descender the part of a lower case letter that hangs below the baseline
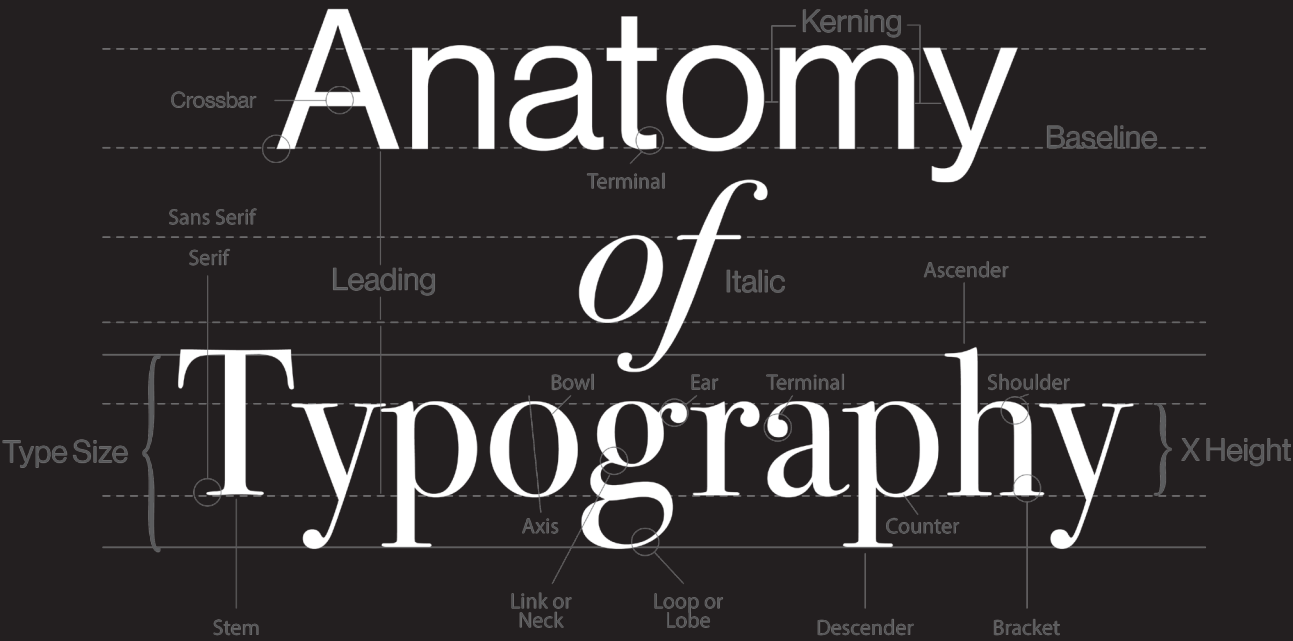
baseline the imaginary line where all letterforms sit

counter the enclosed negative space within a letter

terminal the endpoint of the letterform

set width is the width of a character in relation to the height

Every serious subject has a language of its own. Typography is no exception. The following diagram shows a few terms used to talk about letterforms. Many more appear in the Glossary of Typographic Terms at the end of this document. These terms let you discuss type like an expert.

Anatomy *of* Typography

Kerning

Crossbar

Baseline

Terminal

Sans Serif

Serif

Leading

Italic

Ascender

Bowl

Ear

Terminal

Shoulder

Type Size

X Height

Axis

Counter

Link or Neck

Loop or Lobe

Descender

Bracket

Stem

TYPEFACE

Serif and Sans Serif

The Origin of the Serif, that the serif is an artifact of brushing letters onto stone before cutting them. Serif types are useful in text because the serifs help distinguish individual letters and provide continuity for the reader's eye.
Serifs come in many styles. Compare the bracketed serifs of Bodoni to the slab serifs of Clarendon and the wedge serifs of Birch STD

serif a small decorative stroke at the end of a letter's main strokes. Serifs improve readability by leading the eye along the line of type

sans serif typefaces without serifs are called sans serif (sans is French for without) designs

Baskerville Regular
Bracketed Serifs

Baskerville

Clarendon Regular
Slab Serifs

Clarendon

Birch STD Regular
Wedge Serifs

Birch STD

Typefaces without serifs are called sans serif (sans is French for without) designs. The first sans serif type design is credited to William Caslon in England in 1816. Sans serif designs are also sometimes referred to as gothic or grotesque designs.

Helvetica Regular
Sans Serifs

Helvetica

Alte Haas Grotesk Regular
Sans Serifs

Alte Haas Grotesk

TYPESIZE

X-Height

x-height the height of a lower case x or
the height of lower case letters

Traditionally, x-height is the height of the lowercase letter
x. It affects the feel of a typeface, how many characters fit
on a line, and depending on how the type is set, how easily
your text can be read.
At very small point sizes, a font with a larger x-height is
easier to read, everything else being equal. Compare the
following examples of Helvetica, Didot, and Bembo all at
a point size of 8:

*Helvetica Regular
point size 8*

You can't really talk about type without talking about x-height. Simply
put, x-height is the height of the lower-case letters, excluding the
ascenders and descenders. Unlike point size, x-height is not a unit
of measurement. Rather, it's a proportional description of the low-
ercase letters. A typeface with a large x-height simply means the
lowercase letters are proportionally large in relation to the ascenders
and descenders.

*Didot Regular
point size 8*

You can't really talk about type without talking about x-height.
Simply put, x-height is the height of the lower-case letters, exclud-
ing the ascenders and descenders. Unlike point size, x-height is not
a unit of measurement. Rather, it's a proportional description of the
lowercase letters. A typeface with a large x-height simply means the
lowercase letters are proportionally large in relation to the ascend-
ers and descenders.

*Bembo Regular
point size 8*

You can't really talk about type without talking about x-height. Simply put,
x-height is the height of the lower-case letters, excluding the ascenders and
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x-height simply means the lowercase letters are proportionally large in relation
to the ascenders and descenders.

INTERLETTER SPACING

Fonts on typewriters were usually monospaced (also known as fixed pitch). Monospaced means that each character, whether it's an i or an m, takes up the same amount of space. Monospaced digital fonts, such as Courier, work well when a mechanical typewriter look is desired or in cases where characters should line up vertically.

Courier New Regular `monospaced`

Times Regular proportionally spaced

Today, most of the digital type used on computers is designed to be proportionally spaced. With proportional spacing, each letter is given just the amount of space it needs to look right and be most legible. Using a proportional font, you can fit much more text on a page than using a monospaced font while at the same time making the text easier to read.

Monospace vs Proportional

letterspacing the overall spacing between letters in a block of text, it is also known as tracking. Generally, the larger the type, the less letterspacing required

monospace based on the carvings of the ancient Romans serifs feature small "fee" at the end of the letterforms

proportional typefaces without serifs are called sans serif (sans is French for without) designs

INTERLETTER SPACING

You can also adjust word and letter spacing to improve legibility. Although typefaces are designed with the correct spacing between characters for general use, special situations can result in the type looking crowded or too loose. For example, words printed in all UPPERCASE tend to look too tight because the designer assumed that uppercase and lowercase letters would be mixed. If your application allows you to adjust letter spacing, you should add a small amount of letter space to words printed in all uppercase.

Properly spaced	LETTERSPACE
Improperly spaced	LETTERSPACE

Some letter combinations, particularly in words set in capitals, result in awkward spacing unless they are kerned. Kerning is the adjustment of space between pairs of letters. Kerning is especially important at large point sizes. As the characters are enlarged, so is the space between them.

Kerning and Tracking

tracking adjusting the space between individual letters when awkward pauses come between them

kerning the process of adjusting the spacing between characters in a proportional font, usually to achieve a visually pleasing result

INTERWORD SPACING

Justification

justification a block of text that has been spaced so that the text aligns on both the left and right margins

To aid readability, it's important to keep word spacing as consistent as possible—even if it means hyphenating words. Tight word spacing lets you place more text on the page, but can make it difficult to distinguish words from each other. Loose word spacing fills up a page with a small amount of text, but the text becomes harder to read as the words begin to look disconnected.

When you justify a column of type, never allow letter-spac- ing to vary. Each letter is designed with just the amount of space it needs to- look right and be most leg- ible. Watch that word spaces don't create awkward gaps or rivers. They are disruptive to comfortable reading. Choose a column width, typeface, and point size that work to enhance readbility.

Uneven word spacing

When you justify a column of type, never allow letterspacing to vary. Each letter is designed with just the amount of space it needs to look right and be most leg- ible. Watch that word spaces don't create awkward gaps or rivers. They are disruptive to comfortable reading. Choose a column width, typeface, and point size that work to enhance readbility. Word spacing, the space between words, should be constant in flush left, flush right, or centered text. However, for justified text, word spacing varies from line to line to keep margins even.

More consistent word spacing, better typographic color

INTER LINE SPA CING

Leading

leading the overall spacing between letters in a block of text, it is also known as tracking. Generally, the larger the type, the less letterspacing required

Leading is the vertical distance between lines of type and is measured in points. During the days of metal type, printers inserted extra strips of lead between long lines of text to make them easier to read. This procedure gave rise to the term leading (pronounced ledding). Leading is measured from the baseline of one line of text to the baseline of the next line of text. Most word processing and page layout applications let you adjust the leading in your documents. Experiment with this feature to see how it affects legibility.

9-point type / 17-point leading (9 / 17)

Too much leading causes the eye to jump from line

to line and is disruptive to reading. Too little leading

creates dark, uninviting color that may cause the eye

to skip a line when scanning to find the next one.

9 / 9

Too little leading creates dark, uninviting color that may cause the eye to skip a line when scanning to find the next one. Too much leading causes the eye to jump from line to line and is disruptive to reading.

9 / 11

The right amount of leading can ease the reader's eye. A general rule to follow is two more points of leading than the typesize. This rule works best for blocks of text, not so much for headline text.

CASES

Upper and Lower and Small Caps

uppercase characters they are capital letters. They are vestige of the days when typesetters kept the capital letters in a box above the lowercase letters

lowercase characters they are small letters that were kept in the box below the uppercase characters

smallcaps they are short capital letters designed to blend with lowercase text. They're usually slightly taller than lowercase letters

A word set in ALL CAPS within running text can look big and bulky, and A LONG PASSAGE SET ENTIRELY IN CAPITALS CAN LOOK UTTERLY INSANE. Small capitals are designed to match the x-height of lowercase letters. Designers, enamored with the squarish proportions of true small caps, employ them not only within bodies of text but for subheads, bylines, invitations, and more. Rather than Mixing Small Caps with Capitals, many designers prefer to use all small caps, creating a clean line with no ascending elements. InDesign and other programs allow users to create FALSE SMALL CAPS at the press of a button; these SCRAWNY LETTERS look out of place.

True small caps *Bodoni Smallcaps*	ABCDEFGHIJKLMNOPQRSTUVWXYZ
False small caps *Bodoni Oldstyle*	ABCDEFGHIJKLMNOPQRSTUVWXYZ

True SMALL CAPS integrate PEACEFULLY with lowercase letters. Only use SMALL CAPS when they are OFFICIALLY INCLUDED with the type family.

PUNCTUATION

Quotation, Hatches, Em, and En

em space common unit of measurement in typography. An em space is traditionally defined as the width of the uppercase M in the current face and point size. It is more properly defined as simply the current point size. For example, in a 12 point type, one em is a distance of 12 points

em dash a dash the length of an em, used to indicate a break in a sentence **en space** common unit of measurement in typography. An en is traditionally defined as the width of the uppercase N in the current face and the current point size. It is more properly defined as half the width of an em

en dash a dash the length of an en, used to indicate a range of values

A well-designed comma carries the essence of the typeface down to its delicious details. Helvetica's comma is a chunky square mounted to a jaunty curve, while Bodoni's is a voluptuous, thin-stemmed orb. Designers and editors need to learn various typographic conventions in addition to mastering the grammatical rules of punctuation. A pandemic error is the use of straight prime or hatch marks (often called dumb quotes) in place of apostrophes and quotation marks (also known as curly quotes, typographer's quotes, or smart quotes). Double and single quotation marks are represented with four distinct characters, each accessed with a different keystroke combination.

Bodoni 28 pt   {[" ' , . ; : ' "]}

Univers 28 pt   {[″ ′ , . ; : ′ ″]}
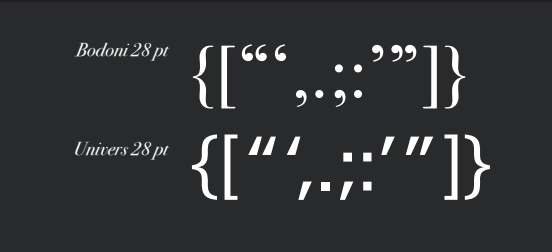
Quotation marks have distinct "open" and "closed" forms, unlike hatch marks, which are straight up and down. A single close quote also serves as an apostrophe ("It's Bob's font."). Prime or hatch marks should only be used to indicate inches and feet (5′2″). Used incorrectly, hatches are known as "dumb quotes." Although computer operating systems and typesetting programs often include automatic "smart quote" features, e-mailed, word-processed, and/or client-supplied text can be riddled with dumb quotes. Auto smart quote programs often render apostrophes upside down ('tis instead of 'tis), so designers must be vigilant and learn the necessary keystrokes.

Astrix

Em and En Dash

Question Mark and Exclamation Point

ALIGNING AND OLD STYLE NUMERALS

Ligatures, Numbers, and Swash Characters

ligatures an elegant expression of typographic fondness, ligatures create a single character out of two

numbers old style figures are designed to work within text, while lining figures align better in charts and graphs

swash characters on occasion, some typographers prefer characters with a little more style and flourish than those set in straight letterforms. Used in moderation, these alternate or swash characters are a great way to dress up boring type

fl fi   Al fi

Bodoni ligature   *Bembo ligature*

1234567890

Oldstyle Numbers
Bodoni

Qu Qu

Swash Letters
Apple Chancery

Swash Q
Bembo

1234567890

Lining Numbers
Bembo

Ligatures are two or more letters combined into a single letterform. In some typefaces, character combinations such as fi and fl overlap, resulting in an unsightly shape. The fi and fl ligatures were designed to improve the appearance of these characters.

shape
of
text

As lines of text get long, it can be difficult for the reader to move from the end of one line to the beginning of the next. On the other hand, short line lengths break up the text and interrupt the reader. The ideal line length depends on the design of the typeface, type size, line spacing, and length of the copy. Generally, a line should have 55 to 60 characters, or 9 to 10 words, for optimal readability.

Line length and point size are interrelated, as line length should be somewhat determined by the point size for maximum readability: the larger the point size, the longer the line length. We read and identify words by the shapes of the letters, not letter by letter; we also read by groups of words.

A long line length for any length of copy also becomes cumbersome to read, as our eyes struggle to find the beginning of the next line.

Line length and point size are interrelated, as line length should be somewhat determined by the point size for maximum readability: the larger the point size, the longer the line length. We read and identify words by the shapes of the letters, not letter by letter; we also read by groups of words.

This line length is comfortable to read and has no hyphenations.

Line length and point size are interrelated, as line length should be somewhat determined by the point size for maximum readability: the larger the point size, the longer the line length. We read and identify words by the shapes of the letters, not letter by letter; we also read by groups of words.

A very short line length can lead to too many hyphenations, making the text difficult to read.

LINE LENGTH

ALIGNMENT

Flush Left, Flush Right, Justified

flush left the text is aligned along the left margin or gutter, also known as left-aligned, ragged right or ranged left

flush right the text is aligned along the right margin or gutter, also known as right-aligned, ragged left or ranged right

justified text is aligned along the left margin, and letter- and word-spacing is adjusted so that the text falls flush with both margins, also known as fully justified or full justification

The alignment of the text within text blocks contributes to the tone of your documents. When text is aligned to one margin and ragged on the other, it can create an informal feeling. Left aligned text is easier to read than right aligned text. Avoid right alignment unless it is appropriate as a design treatment. Justified text aligns on both the left and right hand sides and is used in newspapers, newsletters, and traditionally in book work. Justified text is sometimes considered more formal than ragged text. Not surprisingly, it optimizes the amount of copy you can fit on a page

In English and most European languages where words are read left-to-right, text is usually aligned "flush left," meaning that the text of a paragraph is aligned on the left-hand side with the right-hand side ragged. This is the default style of text alignment on the World Wide Web for left-to-right text. Quotations are often indented.
Flush left might also be used in very narrow columns, where full justification would produce too much whitespace between characters or words on some lines.

A traditional flush-left setting

In other languages that read text right-to-left, such as Arabic and Hebrew, text is commonly aligned "flush right". Additionally, flush-right alignment is used to set off special text in English, such as attributions to authors of quotes printed in books and magazines, or text associated with an image to its right. Flush right is often used when formatting tables of data.

Flush right is a little harder to read, but acceptable in short amounts where it is desired for design purposes

A common type of text alignment in print media is "justification", where the spaces between words, and, to a lesser extent, between glyphs or letters, are stretched or compressed to align both the left and right ends of each line of text. When using justification, it is customary to treat the last line of a paragraph separately by simply left or right aligning it, depending on the language direction. Lines in which the spaces have been stretched beyond their normal width are called loose lines, while those whose spaces have been compressed are called tight lines.

When justifying type, avoid rivers of white space and lines with too much letter spacing or word spacing

SIGNIFICANT LINEATION

Centered Type

When setting type with a ragged margin (flush left or flush right), become aware of the shape that the ragged line endings are making. A good rag goes in and out in small increments. A poor rag is one that makes unnatural shapes with the white space. When this occurs, make manual line breaks or edit your copy to improve the rag.

This style can be very effective
when used for short blocks of copy,
such as titles and headlines,
subheads, invitations, announcements,
and poetry. It centers the lines
of type without adding extra space, mak-
ing a ragged right and left edge. This
technique adds symmetry and elegance
but decreases readability when used for
large amounts of copy.

Centered type adds symmetry and elegance but decreases readability when used for large amounts of copy

Text can also be "centered", or symmet-
rically aligned along an axis in
the middle of a column. This is often
used for the title of a work, headlines,
and for poems and songs. As with
flush-right alignment, centered text is
often used to present data in
tables. Centered text is considered less
readable for a body of text made up
of multiple lines because the ragged
starting edges make it difficult for
the reader to track from one line to the
next. Centered text can also
be commonly found on signs, fliers, and
similar documents where
grabbing the attention of the reader is
the main focus, or visual appearance
is important and the overall amount of
centered text is small.

Too much centered type becomes tedious to read

SKEWED LINES AND SHAPED TEXT

Contoured type. Contoured type is set in a particular shape for purely aesthetic reasons. It is usually justified to achieve a particular contour. If there are narrow line widths, it will probably require editing the copy and handworking the rags to avoid too-open letter and word spacing as well as rivers of white space and stretched or squeezed lines. Type can run around a pull-quote inserted in a reverse box. Align the box with the baseline and cap height of neighboring lines. Wrap-around type or run around or text wrap, this is type that aligns around the contour of an illustration, photo, or other graphic element. It can be applied to either the right, left, or both margins.

You can also skew text as another way to shape your text. Skewed text differentiates from shaped text because it has to do with diagonal lines rather than geometric shapes.

DIVIDING the TEXT

INTER

AND

LINEA

HYPERTEXT

TION

Interlineation is the effect in which two bod-

The two bodies of text are usually distinguished by scale, color,

ies to text occupy the same general text block

weight, typeface, and/or justification. It is mostly used in legal

shape However, the two bodies are differenti-

documents to indicate the insertion of new language between

ated in that one body of text exists within the

previous sentences in a contract or other contexts.

line spacing of the other.

Hypertext refers to a way of highlighting a certain moment in a
body of text to extrapolate upon somewhere else on the page.
For example, this can be utilized to define a term in a passage.
Highlighting can be in the form of a change in color, size, type-
face, and/or the addition of an underline or other effect.

*this caption refers to the
word "highlighting"*

*this caption refers to the
word "color" and was from
this because of the change
in color*

INITIAL LETTER

drop caps are a decorative element typically used in documents at the start of a section or chapter. It's a large capital letter at the beginning or a paragraph or text block that has the depth of two or more lines of normal text.

raised caps are another style is the raised initial. A raised initial rests on the base¬line of the first line of copy and ascends above the body copy. With far fewer alignment variables, raised caps are much less complicated to incorporate.

Iₙ ᴛʜɪꜱ ᴘᴀʀᴀɢʀᴀᴘʜ, the enlarged capital sits on the same baseline as the text that follows. This simple solution is easy to implement on both page and screen. Setting the first few words of the text block in small capitals helps smooth the transition between the initial and the text. Also called a raised capital.

A ʟᴀʀɢᴇʀ ʟᴇᴛᴛᴇʀ ᴄᴜᴛ into the text block is called a *dropped capital* or *drop cap*. This example was produced using the Drop Caps feature in InDesign. The software automatically create a space around one or more characters and drops them the requested number of lines. The designer can adjust the size and tracking of the capital to match it to the surrounding text. Similar solutions can be implemented on the web in css. The space around the capital is rectangular, which can be visually awkward, as seen here with the sloping silhouette of the letter *A*.

Wɪᴛʜ ᴛʜᴇ ᴅʀᴏᴘᴘᴇᴅ ᴄᴀᴘɪᴛᴀʟ used here (The Serif Bold) was positioned as a separate element. A text wrap was applied to an invisible box sitting behind the capital, so that the text appears to flow around the intruding right prow of the *W*. Likewise, the left prow extends out into the margin, making the character feel firmly anchored in the text block. Hand-crafted solutions like this one cannot be applied systematically.

RULE DIVISION AND ORNAMENTAL DIVISION

pilcrow ¶ also called the paragraph mark, paragraph sign, paraph, alinea, or blind P, is a typographical character for individual paragraphs

Paragraphs do not occur in nature. Whereas sentences are grammatical units intrinsic to the spoken language, paragraphs are a literary convention designed to divide masses of content into appetizing portions. Indents have been common since the seventeenth century. Adding space between paragraphs (paragraph spacing) is another standard device. On the web, a paragraph is a semantic unit (the <p> tag in HTML) that is typically displayed on screen with space inserted after it. A typical indent is an em space, or a quad, a fixed unit of space roughly the width of the letter's cap height. An em is thus proportional to the size of the type; if you change the point size or column width, the indents will remain appropriately scaled. Alternatively, you can use the tab key to create an indent of any depth. A designer might use this technique in order to align the indents with a vertical grid line or other page element. Avoid indenting the very first line of a body of text. An indent signals a break or separation; there is no need to make a break when the text has just begun. Despite the ubiquity of indents and paragraph spacing, designers have developed numerous alternatives that allow them to shape content in distinctive ways.

Paragraphs can be divided by placing a pilcrow, an ornament or a rule in between each paragraph. Ornamental division can be used to give text layouts specific stylistic qualities. Graphic borders and ornaments were considered essential in even the earliest forms of printing. ¶ Rule Division is a geometric line used as a graphic enhancement in page layout assembly. The term is used to distinguish ruling lines from a line of type.

The use of a pilcrow indicates change in paragraph

Paragraphs can be divided by placing a pilcrow, an ornament or a rule in between each paragraph. Ornamental division can be used to give text layouts specific stylistic qualities. Graphic borders and ornaments were considered essential in even the earliest forms of printing.

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    Rule Division is a geometric line used as a graphic enhancement in page layout assembly. The term is used to distinguish ruling lines from a line of type.

The use of an em dash indicates change in paragraph

COLOR

typographic color describes the relative lightness or darkness of a block of text. The shade of color in a text block is dictated by factors including the font size, kerning, leading, as well as the font selection itself

Spacing concerns and the design of the typeface itself affects what is known as typographic color. This term may seem like a misnomer in an age when even word processors let you apply actual color (for example, red, blue, or green) to type as easily as changing the point size. Typographic color is really the grey value, or density, of a mass of type on the page. A page may have light or dark color, but you must keep the color consistent on the page to aid readability.

The tighter the letterspacing and word spacing, the darker the lines of type become. You can set condensed type tighter than regular or extended type. And as a rule, you can set display sizes tighter than body text because extended readability is not an issue

Bodoni Regular
9/12

The tighter the letterspacing and word spacing, the darker the lines of type become. You can set condensed type tighter than regular or extended type. And as a rule, you can set display sizes tighter than body text because extended readability is not an issue

Neue Haas Grotesk
Black
9/10

The tighter the letterspacing and word spacing, the darker the lines of type become. You can set condensed type tighter than regular or extended type. And as a rule, you can set display sizes tighter than body text because extended readability is not an issue

Baskerville Bold Italic
9/11

WID OWS AND OR PHA NS

widows are a paragraph-ending line that falls at the beginning of the following page or column, thus separated from the rest of the text

orphans are a paragraph-opening line that appears by itself at the bottom of a page or column, thus separated from the rest of the text

All designers should be able to tell you what widows and orphans are; however, if you ask them the difference between the two, they probably wouldn't be able to tell you. Here are some mnemonic devices to help you remember the difference:

"An orphan has no past; a widow has no future"
"An orphan is left behind, whereas a widow must go on alone"
"An orphan is alone from the beginning; a widow is alone at the end"
"An orphan starts alone, a widow ends alone"

A widow is a very short line, usually composed of one or two words or a hyphenated word, at the end of a paragraph. This is typographically undesirable, as it is disturbing to the eye and creates the appearance of too much white space between paragraphs or at the bottom of a page. It is considered very poor typography, so adjust it by manually rebreaking the rag or editing the copy.
An orphan is related to a widow in that it is a single word or very short line appearing at the beginning of a column or a page. This terminology is not as commonly used and understood as widow.

There are two widows in this paragraph. The first is the ending of a paragraph on the first line of the second column of text and the second is the single word left at the end of the paragraph

A widow is a very short line, usually composed of one or two words or a hyphenated word, at the end of a paragraph. This is typographically undesirable, as it is disturbing to the eye and creates the appearance of too much white space between paragraphs or at the bottom of a page. It is considered very poor typography, so adjust it by manually rebreaking the rag or editing the copy.
An orphan is related to a widow in that it is a single word or very short line appearing at the beginning of a column or a page. This terminology is not as commonly used and understood as widow, but the concept is the same.

There is one orphan in this paragraph. It is the beginning line of the paragraph at the end of the first column of text.

Typefaces used:

Neue Haas Grotesk
Bodoni Oldstyle
Baskerville
Clarendon
Birch STD
Helvetica
Alte Haas Grotesk
Didot
Bembo
Courier New
Times
Bodoni Oldstyle Smallcaps
Apple Chancery

This book was printed on laserjet paper
with a HP LaserJet 5200 printer

This book was designed and handbound
by Emily Seto