

PRINTER'S TYPE IN THE TWENTIETH CENTURY

Richard Southall, *Printer's type in the twentieth century: Manufacturing and design methods*, The British Library, Oak Knoll Press, 2005. ISBN 1-58456

Book review by Sumner Stone

Making letters in the West was a solitary activity until the invention of movable type in the middle of the 15th century. The rather simple toolkit of the scribe who wrote cuneiform was stylus and clay tablet; for Egyptian, Semitic, Greek, and Latin it was pen, ink and papyrus or vellum. The characters written by the scribe were processed by the mind through the hand and onto the writing surface.

Epigraphic work required another step, carving, but even here the letters were generally written or drawn on stone and then engraved, sometimes by the same calligrapher/artist/sulptor – still an intimate act of craftsmanship.

Printing with movable type required a division of labor – more elaborate planning, a more complex process, and multiple sets of hands. Initial drawings may have been produced for the letterforms of early typefaces, but if so we have no physical evidence of them. The punchcutter's minutely engraved steel forms were the thing. These were struck into brass to make tiny jeweler-style molds that required "justifying" before the lead/tin/antimony type was cast, then "dressing" before assembly, coating with ink, and impressing on paper.

In major decisions about style, there were collaborations between publishers and the punchcutters who were the lettermaking artists, e.g. Aldus Manutius and Francesco Griffo; Wafard and François Ambroise Didot. The relative contribution of each member of these duos is difficult to judge. The letters are, nevertheless, clear products of a master's hand, brethren of Renaissance sculpture destined to be reproduced by casting. In the case of the best practitioners such as Griffo, Garamond, Baskerville, the Caslons, and Bodoni they have been potent enough to generate countless offspring.

But, the true industrialization of typesetting developed at the end of the 19th century. The role of type designer moved closer to that of architect. The complexity of new mechanical typesetting machines, the Linotype and the Monotype, required the participation of many people to shepherd a design through the multiple steps necessary for producing final matrices. Technical, social, economic, and internal political constraints became even more significant in the execution of a design. Although there were, generally, drawings, they tended to become, like those of the architect, only one part of a large set of tools and processes that resulted in the final typographic forms.

This is the setting for the two impor-

tant case histories of type-making during the era of mechanical metal composition which are included in Richard Southall's new book, *Printer's type in the twentieth century: Manufacturing and design methods* – Eric Gill's Perpetua, and Jan van Krimpen's Lutetia. They are well chosen, giving us a glimpse of the many vagaries in the industrial production of designs initiated by master craftsmen of letters in this era.

Southall has also conveyed to us a concentrated dose of technical detail about the Monotype typesetting system along with a glimpse of Monotype's internal politics – both backdrops for the staging of these two typographic dramas.

By the middle of the twentieth century there was already another technological transition underway, this time to photo-mechanical typesetting. Here, again, Southall provides us with a deep view into the technology and its implications for creating type. We are treated to what is in many ways the centerpiece of the book – the story of Adrian Frutiger's Univers, a design that for several reasons is destined to become an icon of twentieth century typography. What could be more appropriate for a typeface whose ambitions were captured in its name than to span the (relatively) old and new typesetting technologies. It was initially produced both for Monotype metal and Photon film. Southall's description of the retrofitting and on-site reconstruction that had to be performed in order to accomplish this are instructive to say the least. Frutiger emerges from this story as a true architect of letters.

Phototypesetting had an even shorter lifetime than mechanical metal composition. The computer already loomed in the background as the agent for the actual composition of the text.

Cathode ray tubes and lasers soon provided the means for imaging digitally-stored characters directly. Once again, type-making technology changed drastically. And, once again, Southall provides a comprehensive overview of the technologies along with the issues and opportunities that they presented for making type.

He says in the conclusion of the book, "Nothing is more striking, over the years covered by this survey, than the progressive dematerialization of the means by which texts are prepared for reproduction.... Over the same period the means used to produce the types with which text is composed have followed a similar course.... In some ways the end of the twentieth century has brought the business of type manufacture back almost to where it began."

Letter making has once again become a relatively solitary activity. Witness my own one-person type foundry. The computer as a type

making tool is at once crude and sophisticated. A vast underlying structure of hardware and software have made it easy to produce a font. I have taught classes in which it was accomplished by beginners within a few days. On the other hand, significant skill and experience are still required to make a useful or beautiful font.

The case histories which the book presents from the era of digital type cover a wide spectrum of type-making activity, from the investigation of highly abstract kinds of character representation to the minute details of pushing pixels.

The details of making my own all-purpose Stone family provide a glimpse of the beginning of commercial type design and production in the desktop era. There were initial drawings for these designs, but they were followed by an enormous amount of design work using tools for drawing and design on the computer.

Donald Knuth's Metafont programming language and his Computer Modern metafont are an exploration of parameterization in the representation of typeface designs by one of the world's leading computer scientists. Here drawings do not play a part. Shapes are concocted from code in an abstract representation which can then be manipulated by the programmer.

Euler, a typeface designed by Hermann Zapf is also part of the Metafont story. It was designed in conjunction with the American Mathematical Society specifically for setting mathematical and scientific material. The story of Euler is a lesson in the use of Metafont to digitize the drawings made with traditional tools by one of the twentieth century's best known designers.

The Colorado project, in which Southall himself was heavily involved, was a multi-year undertaking to produce typefaces designed by Ladislav Mandel for setting phone books. Phone books provide a venue in which type design can be demonstrated to have a clear practical value. Savings of a small amount of space on each page of a phone book, without sacrificing legibility, can save millions of dollars in printing and production costs. The design and production of the Colorado fonts was carried out in a highly constrained technical environment which required the participation of the designer and the producers at a pixel per pixel level.

These glimpses of constructing the design of roman type in the age of the computer are insightful and thought provoking.

The twentieth century was a time of intense experimentation in the reproduction of text. *Printer's type in the twentieth century* is a carefully guided tour by a deeply thoughtful and knowledgeable insider through the intricacies of the period.

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