

**Beginnings:** When you look at the average newsstand or magazine rack, it's hard to imagine that the ability to print color photos is a relatively recent innovation—the early 1940s. The ability to reproduce photos in newspapers and magazines at all has only been around since the 1880s.

Various printing processes, however, have been around for almost 2,000 years. The earliest known books and manuscripts were printed in China. The Chinese used a method called block printing which involved carving the letters and pictures on blocks of wood page by page. The work was meticulous and time consuming. If a wood block split, it meant carving a whole new page.

The event that most influenced contemporary printing occurred in Germany in the early Renaissance. Prior to that time, the only books in Europe were handwritten with quill pens, mostly by Roman Catholic monks. In 1440, a man named Johannes Gutenberg invented a new kind of printing press that used moveable type. It duplicated pages composed from individual letters carved onto smooth blocks of durable hardwood. The blocks were arranged into lines and paragraphs in wooden trays with thin strips of lead between the lines for spacing.

When the desired number of copies had been printed, the letters could be rearranged into new pages and used over and over again. With a substantial number of letters, multiple pages could be composed quickly. If a wood block split, it meant recarving just one new letter instead of the whole page.

Gutenberg's early type alphabets were patterned after the lettering with which he was most familiar, the handwritten manuscripts of the Middle Ages. The style was called Black Letter.

As movable-type printing spread throughout western Europe, the Germanic Black Letter typeface designs were increasingly unsatisfactory because they were hard to read. Although black
letter type faces survive to this day, they are used seldom and sparingly, because they are still hard to read, especially the capital letters.

**A New Look:** Almost as early, craftsmen elsewhere in Europe began to design a new style of alphabet. The earliest was designed in 1470 by Nicolas Jenson, a French printer who lived in Italy. His type face was patterned after letters carved by Roman sculptors on monuments from the days of the empire such as the Arch of Constantine and a 125 foot tall marble column erected 114 A.D. Trajan. Both monuments survive to this day.

The Romans, ever conscious of balance and harmony, decided that letters needed small extensions at the tops and bottoms of strokes to give the letters stability. These extensions were called serifs.

From that time until the mid-1700s, Roman typefaces became the standard in most of Europe. Prominent type designers of the period included Claud Garamond (French), William Caslon and John Baskerville (English), and Giambattista Bodoni (Italian). The designs bearing their names continue to be the foundation of serif typeface design and remain popular today.

**Standardization in Europe:** As printers converted from hand-carved wooden letters to more durable and more easily duplicated cast metal blocks, type manufacture switched from individual printers to type foundries. And, as type face designs proliferated and the population became more literate, selling type to printers was a profitable business. Unfortunately, no two foundries designed type using the same measurements. Printers were bound to whichever foundry made the sizes that fit their composing trays.

In response to ongoing complaints from the tradesmen, King Louis XV of France decreed that a uniform type measurement system would be created and adopted in that country.

The first system was devised by Pierre Simon Fournier in 1735. He defined a point as the smallest unit of measure in the system and determined that there would be 72
A Brief History of Typography

points per inch. The inch at that time, however, was based on the length of the first knuckle on the King's thumb. If a new king had a longer or shorter thumb Louis XV, it was back to square one.

About 50 years later, another French type designer, Didot, refined the system by basing it on the legal foot measure which was permanently standardized by that time. The Fournier/Didot System remains the standard for type measurement in most of Europe.

American Standard: On the other side of the Atlantic Ocean in the 1800s, American type measurement was still in disarray. Foundries used not only European point units, but also a variety of other measuring units with names like nonpareil, minion, bourgeois and cannon. While the everyone in the industry used the same terminology for the measuring units, no two foundries agreed as to exactly what size each unit was. Type from different foundries couldn't be used interchangeably.

The first in a chain of events that led to standardization of type measurement in America was the Great Chicago Fire of 1871. In it, the Marder, Luse and Co. type foundry burned to the ground. When it was rebuilt, the owners decided to make their pica size type molds exactly the same size as that of a Philadelphia foundry, the largest in operation at the time.

In 1874, Marder, Luse and Co. hired Nelson Hawks, a Milwaukee printer, as a junior partner. He discovered that the unit size called a pica was exactly equal to 1/6 inch which also was exactly equal to 12 points. Hawks proposed that all the company's type sizes should be based on a standard pica unit. The proposal was accepted and the system was successful.

Hawks left Marder, Luse and Co. in 1882 after a dispute with the senior partners. They wanted to profit from Hawks' system by licensing it to other foundries. He wanted to give it away to promote uniformity within the industry.

The Great Chicago Fire of 1871
Following his departure, he spent many years meeting with type foundry owners in major cities across the country to promote use of the pica/point system. By the time he died at the age of 86, his system was the standard for type measurement in both the United States and Great Britain. Today it is used globally by designers, type founders and printers.

**Modern Typesetting:** While cast metal type continued to be used for many purposes, it had its limitations. To expand his range of font offerings, a printer had to purchase and store a substantial supply of letter blocks. The same was true for each different size in which it was offered and for bold or italic versions. As a result, each printer tended to stock a relatively small group of fonts and customers chose their printer as much for his type selection as for the quality of his work.

A major innovation in the mid-twentieth century gave designers creative flexibility they had never known before. The new phototypesetting process used typefaces on strips of photographic negative. As each letter was selected on the keyboard, the film strip spooled to the proper position and light showed through the film to expose light-sensitive paper. One strip of film replaced all the metal type for the font. The films were compact and inexpensive enough to allow printers to greatly expand their typeface collections.

Moreover, phototypesetting could perform certain manipulation with type that just weren't possible with metal blocks. For instance, when larger sizes of type were handset, there was no way to adjust the line spacing to accommodate ascenders and descenders. This created the optical illusion that some lines were farther apart than others. Phototypesetting permitted the typesetter to expand or reduce the line spacing for optimal aesthetic appearance.

When we entered the Computer Age about a decade ago, it literally blew the creative lid off...and all but destroyed the established typesetting industry. Designers now can perform a multitude of typographic manipulations in seconds. Some of them formerly required costly and time consuming mechanical processes to execute. Typefaces licensed by foundries are affordable enough for individual designers to collect or, with available software, they can design their own.