INTRODUCTION

Type is all around us, in everything we read, from product packaging in the grocery store to television commercials, from greeting cards, books, and magazines to movie credits and storefront signs. Learning to read and write the alphabet is one of the first things we are taught in school, and that process often begins before nursery school with television shows and videos intended for the hungry and curious minds of two- and three-year-olds.

Type and printed matter not only communicate information to us but also influence decisions we make on a daily basis. Whether we realize it or not, type and the way it appears affects which CD or book cover catches our eyes, which detergent we think might make the whites whiter, and which movie seems like it might be the scariest or most romantic. Much of this process goes on unconsciously, which is why the art and craft of typography is so invisible to the average person. But its unseen nature by no means diminishes the importance and influence type has on the quality and substance of our daily lives.

Type Rules! is intended for anyone interested in typography, be they a professional graphic designer, an instructor, or a novice computer user. There is something here for everyone, whether you know a little or a lot about type. This book does not have to be read front to back; you may thumb through the chapters and stop wherever something sparks your interest, or you may read it chapter after chapter, cover to cover. This book will stimulate and satisfy the neophyte's interest in type as well as offer advanced information and techniques to professional graphic designers who want to improve their work.

Typography is not taught (or taught effectively, in my experience) in every design school, as it should be. When it is, the focus is often on typographic design in its broadest sense, not the nuts and bolts of how to set type tastefully and effectively; addressing this void is my primary objective. This book is intended to help you learn how to communicate effectively and professionally with type, no matter what the medium, device, or platform.

* * * * *

I can trace my interest in type and letterforms back to the posters I drew for my junior high school elections. I remember spending hours on the lettering: measuring out the strokes of each character, the spaces between each letter, and the spaces between the lines. Those posters would appear extremely crude by professional standards, but my interest in the geometry of letters and the relationships between their positive and negative spaces was evident even then.

After studying music and then fine art in college, I was lucky enough to land a seat in Ed Benguiat's lettering class at the School of Visual Arts in New York City; my life was never the same again. Ed instilled in me the passion for type that I have today and with which I will attempt to infect you. The bad news is that if I succeed, there is really no cure for it; the good news is that "catching it" will open your eyes to many exciting things you have never seen before and allow you to enjoy and appreciate the world around you in a completely new way.

"The story of
type doesn't
begin with type
per se, but with
the beginning of
mankind and
civilization.
Type has only
existed for
about 55 years,

A BRIEF HISTORY OF TYPE

The story of type doesn't begin with type per se, rather it starts with the beginning of mankind and civilization. Type has only existed for about 560 years, but its beginnings are rooted in the life of the caveman himself, as it was his developing needs and habits that led civilization on a path toward the evolution of the alphabet and subsequently the invention of type and printing. It is certainly possible to learn to use type effectively and tastefully without knowing its roots, but to fully understand and appreciate type today, it is important to know something of the past.

Milestones in the history of type are highlighted throughout this chapter. Some of the dates, chronology, and details vary from source to source, but the spirit of the events remains the same. These events have taken mankind on a glorious ride from the crudest cave drawings to the bits and bytes of type in the digital age.

SOUNDS TO SYMBOLS

For many years, early humans communicated purely with sound. Verbal language—which is heard and not seen as opposed to visual language (or visible language, as it is often called)—has many limitations: it is gone the instant it is spoken and heard, and it is therefore temporary. Stories, history, and other information could not be passed from generation to generation in a permanent way, only by direct word of mouth.

The earliest attempts to record stories and ideas were through cave drawings; the first known is dated around 25,000 BC. These drawings, or pictographs, were very simple representations of people, places, and things, and for this reason, they were relatively easy to learn and understand. Although this was a very simple form of written communication, it was certainly more permanent than sound, and much of it has survived the ravages of time and still exists today. (Fig. 1–1)

Figure 1–1 This Aboriginal rock painting (c. 13,000 BC), located in a cave in Queensland, Australia, is a distinctive example of the earliest form of written communication. Photograph courtesy of Axel Poignant Archive.

Around 3000 BC the Sumerians developed cuneiform, a writing system that consisted of wedge-shaped forms carved into clay tablets and other hard surfaces. Cuneiform evolved from the pictographs that the Sumerians had adapted earlier and was one of the first writing systems to read left to right. Its wedge-shaped forms were the result of the use of a stylus, a writing tool whose straight edges and triangular corners produced these geometric forms.

As time passed, there was a need for more symbols to represent ideas and other concepts in addition to just "things." This led to the development of ideograms, or symbols, to represent ideas and actions. This new, expanded system was more difficult for the masses to understand, as it was not purely representational but more symbolic in nature. This separated society into two groups: those who could understand this system and those who could not. The spoken and written language had become very different from each other, requiring the learning of two unrelated systems of communication.

As society became more complex, the existing writing system did not meet its increasing needs and was no longer satisfactory; something more was needed. This need subsequently led to the development of letter symbols that, when put together, represented words.

The Phoenicians, a society of traders and skilled craftsmen on the eastern coast of the Mediterranean Sea, took written language a giant step forward from the pictograms and

PHOENICIAN	NAME	PHONETIC NAME	EARLY GREEK	CLASSICAL GREEK	NAME	GREEK	ENGLISH
𐤀	aleph		Α	Α	alpha	Α α	*a*
𐤁	beth	*b*	Β	Β	beta	Β β	*b*
𐤂	gimel	*g*	Γ	Γ	gamma	Γ γ	*g*
𐤃	daleth	*d*	Δ	Δ	delta	Δ δ	*d*
𐤄	he	*h*	Ε	Ε	epsilon	Ε ε	*e*
𐤅	waw	*w*	Ϝ		digamma		
𐤆	zayin	*z*	Ζ	Ζ	zeta	Ζ ζ	*z*
𐤇	ḥeth	*ḥ*	Η	Η	eta	Η η	*ê*
𐤈	teth	*ṭ*	Θ	Θ	theta	Θ θ	*th*
𐤉	yod	*y*	Ι	Ι	iota	Ι ι	*i*
𐤊	kaph	*k*	Κ	Κ	kappa	Κ κ	*k*
𐤋	lamed	*l*	Λ	Λ	lambda	Λ λ	*l*
𐤌	mem	*m*	Μ	Μ	mu	Μ μ	*m*
𐤍	nun	*n*	Ν	Ν	nu	Ν ν	*n*
𐤎	samekh	*s*			xi	Ξ ξ	*x*
𐤏	ayin		Ο	Ο	omicron	Ο ο	*o*
𐤐	pe	*p*	Π	Π	pi	Π π	*p*
𐤑	sade	*s*	Μ		san		
𐤒	qoph	*q*	Ϙ		qoppa		
𐤓	reš	*r*	Ρ	Ρ	rho	Ρ ρ	*r*
𐤔	šin	*sh/s*	Σ	Σ	sigma	Σ σς	*s*
𐤕	taw	*t*	Τ		tau	Τ τ	*t*
				Υ	upsilon	Υ υ	*u, y*
					phi	Φ φ	*ph*
				Χ	chi	Χ χ	*kh*
					psi	Ψ ψ	*ps*
				Ω	omega	Ω ω	*ô*

Figure 1–2 This chart shows the evolution of the Greek alphabet, which was originally adapted from the twenty-two-character, all-consonant Phoenician alphabet. The Greeks added several new characters as well as vowels.

Figure 1–3 The Greek writing system employed boustrophedon ("as the ox plows"), a system in which one reads from left to right on one line and right to left on the next. Notice how the letters are reversed from one line to another.

ideograms of the Sumerians. Around 1000 BC the Phoenicians developed twenty-two symbols that corresponded to the twenty-two key sounds of their language. Their idea was to connect these symbols (representing sounds) to imitate spoken words, thus eliminating the need for memorization of hundreds of unrelated symbols. This was the first attempt to connect the written language with the spoken word; we now call this phonetics. (Fig. 1–2)

Around 800 BC, the Greeks embraced the Phoenician invention and took it a step further by adding vowels and naming the symbols. They also employed boustrophedon (meaning "as the ox plows"), a system in which one reads from left to right on one line and right to left on the next. (Fig. 1–3)

Much later, the Romans, a highly developed society, made further changes by adding more letters, bringing this writing system even closer to our modern-day alphabet. They made other advances as well. The Roman scribes, in their attempt to write more quickly and efficiently, began joining and slanting letters in harmony with the natural motion of the hand. In addition, they added ascenders and descenders, as well as condensed forms of the alphabet in order to conserve space.

Figure 1–4 (Upper) The lettering at the base of Trajan's Column, dated 114 AD, one of the best-known and most beautiful examples of Roman letterforms. (Lower) Close-up of the inscription. Photographs courtesy of Bill Thayer & Graphion.

One of the Romans' most important contributions to early writing was Trajan's Column, dated 114 AD. It showcases one of the most beautiful and best-known examples of Roman letterforms. The lettering, which is incised at the base of the column, is a classical, elegant, and exquisitely balanced combination of form, proportion, and simplicity. It has been, and continues to be, a powerful inspiration to type designers throughout the world. (Fig. 1–4 and Fig. 1–5)

Special mention should be made here of the tremendous contributions to the art of writing by the Chinese and by other Asian cultures. Although their writing systems are not alphabetic but rather consist of thousands of symbols, their extreme artistry, subtlety of form, and mastery of the art of calligraphy have been a continuous source of beauty, poetic elegance, and inspiration to all who come in contact with them.

GUTENBERG AND MOVABLE TYPE

Until the fifteenth century, all books were hand copied by scribes, as exemplified by the many breathtakingly beautiful and exquisitely written and illustrated manuscripts created for religious purposes in monasteries.

In 1448 that all changed with the birth of printing, after which the world would never be quite the same. Johannes Gutenberg, a goldsmith from Mainz, Germany, is credited with the invention of movable type. (There is some controversy about this, as some people credit Laurens Coster of Haarlem in the Netherlands with its invention; others credit Pi Sheng of China with inventing movable type in 1045, more than four hundred years earlier.) Gutenberg accomplished his invention of movable type by carving the characters of the alphabet in relief onto metal punches, which were then driven into other pieces of metal called matrices. Molten metal was poured into these matrices, making the actual type, which was identical to the original relief punches. The type was then fit into printing presses that were capable of printing multiple images in a very short time. This was referred to as letterpress printing, and its distinct characteristic is that each character makes a slight impression on the paper, giving it a rich, tactile quality. (Fig. 1–6)

Figure 1–6 Engraved portrait of Johannes Gutenberg from Andre Thevet's Les vrais portraits et vie des hommes*, Paris, 1584. Courtesy of Huntington Library.*

Early type design imitated the pen-drawn styles of the scribes. Gutenberg's first typeface was in the style of the heavy blackletter popular in Germany at that time. It contained over three hundred characters, including ligatures and abbreviations. As the popularity of printing became more widespread, a variety of typestyles emerged based on popular handwriting styles of that time, including those favored by Italian humanist scholars. Nicolas Jenson and Aldus Manutius were two printers of the time who designed typestyles that were influential and inspirational, even to this day.

Gutenberg went on to print the Bible, the first book printed from movable type. His invention truly changed the world, as it no longer was necessary for scribes to spend months and years (and sometimes a lifetime) hand copying books. (Fig. 1–7 and Fig. 1–8)

This historical milestone—which enabled history, news, religious writings, and other kinds of information to be circulated more easily and freely—brought forth many other changes, such as improvements in printing presses, papers, and inks. It also inspired many others to design typefaces to make use of this transformational invention.

At this point in history, it is important to note the influence that the technology had on the look of type. The new printing technology, for all its exciting advances and the many beautiful and functional typefaces that were inspired by it, had its limitations, particularly when we look back from where we are now. Because each character was on a separate piece of metal, the

Figure 1–7 A spread from the Gutenberg Bible (opening of 1 Kings), the first book printed from movable type. Mainz, Germany, 1450–55. Courtesy of Huntington Library.

space between the particular characters could not easily be adjusted to create a more even type color unless the letter combination was designed as a ligature and was combined on one piece of type. Additionally, line spacing could not be reduced beyond "setting solid," which allowed space for ascenders and descenders. This meant that an all-cap setting had to have a lot of line spacing even if there were no ascenders and descenders. This created a very open, letterspaced look that was characteristic of that time and that is still desired by some for its historical accuracy and its readability.

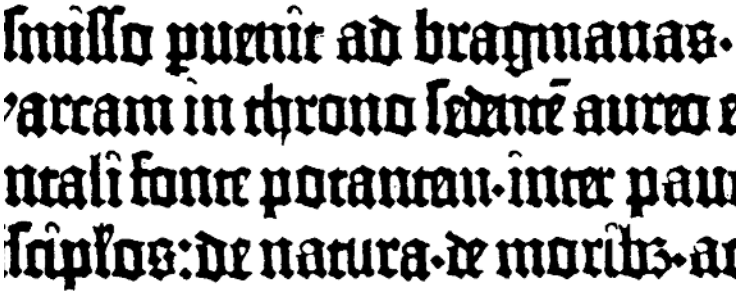


Figure 1–8 Close-up of the blackletter typeface used to set the Gutenberg Bible.

THE INDUSTRIAL REVOLUTION AND THE MECHANIZATION OF TYPE

The development of new and improved presses continued through the centuries, albeit slowly. But it wasn't until the Industrial Revolution in the late nineteenth and early twentieth centuries that groundbreaking improvements in typesetting equipment were achieved. In addition to the lack of speed and reliability of hand-set-metal-type composition (remember, every letter of every word had to be set by hand), another of its significant limitations was the inability to justify type automatically, that is, without the manual insertion of metal spaces between the letters. The Linotype machine, invented by Ottmar Mergenthaler in the 1880s, as well as other typesetting machines that followed, including one from Monotype, sped up the printing process immensely (and included the ability to justify text) and finally eliminated the need to set type by hand one letter at a time. The greatly increased speed that resulted from the replacement of hand composition by machine composition had a major effect on newspapers, allowing them to extend their deadlines to print late-breaking news. (Fig. 1–9 through Fig. 1–13)

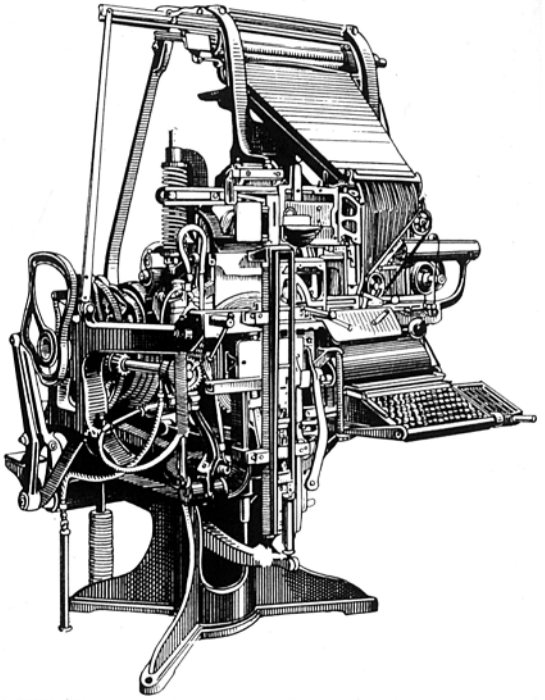


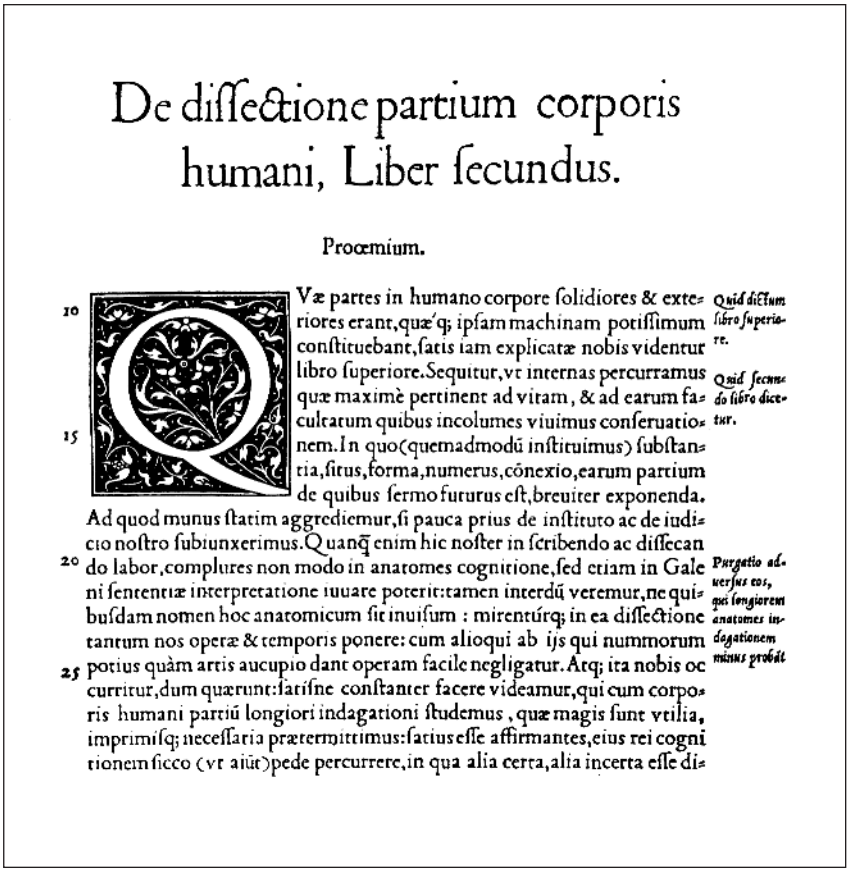
Figure 1–9 Linotype machine invented by Ottmar Mergenthaler.

Along with these groundbreaking developments in printing presses came the invention of a pantographic punch cutter in 1885 by Linn Boyd Benton. This device automated the process of creating punches with its ability to scale to any size a single master drawing, which could then be used to make the matrices. This eliminated the need to draw each and every size of type by hand, considerably speeding up the process of making type.

These typesetting innovations went hand in hand with other advancements taking place in the printing industry, such as offset lithography, a photographic process that gradually replaced letterpress printing. (Fig. 1–14, Fig. 1–15, and Fig. 1–16)

PHOTOCOMPOSITION

Technology took a huge leap ahead in the mid-1950s with the development of phototypesetting. Several companies, the most prominent ones being Mergenthaler and Intertype, developed and improved a photographic process of setting type whereby typefaces were made into negatives through which light was focused onto photosensitive paper, producing an image of the type. The improvements over hot-metal typesetting were qualitative as well as quantitative. Typesetting could now be done electronically rather than mechanically, setting over five hundred characters per second compared to



De diſſectione partium corporis humani, Liber ſecundus.

Procœmium.

QVæ partes in humano corpore ſolidiores & exteriores erant, quæq; ipſam machinam potiſſimum conſtituebant, ſatis iam explicatæ nobis videntur libro ſuperiore. Sequitur, vt internas percurramus quæ maximè pertinent ad vitam, & ad earum facultatum quibus incolumes viuimus conſeruationem. In quo (quemadmodũ inſtituimus) ſubſtantia, ſitus, forma, numerus, cõnexio, earum partium de quibus ſermo futurus eſt, breuiter exponenda. Ad quod munus ſtatim aggrediemur, ſi pauca prius de inſtituto ac de iudicio noſtro ſubiunxerimus. Quanq̃ enim hic noſter in ſcribendo ac diſſecando labor, complures non modo in anatomes cognitione, ſed etiam in Galeni ſententiæ interpretatione iuuare poterit: tamen interdũ veremur, ne quibuſdam nomen hoc anatomicum ſit inuiſum: mirentúrq; in ea diſſectione tantum nos operæ & temporis ponere: cum alioqui ab ijs qui nummorum potius quàm artis aucupio dant operam facile negligatur. Atq; ita nobis occurritur, dum quærunt: ſatisne conſtanter facere videamur, qui cum corporis humani partiũ longiori indagationi ſtudemus, quæ magis ſunt vtilia, imprimiſq; neceſſaria prætermittimus: ſatius eſſe affirmantes, eius rei cognitionem ſicco (vt aiũt) pede percurrere, in qua alia certa, alia incerta eſſe di-

Quid dictum libro ſuperiore.

Quid ſecundo libro dicetur.

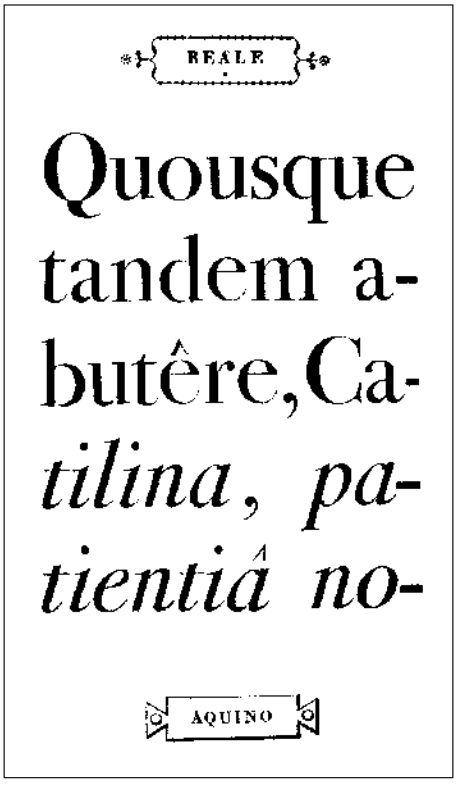
Purgatio aduerſus eos, qui longiorem anatomes indagationem minus probãt

Figure 1–10 Roman type by Claude Garamond, from the print shop of Simon de Colines, Paris, 1545.

DIT
ILES
GARES

Figure 1–11 Sample of Firmin Didot types cut around 1800.

Figure 1–12 Actual Bodoni punches. Carved punches were driven into other pieces of metal called matrices. Molten metal was then poured into these matrices, making the actual type. Courtesy of Sumner Stone.



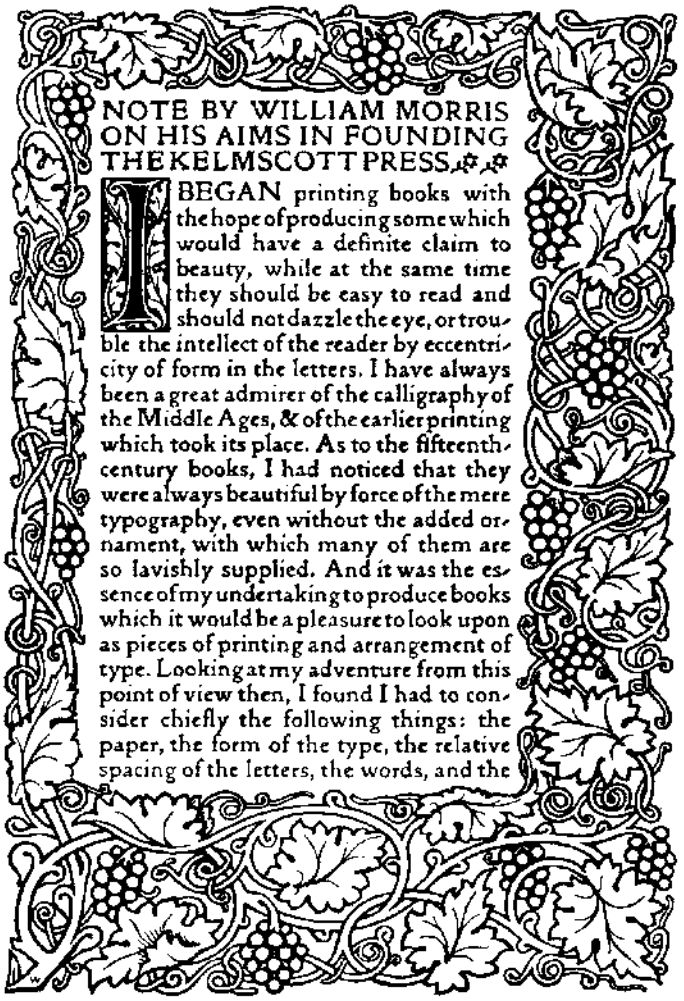
REALE

Quousque tandem a-
butêre, Ca-
tilina, pa-
tientiâ no-

AQUINO

Figure 1–13 The grace and elegance of the type of Giambattista Bodoni is evident in this page from the second edition of Manuale tipografico *(1818), which is considered one of the greatest type specimen books ever printed.*

perhaps five or six previously, and the equipment took up much less space. Images became sharp and crisp, corrections could be made electronically, and most importantly, there was now complete flexibility with regard to intermixing styles, weights, and sizes; letter spacing and kerning; line spacing and word spacing; hyphenation and justification; overlapping; and other photographic special effects. The elimination of so many restrictions in the typesetting process had a major effect on typography and typographic design.


NOTE BY WILLIAM MORRIS ON HIS AIMS IN FOUNDING THE KELMSCOTT PRESS

I BEGAN printing books with the hope of producing some which would have a definite claim to beauty, while at the same time they should be easy to read and should not dazzle the eye, or trouble the intellect of the reader by eccentricity of form in the letters. I have always been a great admirer of the calligraphy of the Middle Ages, & of the earlier printing which took its place. As to the fifteenth-century books, I had noticed that they were always beautiful by force of the mere typography, even without the added ornament, with which many of them are so lavishly supplied. And it was the essence of my undertaking to produce books which it would be a pleasure to look upon as pieces of printing and arrangement of type. Looking at my adventure from this point of view then, I found I had to consider chiefly the following things: the paper, the form of the type, the relative spacing of the letters, the words, and the

Figure 1–14 Golden Type and page border by William Morris. From a note by William Morris on his aims in founding the Kelmscott Press. Source: Kelmscott Press, 1898.

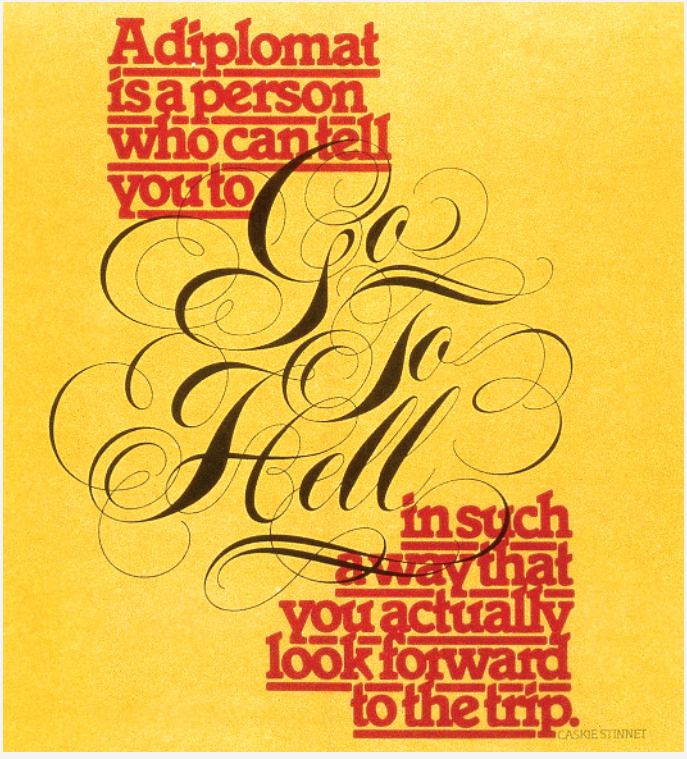
Figure 1–15 This cover design by Herbert Bayer illustrates the influence of the Bauhaus, c. 1923. (Original: red and blue letters on a black background.)

Figure 1–16 Typeface design by Herbert Bayer, 1925. This Bauhaus design is a minimalist, sans serif unicase typeface.

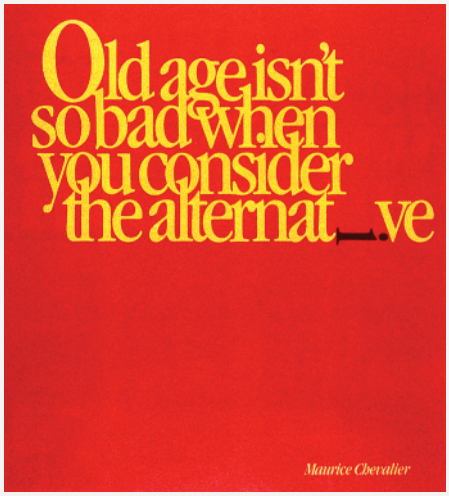
Herb Lubalin and Expressive Typography

One of the most prominent figures in typography and typographic design in the 1960s and 1970s was Herb Lubalin (1918–1981), a hot, innovative, and fearless New York designer. His groundbreaking and adventurous use of type, particularly in the publication *U&lc* (designed and edited by Lubalin and published by the International Typeface Corporation) influenced designers around the globe. His work incorporated tight letter and line spacing, extreme kerning with acute attention to every typographic detail, and the overall use of type and innovative new typefaces in ways never before seen. In addition, he handled type in an illustrative way seldom done before, either by employing typographic forms as graphic elements of the design or by creating typographic puns.

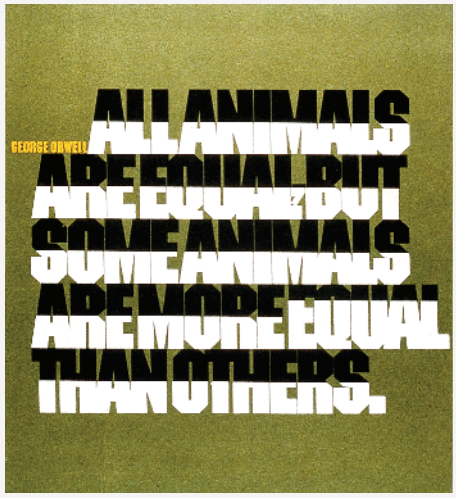
The work of Herb Lubalin broke with tradition in every possible way. He created these three pieces for U&lc*, the typographic journal published by International Typeface Corporation. As the editor and designer of* U&lc*, he was able to present his innovative typographic ideas in the perfect vehicle.*



This piece combines a bold typeface set with tight letter and line spacing with a very elegant hand-lettered script to illustrate a point typographically.

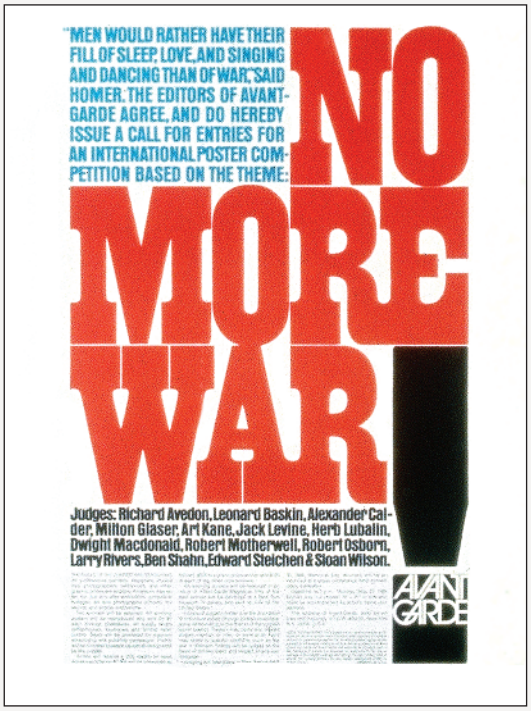


The overlapping ascenders and descenders of this piece take a back seat to the dramatic effect of the i *lying on its side. The message is visual as well as editorial.*



The message expressed here with the use of very tightly set caps is made even stronger by the placement of black-and-white color breaks, especially the word equal*. Courtesy of International Typeface Corporation.*

Why did he do this? Because he could—these were typographic capabilities not possible prior to the arrival of phototypesetting. The typographic trends initiated by Herb Lubalin and imitated by countless others, particularly the emphasis on tight type at the occasional expense of readability, were a reaction to the restrictions of the hot-metal typesetting that preceded them. This style has its critics (as well as its admirers) today, but it is important to understand how and why it came about to appreciate its tremendous importance and influence on the evolution of type and typographic design.



An announcement of an antiwar poster contest by Avant Garde *magazine. Herb Lubalin's use of color, tight type, and a very deliberate type alignment (including hung punctuation) creates a jigsaw puzzle effect in this powerful piece. Courtesy of Rhoda S. Lubalin (estate of Herb Lubalin).*

This award-winning logo designed for a never-published magazine not only states the name but illustrates it as well. Herb Lubalin considered the suggestion of a fetus inside the logo one of his finest typographic designs. Courtesy of Rhoda S. Lubalin (estate of Herb Lubalin).

INTO THE DIGITAL AGE

The twentieth century continued to bring advances in typesetting technology at breakneck speed. Phototypesetting had been in use little more than two decades when digital typesetting methods took hold in the 1980s. Because it was so expensive and new, only professional typographers in type shops adopted this electronic technology. The new digital typesetters were capable of composing type and integrating photos and artwork and layout at one workstation. Digital color separation and retouching, stripping, and plate-making were to follow shortly. At this point, typesetting was still in the capable hands of professionals who spent many years learning the craft and trade of typography. This was all to change in the next few years.

In 1985, the world was irreversibly altered with the introduction of the Macintosh (Mac) computer, the first affordable "desktop computer" developed by Apple under the leadership of Steve Jobs. Other manufacturers, led by IBM, were developing versions of their own, which came to be known as personal computers (PCs). These PCs had different operating systems than

Macs but the same affordability and focus. Now it was possible for virtually anyone to set type on a computer as desktop publishing blazed the path toward desktop typography.

This new, exciting, and increasingly more affordable technology was improving at every turn. At the same time, page-layout applications, such as PageMaker and QuarkXPress, as well as the more illustration-oriented programs, such as Adobe Illustrator and Aldus Freehand, were being developed. As the memory and speed of desktop computers increased, so did the features and capabilities of these programs, eventually including the ability to set and fine-tune type. Simultaneously, companies and foundries such as International Typeface Corporation (ITC), Adobe, Linotype, Compugraphics, and Berthold shifted their focus to developing digital versions of their existing typeface libraries as well as releasing new and different designs. Smaller, more specialized foundries such as FontBureau, Emigre, T-22, and FontShop began to emerge and introduced some very innovative and cutting-edge type designs. The introduction of type design programs such as Letraset FontStudio, Macromedia Fontographer, and Ikarus-M gave anyone the tools to create fonts. These developments led to the democratization of type design and contributed to the many thousands of fonts commercially available today. The quality of these typefaces ranged from very high to extremely poor, leaving the daunting task of deciphering which was which to the user.

Graphic design production methods were changing in dramatic ways as well. Pasteups and mechanicals (the manual creation of camera-ready artwork using paper proofs and wax or rubber cement) were being replaced by digital page makeup, which was cheaper, faster, and more flexible. Type no longer needed to be sent out to expensive type shops. Instead, it was typeset by graphic designers and production artists, as well as administrative assistants.

The problem with this new way of setting type is why a book like this exists. Setting good typography is an art and craft that in the past took many years to master; highly skilled professionals devoted their careers to developing such mastery. Today, however, many if not most who work with type do not have adequate training in the fundamentals, including many graphic designers who are either self-taught or did not learn the basic principles of setting professional-level typography in their education (although more and more schools are addressing this important subject). The unfortunate result of this situation has been the proliferation of poor typography.

Another contributing factor to this problem was the fact that the earliest versions of page-layout programs did not have the capability to fine-tune type. Thankfully, today's updated software programs are much more sophisticated and robust, and are quite capable of creating excellent typography, but they still require a skilled and knowledgeable person to achieve this. The computer is just a tool; it is a means to an end, not an end in itself. Many designers and production artists are not versed in the factors that contribute to the creation of fine typography, and they are not familiar with the features in their design software that can achieve this. With practice, however, you will acquire the eye necessary to see type as a professional does and the ability and motivation to create it.

Notable Type Designers

Over the centuries, type designers were extremely influential in shaping the printed word. The sixteenth century brought us the beautiful proportions of the work of Claude Garamond and Robert Granjon. In the next hundred years, the balanced designs and readable typestyles of William Caslon emerged. With their elegant and graceful designs, Giambattista Bodoni and Firmin Didot were tremendously influential in the eighteenth century. The nineteenth century gave way to the oldstyle characteristics of William Morris's work, and the twentieth century brought us many designs inspired by the geometric style of Bauhaus. Many thousands of typeface styles available to us today are in large part due to the originality, artistry, and craftsmanship of five centuries of talented printers and designers, a handful of which are highlighted in the following group of some of the most influential and important type designers of all time.

Claude Garamond (1480–1561) was a highly regarded French typefounder specializing in type for the publishing industry. He was unsurpassed as a classical designer and craftsman, and he was considered one of the best punch cutters of his day.

Garamond types are considered the greatest of the sixteenth century. His roman and italic types were considered groundbreaking designs and a primary factor in establishing the roman letter as standard, taking the place of gothic or blackletter, which were the standards of the time.

The Garamond typeface (or some of its many versions) remains one of today's most popular typefaces because of its elegance, warmth, and legibility. It is important to note that some of the Garamonds available today are interpretations of the original types.

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Garamond

William Caslon (1692–1766) was a successful British engraver, punch cutter, typefounder, and typeface designer. He began as an engraver of gunlocks in London and then set up his own foundry. His types were instantly popular with printers and clients alike because of their distinctiveness, grace, and beauty. They quickly became the new standard in British newspapers and were used for the Declaration of Independence and the Constitution of the United States.

The popularity of Caslon typestyles has waxed and waned over the years, but today they are considered some of the most beautiful and functional of typefaces, and they have probably been imitated, copied, revived, and reissued more than any other typeface.

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ITC Founder's Caslon

John Baskerville (1706–75) was an unconventional British printer, calligrapher, typefounder, stonecutter, and writing master. His claim to fame is his Baskerville typeface, which is one of the earliest of the transitional classifications. His perfectionist tendencies led him to make major innovations in printing presses, ink, and papermaking that, when combined with his type designs, led to some of the most exquisite examples of printing of that era.

Unlike William Caslon, John Baskerville was underappreciated until many years after his death, when he was recognized for his contribution to English printing and typefounding. Today his Baskerville typeface is one of the most widely used and influential serif typefaces. His work truly changed the course of printing history.

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Baskerville

Giambattista Bodoni (1740–1813) was a much-celebrated Italian printer, engraver, publisher, and typographer. He is considered to be the father of the modern typestyle, which is characterized by flat serifs and high contrast between thick and (often hairline) thin strokes. Bodoni, the son of a printer, has been referred to as "the king of typographers and the typographer of kings." He first served as an apprentice at the Vatican and was later appointed printer to the court of Parma in 1768, after which he opened his own foundry.

The typeface that retained the Bodoni name and appeared in 1790 was actually one of hundreds that he designed, most of which appeared in his *Manuale tipografico* (1788), which is a statement of his design philosophy. This two-volume work contains over a hundred roman and italic typefaces of his own design, including roman, Greek, gothic, Asian, and Russian fonts, as well as lines, borders, symbols, numbers, and musical notation.

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ITC Bodoni Twelve

Frederic W. Goudy (1865–1947) was a prolific American type designer and typographer, publisher, and teacher. His typefaces, which he designed for a variety of publishing houses and companies, are considered to have a uniquely warm, recognizable, and somewhat "American" style.

Goudy designed over a hundred typefaces in his career, some of the most notable being Copperplate, Kennerley, Goudy Old Style, Deepdene, Remington Typewriter, Californian, and Bulmer. Goudy is also responsible for Californian by Monotype as well as its digital companion, ITC Berkeley Oldstyle, both of which originated from the custom work he did for the University of California Press.

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Goudy Old Style

Morris Fuller Benton (1872–1948) was an influential American typeface designer who headed the design department of the American Type Founders (ATF) from 1900 to 1937. During that time he was responsible for introducing a great many type designs into common usage by either reviving important designs (ATF Bodoni, Souvenir), expanding existing families (Goudy Old Style, Cheltenham), or creating brand-new designs (Hobo, Bank Gothic, and Broadway), including many of the very popular neogrotesque sans serifs (Franklin Gothic, Alternate Gothic, News Gothic, Agency Gothic). In total, he developed over two hundred alphabets.

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Franklin Gothic

Oswald Bruce Cooper (1879–1940) was an American type designer, lettering artist, graphic designer, and educator. His entrée into the field of typography was when he studied lettering with Frederick Goudy at the Frank Holme School of Illustration. He did so well at lettering that under Goudy's guidance and mentorship, he became a teacher and director at the school.

In 1904 Cooper (also known as Oz Cooper) and Fred Bertsch, one of his students, formed Bertsch & Cooper. This studio became known for their hand lettering and eventually grew to become a full-service typesetting and design studio with over fifty employees. Cooper went on to design complete typefaces, many based on some of the hand lettering he did for clients. They include Oz Poster, Maiandra, ITC Ozwald, ITC Highlander, as well as the extremely popular Cooper Black.

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Cooper Black

William Addison Dwiggins (1880–1956) was a noted American type designer, book designer, illustrator, calligrapher, printer, and wood-carver. He studied lettering with Frederick Goudy at the Frank Holme School of Illustration and went on to have a diverse career that included a broad range of graphic interests. In 1917 he was appointed acting director of Harvard University Press, and he founded the Society of Calligraphers in Boston a few years later.

In 1924 he began designing typefaces exclusively for Linotype composition. During this time he designed his most popular series, Electra and Caledonia, as well as Metro, Eldorado, and Falcon. In 1929 Dwiggins was awarded his profession's highest honor, the AIGA Medal.

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Parkinson Electra

Eric Gill (1882–1940) was a very colorful (and controversial) British stone carver, type designer, sculptor, illustrator, and printmaker, who gained notoriety for his opinionated writings on everything from art and politics to sex and religion. His most notable designs are Perpetua and Joanna, which he used to hand-set his book *An Essay on Typography* (1931). His best-known design is Gill Sans, which was based on lettering designed by Edward Johnston for the London Underground signage.

The type and ornaments Gill was commissioned to design for the Golden Cockerel Press were acquired by ITC after Gill's death and released as ITC Golden Cockerel.

Joanna

Stanley Morison (1889–1967) was a notable British typographer, historian, and designer. In 1922 Morison founded the Fleuron Society, which was dedicated to typography. He then became a typographic consultant for Cambridge University, the *Times* (a London daily newspaper), and the Monotype Corporation, where he was instrumental in the revival of such historic types as Baskerville and Bembo.

Morison is probably best known for developing (along with Victor Lardent) the very readable Times New Roman typeface for the *Times*, which commissioned him to design a replacement for Times Old Roman after he criticized the poor quality of the paper's printing during his tenure as their typographic consultant.

Times New Roman

Hermann Zapf (1918–) is the highly regarded German type designer, calligrapher, writer, and lecturer responsible for many of the twentieth century's most important fonts. His type designs include Palatino, Optima, and Melior, as well as Aldus, Medici Script, and the familiar Zapf Chancery and Zapf Dingbats, both of which have been popularized by desktop publishing.

Zapf has always embraced new technology and has designed type for a range of printing and typesetting technologies, including hot metal, phototypesetting, and digital typography. He was professor at the Rochester Institute of Technology from 1976 to 1987 and continues to serve as a consultant to Linotype.

Optima

Edward Benguiat (1927–) is a prolific and charismatic American typeface designer and lettering artist. He has designed over six hundred typefaces, including ITC Souvenir, ITC Avant Garde Gothic, ITC Tiffany, ITC Bookman, ITC Korinna, ITC Benguiat, ITC Barcelona, ITC Modern 216, ITC Caslon 224, ITC Panache, ITC Century Handtooled, ITC Cheltenham Handtooled, ITC Garamond Handtooled, and ITC Edwardian Script. In addition to designing commercial typefaces, he has designed type and logos for many publications including the *New York Times*, the *Star Ledger, Esquire, New York Magazine, Reader's Digest*, and *Playboy*, as well as for many major corporations such as AT&T, A&E, Ford Motor Company, and Estée Lauder.

Benguiat's association and involvement with International Typeface Corporation, *U&lc,* and Photo-Lettering Inc. have had a tremendous impact on the type community. To the delight of his students, he still teaches at the School of Visual Arts in New York City, as he has been for almost forty years.

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ITC Benguiat

Adrian Frutiger (1928–) is one of the most important and influential typographers of the twentieth century. Born in Switzerland, he became interested in handwriting and lettering at an early age. As a teen, he apprenticed as a compositor and then went on to study calligraphy, sculpture, and graphic design. Frutiger first worked for the noted French typefoundry, Deberny & Peignot, and in 1962 he opened his own design studio.

Frutiger designed some of the most notable typeface families still popular today, including Univers, Avenir, and Frutiger, as well as Egyptienne, Serifa, Glypha, and Janson. Frutiger's work spans several type technologies, from metal type to phototypesetting to digital. He has been personally involved in the expansion and reworking of Univers, Frutiger, and Avenir to make them more useful and better performing designs for today's digital technology.

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Univers

Matthew Carter (1937–) is a highly regarded British type designer who resides in the United States. Carter has many years of experience designing type for all technologies—first at Linotype, then at Bitstream Inc. (the digital foundry he cofounded), and currently as principal of Carter & Cone Type Inc. Carter's commercial work includes Snell Roundhand, ITC Galliard, Miller, Shelley, ITC Charter, Mantinia, Sophia, Bell Centennial (for U.S. telephone directories), and the widely known screen fonts Verdana, Georgia, and Tahoma. He has produced type for Apple, Microsoft, *Time, Newsweek, Wired, U.S. News & World Report, Sports Illustrated,*

the *Washington Post*, and the Walker Art Center.

Carter has received numerous awards for his contributions to typography and the printing industry and remains in great demand for custom typefaces for newspapers, magazines, corporations, and university presses.

ITC Galliard

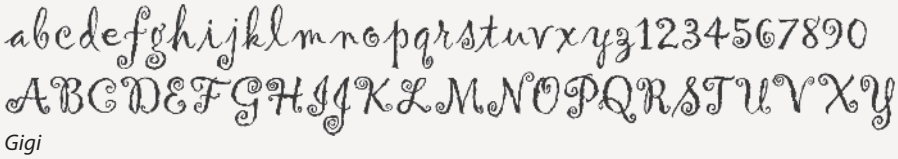
Gerard Unger (1942–) is an award-winning Dutch type designer, graphic designer, author, and educator. He has worked on magazines, newspapers, books, logos, corporate identities, annual reports, stamps, and coins. Unger's typefaces include Hollander, ITC Flora, Amerigo, Swift, Neue Swift, Demos, Praxis, Oranda, and Vesta. He has designed typefaces for newspapers and publications, including Gulliver, which is used in *USA Today* as well as several other international publications. He has also designed signage systems for the Dutch highway system and the Amsterdam Metro.

His designs are known for their extreme legibility under a range of printing conditions and for addressing the design challenges of varying technological environments. Unger is a highly respected lecturer and educator, and is currently a visiting professor at the University of Reading (UK) Department of Typography and Graphic Communication.

Vesta

Jill Bell (1950–) is an American lettering artist, calligrapher, type designer, and graphic designer who is known for her very illustrative, expressive hand lettering and typestyles. While she didn't start off as a typeface designer in the traditional sense, Bell was at the forefront of the adaptation and conversion of custom hand lettering into commercially available typefaces at a time when most digitally available typefaces were either traditional text or more typographic display designs.

Her designs include Bruno, ITC Caribbean, Carumba, Clover, Gigi, Hollyweird, Smack, Stranger, and Swank. Her typefaces, although often mistaken for hand lettering, are widely visible in today's popular culture and can be seen on packaging, advertisements, book covers, CDs, greeting cards, calendars, logos, and websites.



Gigi

James Montalbano (1953–) is an accomplished Brooklyn-based American type designer and educator, and principal of Terminal Design, a digital typefoundry specializing in typeface design, font development, and digital lettering. His commercially available fonts span a diverse range of styles, from text super families (Kinney, Moraine, Rawlinson 2.0) to text/display type systems (718, Consul, Trilon, Yo) to connecting scripts (Insouciant). In addition, he has designed a broad range of custom fonts and lettering for editorial, corporate, government, and publishing clients.

Montalbano was the lead typeface designer (working with Don Meeker of Meeker & Associates) in the development of the ClearviewHwy signage system. In 2004 the U.S. federal government granted approval for ClearviewHwy to be used on all federal roads. As of 2011, more than 20 states employ ClearviewHwy. In 2011 Cooper-Hewitt acquired the entire Clearview typeface family, its first digital font acquisition.

Montalbano is a past president of the Type Directors Club and has taught typography at Pratt Institute and typeface design at Parsons The New School for Design and the School of Visual Arts, all in New York City.

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Latin 512 Expanded

Robert Slimbach (1956–) is a prolific American typeface designer responsible for a great many of the digital typefaces being used today, both revivals and original designs. His interest in typography and graphic design developed after college while running a silkscreen printing business that produced posters and greeting cards. He went on to work for Autologic Incorporated, where he honed his skills as a type designer and a calligrapher for two years. He then went on to design ITC Giovanni and ITC Slimbach before joining Adobe Systems in 1987, where he is now their principal designer. His expansive range of typefaces include Adobe Garamond, Utopia, Minion, Poetica, Sanvito, Caflisch Script, Adobe Jenson, Kepler, Warnock, and Arno.

Slimbach has accumulated numerous awards and accolades for his work, including the Prix Charles Peignot in 1991 and several Type Directors Club awards. Much of his current focus is on expanding the range of offerings of his earlier designs, both as additional glyphs as well as optical versions, which can be accommodated by today's OpenType font technology.

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ITC Slimbach

Zuzana Licko (1961–) is a Czech-born, American-raised typeface designer and cofounder (with her husband, Rudy VanderLans) of *Emigre* magazine, as well as the Emigre type library. Licko was one of the earliest to create digital typeface designs using the first generation of the Macintosh computer.

Her first designs exploited the resolution limitations of the early digital technology, with its characteristic pixilation. These designs, which were considered radical at the time, eventually became somewhat mainstream and went on to have a tremendous impact on the world of both graphic and typeface design. Her work includes digital and geometric designs such as Lo-res, Matrix, Variex, Modula, Citizen, Triplex, Senator, and Solex, as well as more classically influenced designs such as Filosophia and Mrs. Eaves.

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Triplex

Hoefler & Frere-Jones is a New York-based typefoundry (originally The Hoefler Type Foundry, established 1989) run by president and founder Jonathan Hoefler (1970–) and principal and director of typography Tobias Frere-Jones (1970–). They combined their impressive typographic pedigrees to design some of the best-known, most highly visible typefaces, including Gotham, Archer, Sentinel, Knockout, Hoefler Titling, Whitney, Vitesse, Ideal Sans, Requiem, and Tungsten. Their work is known for its high performance, high style, and robust features—both technical and aesthetic.

In addition to their vigorous collection of commercially available fonts, they have collaborated on typographic projects for the *Wall Street Journal*, *Martha Stewart Living*, Nike, Pentagram, *GQ*, *Esquire*, the *New York Times*, *Business 2.0*, and the *New York Times Magazine*.

Hoefler's work is included in the permanent collection of the Cooper-Hewitt National Design Museum (part of the Smithsonian Institution) in New York. In 2002 the Association Typographique Internationale (ATypI) presented Hoefler with its most prestigious award, the Prix Charles Peignot for outstanding contributions to type design. He is probably most widely known for Hoefler Text, which was designed for Apple Computer and is included on the Macintosh operating system.

Frere-Jones's work is included in the permanent collection of the Victoria and Albert Museum in London. In 2006 he became the first American to receive the Gerrit Noordzij Prize, presented by the Royal Academy of The Hague in honor of his unique contributions to type design, typography, and type education. Frere-Jones teaches typeface design in the Yale School of Art MFA program, with type designer Matthew Carter.

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Gotham

EXERCISE

Design Guidelines

Nancy Sharon Collins, Assistant Professor, 2004–5, Nicholls State University, Thibodaux, Louisiana

1. Think first.

2. Sketch everything you think. Get your thoughts out of your brain and onto the page—any page—where your client and audience can read it.

3. Define your objective(s). Make a priority list. Start with the most important information at the top. List all other elements in sequence beneath it. Let this be your master, map, and guide.

4. Try not to bring preconceived notions to any project. Stay open-minded and open to change. Don't get too attached to any one idea. At any point, your client or the project itself can do a 180-degree turn on you, and you will have to alter your design accordingly.

5. Do all your research before you start on the computer.

- **a.** Keystroke all original text into a word-processing program to edit for content, spelling, and typographically correct punctuation. (Do not do this in a design program—you will get too wrapped up in the design and lose sight of editing the text.)
- **b.** Check all art for compatibility with the design program(s) you are planning to use.
- **c.** Pin or tape your priority list within easy view.
- **d.** Make your own type specimen book (see Exercise in Chapter 3).
- **e.** Keep a scrapbook of "orphan type" (typographic ideas found on one-off media, such as old signs, old magazines, old packaging; look at junk mail, pulp fiction, club flyers, cereal boxes, etc.).
- **f.** For major elements (headlines, etc.), make rough type studies of at least three to five styles. Utilize typography from nondigital media (hand-drawn, collage, or orphan type).
- **g.** Make low-resolution (for position only) scans of all of your art: store them in one folder so you can access easily and edit them later.
- **h.** Create five to ten primary and secondary type studies. Pin them on the wall. Stand back and look at them. Choose or make more.

6. Compose a few (5 to 10) sample designs with all components in quick, rough form.

a. Pin or tape them on the wall and critique them.

b. Edit out the weaker designs.

c. Create style sheets or use old-fashioned typographic specifications, written by hand.

d. The design(s) you choose to execute should be the easiest to defend. Ask yourself: How quickly does the design address the original problem? Does the design really reflect the target audience? Are all key components readable according to the appropriate hierarchy? This sounds terrible and boring, but a successful design not only must look nice—it must function to succeed!

7. Print out your design often. Pin or tape your work to a wall. Critique as you go, replacing weak elements with stronger solutions.

8. Make sure your final design "reads" according to your original priority list.

9. Have someone else proofread your work, even if you use a spell-checker.

10. Keep all phases of your work. If you have to backtrack, you will have everything.

11. Organization is key. If you have to find a particular phase or element, you should know exactly where to find it.

12. Make sure your final printout appears exactly as you intend. If not, go back, figure out why not, fix it, and print again.

EXERCISE

Typographic Timeline

Ilene Strizver, Faculty, School of Visual Arts, New York, New York

Objective

- To become familiar with the sequential history of type and typography
- To develop an understanding of what led to the transition from one period to another

Assignment

Research and create a typographic timeline from the invention of movable type through the present time. Include the following:

- Typeface classifications from Chapter 3 (additional classifications may be added)
- Influential type designers and pioneers
- Milestone typeface designs
- Influential stylistic periods
- Important typefoundries

Use charts, graphics, color, and appropriate typography as necessary to visually express the information in a clear, accurate, and visually attractive and effective way.

EXERCISE

Historical Design

Ilene Strizver, Faculty, School of Visual Arts, New York, New York

Objective

To research and explore influential periods and styles in history as it applies to typography and (typo)graphic design

Assignment

Step 1: Write a five- to seven-hundred-word summary on the typography and design of three of the topics listed below. Include at least three illustrations with captions.

Art deco
Art nouveau
Bauhaus
Futurism
Herb Lubalin and the New York style
Russian constructivist
Suprematism
Swiss grid
William Morris and the Kelmscott Press

Step 2: Select one of the three topics you have written about, and design a piece in that style. The format is 10 × 10 inches square. It can be all type or primarily type and image. It can be black-and-white or color.