POINTS OF VIEW

Typography

Typography is the art and technique of arranging type. Like a person's speaking style and skill, the quality of our treatment of letters on a page can influence how people respond to our message. It is an essential act of encoding and interpretation, linking what we say to what people see.

Typography has been known to affect perception of credibility. In one study, identical job resumes printed using different typefaces were sent out for review. Resumes with typefaces deemed appropriate for a given industry resulted in applicants being considered more knowledgeable, mature, experienced, professional, believable and trustworthy than when less appropriate typefaces were used[1]. In this case, picking the right typeface can help someone's chances of landing a job.

The term typeface is frequently conflated with font; Arial is a 'typeface' that may include roman, bold and italic 'fonts'. Most generally we categorize letterforms as serif or sans serif. Primary characteristics of a letterform are illustrated in **Figure 1a**. Serif typefaces tend to be thinner, more formal and easier to read in multiline blocks of text because the 'feet' help our eyes follow the line. Sans serif typefaces have simpler letterforms, are informal and, according to some, less readable in long stretches, so are appropriate for short bursts of text such as headings and labels. In general, sans serif fonts work well for slides and serif fonts for posters and printed documents.

Picking type is a matter of personal taste, but typography exists to honor content. The four most common typefaces are Baskerville, Helvetica, Palatino and Times New Roman (**Fig. 1b**), and a good rule is: when limited to the palette of type preinstalled on our computers, pick one and ignore the rest. The acclaimed poet and typographer Robert Bringhurst eloquently states that these four typefaces are "faces with nothing to offer one another except for public disagreement"[2]. If nothing else, the single typeface approach ensures consistency. Uniformity is one form of beauty; contrast is another. Of course, typefaces can be combined, but the operation requires care and craft.

Typography can reveal the tone of the document and clarify the structure and meaning of the text. Perhaps more than any other formatting options, our selection of fonts shows readers at a glance whether the document is stately or humble, formal or informal, creative or technical. Words, phrases, sentences and blocks of text should be spaced according to their underlying meaning. The space between paragraphs should be greater than between lines; items of a list should be spaced so they appear related to each other but separate from adjacent text. As I previously described in my columns on Gestalt principles[3,4], objects that are aligned or placed near one another are seen as belonging together. In **Figure 2**, I show sample text with spacing established simply with carriage returns (**Fig. 2a**), in contrast to the spacing made by adjusting
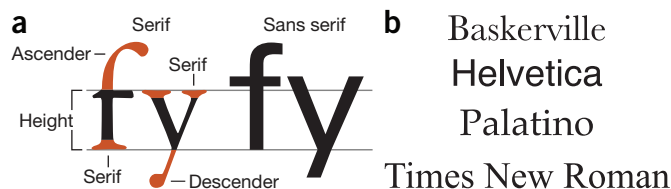

Figure 1 | Typefaces. (**a**) The anatomy of letterform for serif (Garamond) and sans serif (Univers) type both set at 58 point. (**b**) Four of the most readily available fonts.

line and paragraph settings (**Fig. 2b**). The relative scale of white space in **Figure 2b** makes the hierarchy of the content apparent. Differentially aligning the paragraph text and bulleted list, when allowed, differentiates the content.

To achieve meaningfully spaced text, use the 'space before' and 'space after' settings instead of extra carriage returns. Find the settings under Font menu > Paragraphs (PowerPoint) or Format menu > Paragraphs (Word). The paragraph text in **Figure 2b** is set with 5 point space after it; the bulleted list has 3 point space after it. Furthermore, left justified text leaves a ragged right edge that can be made more regular by adjusting the size of the text box and using soft returns (shift and return) to manually break lines.

Most documents can be set perfectly well with one typeface using no more than two or three type sizes, with judicious use of bold and italics if necessary. By limiting the variation in type and type treatment, we can unify the tapestry of visual information to be presented on scientific slides or posters. In these formats, we often need to combine a disparate array of information taken from different sources, including text, images and figures. A consistent typographical program unifies the elements and makes documents easier to read. Typography must draw our attention before it is read but not interfere with reading. The goal is to achieve a balance between text and all other elements on the page.

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1. Shaikh, D. & Fox, D. *Usability News* **10** (2008).
2. Bringhurst, R. *The Elements of Typographic Style* (Hartley & Marks Publishers, Point Roberts, Washington, USA, 2005).
3. Wong, B. *Nat. Methods* **7**, 863 (2010).
4. Wong, B. *Nat. Methods* **7**, 941 (2010).

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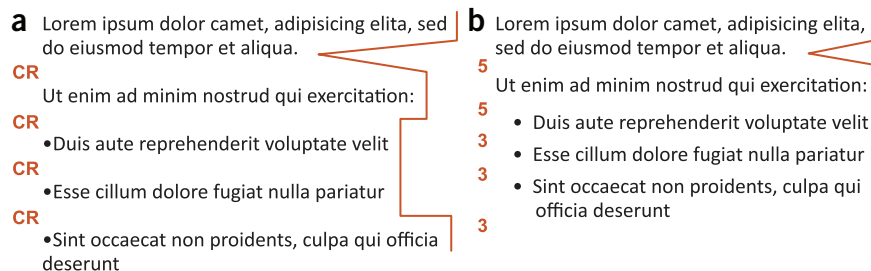
Figure 2 | Spacing can reveal structure and give meaning to text. (**a**) Uniform carriage return (CR) spacing is incongruous with hierarchical content. (**b**) Relative spacing using paragraph formatting expresses relationships in the text. Numbers are 'space after' values given in point sizes.