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# PRINTtips

## Ten Things You Need to Know About... Typography



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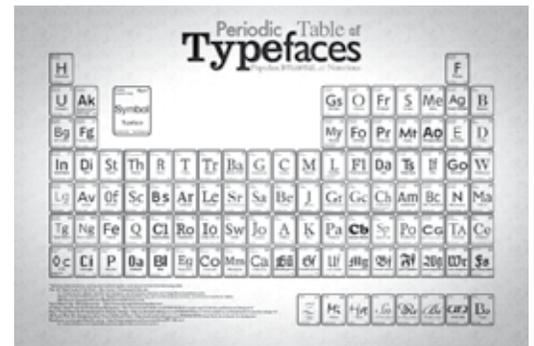
**T**ypography — both the design of letters and characters and the process of arranging type — is a central component of any graphic design project and is integral to communication. Good typography reinforces the meaning of the text, puts the reader at ease, allows the reader to devote less energy to the mechanics of reading, and causes the reader to pay more attention to the message.

### Typeface or Font?

The terms typeface and font are used interchangeably today. However, in the days of metal type, there was a distinction. Font meant an alphabet (i.e., the upper and lower case letters, numerals, punctuation marks, and symbols) in a single size, weight, and style; while typeface meant a family of fonts in various sizes, weights, and styles.

- Size is the height of the alphabet and is measured in points (print) or ems (web).
- Weight; such as medium, bold, light, or black, is the thickness of the alphabet relative to its height.
- Style is the slant of the letters. Upright letters are known as roman, slanted is called italics or oblique.

When type was set by hand, all the letters and characters representing one font were separately stored in the drawer of a job case. Then technology replaced metal type, and changes



in size, weight, and style were made by simple keyboard commands. The distinction between a typeface and font subsequently blurred to what it is today.

### Type as Design: Type Classification

Type classification is a system for grouping fonts by shared visual characteristics (stroke variation, serifs and bracketing, x-height, and stress). Typography for print uses these main classifications: Roman, Blackletter, and Gaelic. The Roman classification — which predominates today — is further divided into serif, sans serif, script, and ornamental.

- Serif typefaces have finishing strokes and stems on individual characters. Serif typefaces you may be familiar with include Times, Garamond, Palatino, Bodoni, and Bookman.
- Sans serif typefaces lack finishing strokes and are relatively modern. Helvetica, Univers, Futura, Avant Garde, and Gill Sans are all sans serif typefaces.

## Ten Things You Need to Know About Typography (cont.)

*“Arranging type means selecting a font, point size, line length, and spacing...”*

*“Negative space defines the boundaries of positive space and helps balance the page.”*

*“White space is the part of a page that is empty of text, photos, or graphic elements.”*

- Script typefaces mimic calligraphy or hand lettering and are either formal or casual. Formal script examples are Snell Roundhand and Old English; casual script includes Brush Script and Mistral.
- Ornamental typefaces (also known as display or novelty type) have limited use as headlines or for decorative purposes.

Web typography uses a slightly different classification system: serif, sans serif, monospaced, cursive, fantasy, and script.

### Arranging Type: Design Choices

Arranging type means selecting a font, point size, line length, and spacing for each line and for the page as a whole in order to convey the meaning of the words.

### Fonts

The choice of fonts is dictated by the page’s purpose, the amount of text, the intended audience, and characteristics of the font itself. Because there is more body copy than anything else, it has the biggest influence on the overall appearance of the page.

- For a printed page with a lot of text, use a serif font for the body copy as most books, newspapers, and magazines do. On a web page, use either a serif or sans serif font. Current screen resolutions display serif fonts well.
- Limit the total number of fonts to three or fewer. For a single-page or short document, use only one or two fonts. Use only one script or ornamental font, regardless of the number of pages, and use it sparingly.
- Except for acronyms and abbreviations, avoid using all capital letters for text. In printed documents, using all caps slows down reading speed. On the web, all caps is synonymous with shouting.
- Never use all caps in a script font — the letters won’t connect as they would in handwriting or calligraphy, and the words will be very difficult to read.

For contrast, pair a serif font for body copy with a sans serif for headlines. For variety, vary the size and weight of the type rather than changing fonts. For emphasis, use bold or italic type.

### Point Size

Point size is the size of the letters. For print, use 10-12 point type for body copy; on the web, use 15-25 pixels. Be prepared to make adjustments as some identical point sizes may appear larger or smaller depending on the font.

Headings help organize the page by defining sections of body copy and defining a hierarchy. Headings can be set in a larger point size than body copy, with a different weight, or set off with space above and below.

### Line Length

Line length is the horizontal width of the text block. For best results, set the line length to average 45-90 characters per line or to about 2 1/2 times the alphabet length of the font you are using. (To determine the best length, type the alphabet twice, then a third time up to the letter m, and measure. The width in picas is usually the best line length for that font.) If you follow this rule, you may have to create columns on the page.

### Spacing

Spacing — between letters, words, lines, columns, and on the margins of the page — creates negative space, the space that surrounds an object.

Negative space defines the boundaries of positive space and helps balance the page.

Leading (rhymes with heading) is the vertical distance between lines, measured baseline to baseline. It should be 120-145% of the point size, though it can be adjusted to bring lines closer together or spread them farther apart. In CSS, leading is called line-height.

Adjusting the space between two letters is called kerning and is used to remove gaps around letters whose forms angle outward or frame an open space (W,Y,V,T,L). Kerning can be controlled by creating a table of kerning pairs that specifies spaces between different letter combinations.

## Ten Things You Need to Know About Typography (cont.)

Tracking, letterspacing, or character spacing refers to adjusting space between all the letters in a word. It is used to make lines of type more even; to remove hyphenation, or widows and orphans from paragraphs; or to increase the space between the letters of a word set in all caps.

White space is the part of a page that is empty of text, photos, or graphic elements. If a page looks crowded, it probably needs more white space. Many readers associate white space with an upscale or sophisticated look. Page margins, line length, and column width all affect white space.

### Alignment

Alignment refers to how the text is displayed on the page. The choices are left, right, centered, or justified and should remain consistent throughout the document.

Left alignment (also called left justified or flush left) begins each line at the left margin. This produces a straight margin on the left and a ragged edge margin on the right. This is the most commonly used alignment.

Right alignment (also called right justified or flush right) aligns the beginning of each line of text along the right margin, producing a straight right margin and ragged edge margin on the left. Right alignment is used sparingly as it is difficult to read in large blocks of text.

Centered alignment has equal amounts of space on the right and left margin of each line, making ragged edge margins on both sides. Centered alignment is often used for document titles and headings.

Justified alignment combines left and right aligned text, resulting in a straight margin on both sides. This is accomplished by adjusting the space between words and characters so the text fills the entire line. It is popular in newspapers and magazines and increasingly on the web.

### Typography is About the Details

Whether in print or on the web, the goal of good typography is the same, to convey the meaning of the text and thereby to enhance the reader's comprehension. In typography, small changes can make a big difference.

*“In typography, small changes can make a big difference.”*

## How to Achieve a Professional Look

**T**he difference between a document that looks professional or amateurish is often a matter of detail. Here are some tips to help you achieve a professional look to your documents when you need to add emphasis. Three common ways are to use italics, bold face, or upper case letters, either singly or in combination.

- **Italics** is used to indicate titles of a publication, a musical composition, a radio or television program, a famous speech, or a long poem. It's also used to indicate a foreign word or phrase, unfamiliar technical terms, some proper names, and for soft emphasis. Note: Underlining was a technique for indicating italics in the days of typewriters and should not be used with or in place of italics.

- **Bold face** creates weight contrast and is used for heavier emphasis as well as for captions, subheads, and stand-alone words and phrases. If using a sans serif font, bold face is generally preferred to italics, as the slant of a sans serif font is not prominent enough to stand out. Bold face should be used sparingly in running text because it creates a harsh visual interruption.

- **ALL UPPER CASE LETTERS (ALL CAPS)** is rarely used for emphasis, except for single words or words of warning. For longer phrases or headlines, an alternate to all caps is SMALL CAPS which is less visually jarring. All caps in electronic communications connote shouting and is discouraged.

*“Three common ways are to use italics, bold face, or upper case letters ...”*



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## A Brief History of Typography

*“The individual letters and characters were held in a job case, a large drawer with many small compartments.”*

**T**ypography, a direct descendant of hand lettering and calligraphy, is often just as beautiful because it follows a defined set of rules for creating letters, numbers, glyphs, and ligatures. It dates from the invention of moveable type — individual letters and characters that could be assembled and reassembled — by Johannes Gutenberg in about 1450. Gutenberg added other innovations (such as casting type based on a matrix, a negative letter mold) and developed an alloy of lead, tin, and antimony to use as the metal.

The process of manufacturing moveable type in metal was continually improved and eventually fostered a true art form — the creation of alphabets, numerals, and characters in a single size, weight, and style (called a font) with distinctive characteristics; artistically rendered and mathematically balanced.

Moveable type progressed from crafting fonts individually in Gutenberg’s time to foundries that cut matrices and cast the fonts with hot metal in the late 19th century. The individual letters and characters were held in a job case, a large drawer with many small compartments. Typesetters composed the lines of type by selecting and assembling the letters and characters into words and spaces.

In the early part of the 20th century, Ottmar Mergenthaler invented the Linotype composing machine with molten lead vats that created an entire line of type in one matrix. Linotype machines were commonplace in newspaper printing and were still in use as late as the 1970s.

Eventually typesetting yielded to computerization — first as phototypesetting, later as desktop publishing, and finally as the typesetting and page composition systems that we use today.