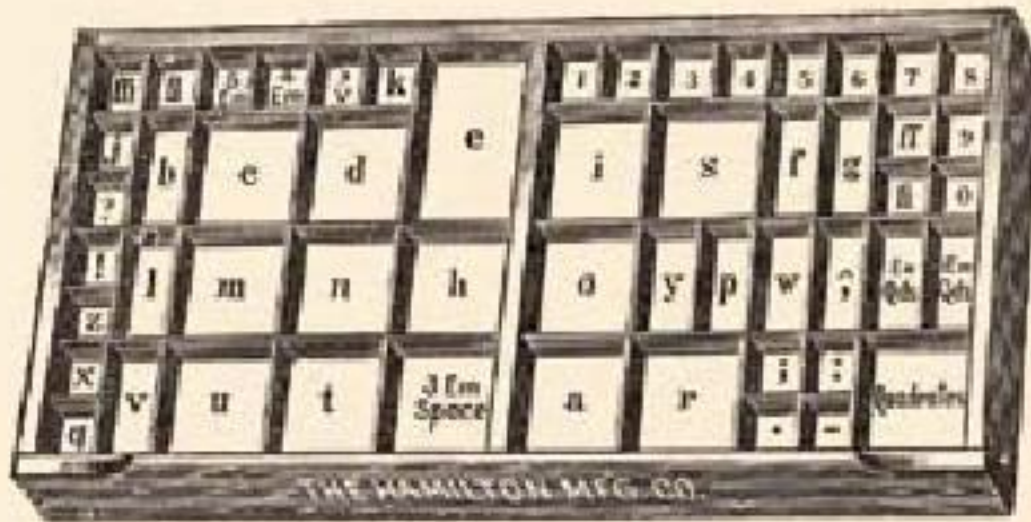
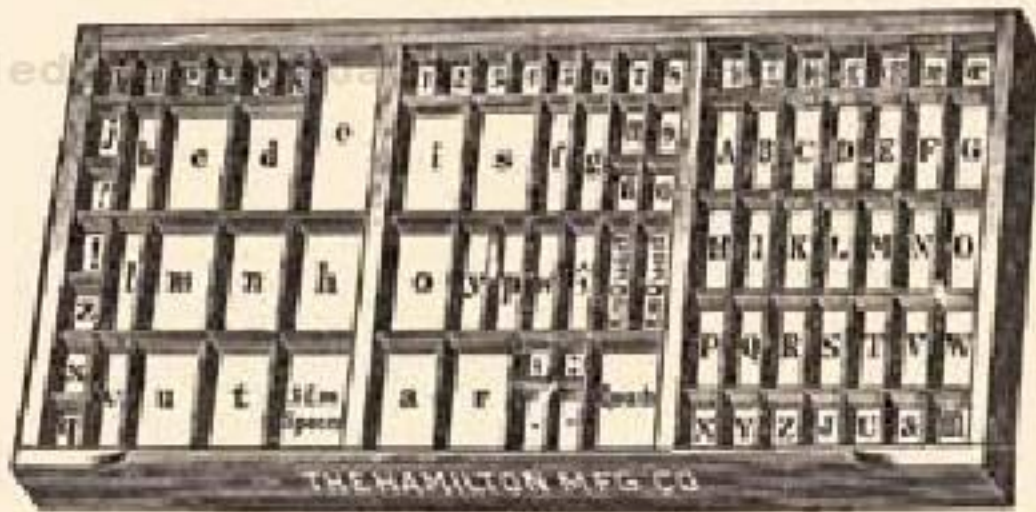




Upper Case.



Lower Case.
A PAIR OF CASES.



California Jobs Case.

FIG. 2.—Showing Lay of Cases.

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ebruary

TYPE, SPACES, AND LEADS
Diagram, 1917. Author:
Frank S. Henry. In a
letterpress printing shop,
gridded cases hold fonts of type
and spacing material. Capital
letters are stored in a drawer
above the minuscule letters.
Hence the terms "uppercase"
and "lowercase" are derived
from the physical space of the
print shop.

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ebruary

LETTER

THIS IS NOT A BOOK ABOUT FONTS. It is a book about how to use them. Typefaces are an essential resource employed by graphic designers, just as glass, stone, steel, and other materials are employed by architects. Graphic designers sometimes create their own typefaces and custom lettering. More commonly, however, they tap the vast library of existing typefaces, choosing and combining them in response to a particular audience or situation. To do this with wit and wisdom requires knowledge of how—and why—letterforms have evolved.

Words originated as gestures of the body. The first typefaces were directly modeled on the forms of calligraphy. Typefaces, however, are not bodily gestures—they are manufactured images designed for infinite repetition. The history of typography reflects a continual tension between the hand and the machine, the organic and the geometric, the human body and the abstract system. These tensions, which marked the birth of printed letters over five hundred year ago, continue to energize typography today.

Movable type, invented by Johannes Gutenberg in Germany in the early fifteenth century, revolutionized writing in the West. Whereas scribes had previously manufactured books and documents by hand, printing with type allowed for mass production: large quantities of letters could be cast from a mold and assembled into “forms.” After the pages were proofed, corrected, and printed, the letters were put away in gridded cases for reuse.

Movable type had been employed earlier in China but had proven less useful there. Whereas the Chinese writing system contains tens of thousands of distinct characters, the Latin alphabet translates the sounds of speech into a small set of marks, making it well-suited to mechanization. Gutenberg’s famous Bible took the handmade manuscript as its model. Emulating the dense, dark handwriting known as “blackletter,” he reproduced its erratic texture by creating variations of each letter as well as numerous ligatures (characters that combine two or more letters into a single form).

This chapter extends and revises “Laws of the Letter,” Ellen Lupton and J. Abbott Miller, *Design Writing Research: Writing on Graphic Design* (New York: Kiosk, 1996; London: Phaidon, 1999), 53–61.

JOHANNES
GUTENBERG
Printed text,
1456.

eam: que ip
dige. filia
nras illis d
tantu boni
nostros. cu
stancia eoz
nostra erit.
et habitace
Assensuq; si
maribz. Et
mus vulne
filij iacob. si
dijz. ingres
interfeti sq;
sichem parit
de domo in
egressis. irru
iacob. 3 dep
onem supri: oues eoz et armenta.
almos. cunctaq; vastantes que in d
nibz 7 i agris erant. paruulos q; eoz
et uxores duxerunt captiuas. Quibu

NICOLAS JENSON learned to print in Mainz, the German birthplace of typography, before establishing his own printing press in Venice around 1465. His letters have strong vertical stems, and the transition from thick to thin emulates the path of a broad-nibbed pen.

ilos appellatur mariti
euir dicitur frater mar
ratriæ appellantur qua
mitini fratrum & ma
atrueles matrum fratri
ōsobrini ex duabus ed
ta sunt in antiquis au

the iiij wekis, and how
lord, yet the chirche ma
that is to wete, of that he
and of that he cometh to
in thoffyce of the chircl
tynges that ben in this
one partie, & that othe
cause of the comynge of
ben of joye and gladne

GOLDEN TYPE was created by the English design reformer William Morris in 1890. He sought to recapture the dark and solemn density of Jenson's pages.

CENTAUR, designed from 1912 to 1914 by Bruce Rogers, is a revival of Jenson's type that emphasizes its ribbonlike stroke.

Lorem ipsum dolor si
consectetuer adipiscing el
Integer pharetra, nisl u
luctus ullamcorper, au
tortor egestas ante, vel
pede urna ac neque. M
ac mi eu purus tincidu

Lorem ipsum dolor si
consectetuer adipiscing
Integer pharetra, nisl
luctus ullamcorper, au
tortor egestas ante, vel
pharetra pede urna ac
neque. Mauris ac mi e

ADOBE JENSON was designed in 1995 by Robert Slimbach, who reconceives historical typefaces for digital use. Adobe Jenson is less mannered and decorative than Centaur.

RUIT was designed in the 1990s by the Dutch typographer, teacher, and theorist Gerrit Noordzij. This digitally constructed font captures the dynamic, three-dimensional quality of

vanum laboraverunt
si Dominus custodie
stra vigilavit qui cos
num est vobis ante li
rgere postquam sede
i manducatis panem
m dederit dilectis sui
ALMI IVXTA LXX

Lorem ipsum dolor s
consectetuer adipisci
Integer pharetra, nis
ullamcorper, augue t
ante, vel pharetra pec
neque. Mauris ac mi
tincidunt faucibus. P
dignissim lectus. Nun

typefaces as well as their gothic (rather than humanist) origins. As Noordzij explains, Jenson "adapted the German letters to Italian fashion (somewhat rounder, somewhat lighter), and thus created roman type."

SCALA was introduced in 1991 by the Dutch typographer Martin Majoor. Although this thoroughly contemporary typeface has geometric serifs and rational, almost modular forms, it reflects the calligraphic origins of type, as seen in letters such as a.

HUMANISM AND THE BODY

In fifteenth-century Italy, humanist writers and scholars rejected gothic scripts in favor of the *lettera antica*, a classical mode of handwriting with wider, more open forms. The preference for *lettera antica* was part of the Renaissance (rebirth) of classical art and literature. Nicolas Jenson, a Frenchman who had learned to print in Germany, established an influential printing firm in Venice around 1469. His typefaces merged the gothic traditions he had known in France and Germany with the Italian taste for rounder, lighter forms. They are considered among the first—and finest—roman typefaces.

Sed ne forte tuo caere
Hic timor est ipsis
Non adeo leuiter nost
Ut meus oblito pul
Ilic phylacides iuca
Non potuit caecis in
Sed cupidus falsis atti
Thessalis antiquam
Ilic quicquid ero ser
Traicit & fati litto
Ilic formosae ueniam
Quas dedit argui
Quarum nulla tua fu
Gratior, & tellus l
Quamuis te longae re
Cara tamen lachry

Many typefaces we use today, including Garamond, Bembo, Palatino, and Jenson, are named for printers who worked in the fifteenth and sixteenth centuries. These typefaces are generally known as “humanist.” Contemporary revivals of historical typefaces are designed to conform with modern technologies and current demands for sharpness and uniformity. Each revival responds to—or reacts against—the production methods, printing styles, and artistic habits of its own time. Some revivals are based on metal types, punches (steel prototypes), or drawings that still exist; most rely solely on printed specimens.

Italic letters, also introduced in fifteenth-century Italy, were modeled on a more casual style of handwriting. While the upright humanist scripts appeared in expensively produced books, the cursive form thrived in the cheaper writing shops, where it could be written more rapidly than the carefully formed *lettera antica*. Aldus Manutius, a Venetian printer, publisher, and scholar, used italic typefaces in his internationally distributed series of small, inexpensive printed books. For calligraphers, the italic form was economical because it saved time, while in printing, the cursive form saved space. Aldus Manutius often paired cursive letters with roman capitals; the two styles still were considered fundamentally distinct.

In the sixteenth century, printers began integrating roman and italic forms into type families with matching weights and x-heights (the height of the main body of the lowercase letter). Today, the italic style in most fonts is not simply a slanted version of the roman; it incorporates the curves, angles, and narrower proportions associated with cursive forms.

FRANCESCO
GRIFFO
designed roman
and italic types
for Aldus
Manutius. The
roman and italic
were conceived as
separate typefaces.

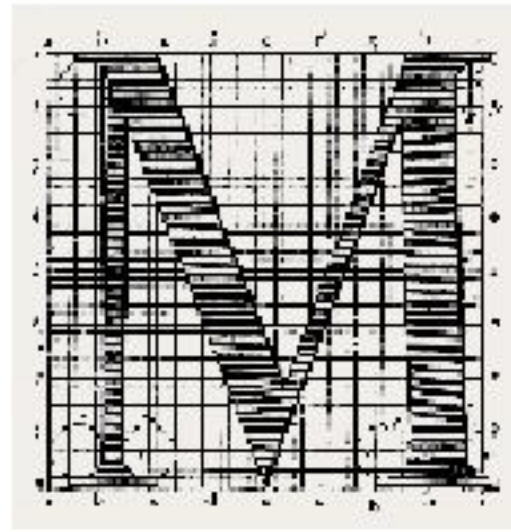
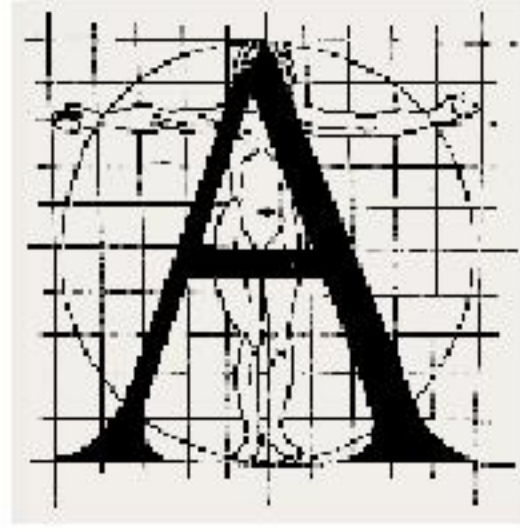
JEAN JANNON created
roman and italic types for
the Imprimerie Royale,
Paris, 1642, that are
coordinated into a larger
type family.

comme i'ay des-ia remarqué, ^a S. Augu-
stin demande aux Donatistes en vne sem-
blable occurrence : *Quoy donc ? lors que
nous lisons , oublions nous comment nous auons
accoustumé de parler ? l'escriture du grand Dieu*

^a Aug. lib. 33,
contra Faust. c.
7. Quid er-
go? cum legi-
mus, obliui-
scimur quem-
admodum lo-
qui solemus?
An scriptura
Dei aliter no-

On the complex origins
of roman type, see Gerrit
Noordzij, *Letterletter*
(Vancouver: Hartley and
Marks, 2000).

GEOFROY TORY argued that letters should reflect the ideal human body. Regarding the letter A, he wrote: "the cross-stroke covers the man's organ of generation, to signify that Modesty and Chastity are required, before all else, in those who seek acquaintance with well-shaped letters."



LOUIS SIMONNEAU designed model letterforms for the printing press of Louis XIV. Instructed by a royal committee, Simonneau designed his letters on a finely meshed grid. A royal typeface (romain du roi) was then created by Philippe Grandjean, based on Simonneau's engravings.

WILLIAM CASLON produced typefaces in eighteenth-century England with crisp, upright characters that appear, as Robert Bringhurst has written, "more modelled and less written than Renaissance forms."

By WILLIAM CASLON, Letter-Founder, in Chiswell-St.

ABCD	DOUBLE PICA ROMAN.	Double Pica Italic.
ABCDE	Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jac-	Quousque tandem abutere, Catilina, patientia nostra? quamdiu nos etiam furor iste tuus eludet? quem ad finem sese effrenata jac-
ABCDEF	ABCDEFGHIJKLMN	ABCDEFGHIJKLMNO
ABCDEF	GREAT PRIMER ROMAN.	Great Primer Italic.
ABCDEF	Quousque tandem abutere, Catilina, pa-	Quousque tandem abutere, Catilina, pa-

S P E C I M E N

By JOHN BASKERVILLE of Birmingham.

I Am indebted to you for two Letters dated from Corcyra. *if to mean well to the Interest of my Country and to approve that meaning*

JOHN BASKERVILLE was a printer working in England in the 1750s and 1760s. He aimed to surpass Caslon by creating sharply detailed letters with more vivid contrast between thick and thin elements. Whereas Caslon's letters were widely used during his own time, Baskerville's work was denounced by many of his contemporaries as amateur and extremist.

AUSTERLITI
RELATAM A GALL
DUCE

GIAMBATTISTA BODONI created letters at the close of the eighteenth century that exhibit abrupt, unmodulated contrast between thick and thin elements, and razor-thin serifs unsupported by curved brackets. Similar typefaces were designed in the same period by François-Ambroise Didot (1784) in France and Justus Erich Walbaum (1800) in Germany.

ENLIGHTENMENT AND ABSTRACTION

A a b c d e f

A B C D

a b c d e f

A B C D

N O P Q

GEORGE BICKHAM, 1743.
Samples of "Roman Print"
and "Italian Hand."

Renaissance artists sought standards of proportion in the idealized human body. The French designer and typographer Geofroy Tory published a series of diagrams in 1529 that linked the anatomy of letters to the anatomy of man. A new approach—distanced from the body—would unfold in the age of scientific and philosophical Enlightenment.

A committee appointed by Louis XIV in France in 1693 set out to construct roman letters against a finely meshed grid. Whereas Tory's diagrams were produced as woodcuts, the gridded depictions of the *romain du roi* (king's alphabet) were engraved, made by incising a copper plate with a tool called a graver. The lead typefaces derived from these large-scale diagrams reflect the linear character of engraving as well as the scientific attitude of the king's committee.

Engraved letters—whose fluid lines are unconstrained by the letterpress's mechanical grid—offered an apt medium for formal lettering. Engraved reproductions of penmanship disseminated the work of the great eighteenth-century writing masters. Books such as George Bickham's *The Universal Penman* (1743) featured roman letters—each engraved as a unique character—as well as lavishly curved scripts.

Eighteenth-century typography was influenced by new styles of handwriting and their engraved reproductions. Printers such as William Caslon in the 1720s and John Baskerville in the 1750s abandoned the rigid nib of humanism for the flexible steel pen and the pointed quill, writing instruments that rendered a fluid, swelling path. Baskerville, himself a master calligrapher, would have admired the thinly sculpted lines that appeared in the engraved writing books. He created typefaces of such sharpness and contrast that contemporaries accused him of "blinding all the Readers in the Nation; for the strokes of your letters, being too thin and narrow, hurt the Eye." To heighten the startling precision of his pages, Baskerville made his own inks and hot-pressed his pages after printing.

At the turn of the nineteenth century, Giambattista Bodoni in Italy and Firmin Didot in France carried Baskerville's severe vocabulary to new extremes. Their typefaces—which have a wholly vertical axis, sharp contrast between thick and thin, and crisp, waferlike serifs—were the gateway to an explosive vision of typography unhinged from calligraphy.

The *romain du roi* was designed not by a typographer but by a government committee consisting of two priests, an accountant, and an engineer. —ROBERT BRINGHURST, 1992

P. VIRGILII MARONIS
BUCOLICA

ECLOGA I. cui nomen TITYRUS.

MELIBŒUS, TITYRUS. 5e858d947f51ed56ef18e9b0af769e19

ebruary

TITYRE, tu patulæ recubans sub tegmine fagi
Silvestrem tenui Musam meditaris avena:
Nos patriæ fines, et dulcia linquimus arva;
Nos patriam fugimus: tu, Tityre, lentus in umbra
5 Formosam resonare doces Amaryllida filvas.
T. O Melibœe, Deus nobis hæc otia fecit:
Namque erit ille mihi semper Deus: illius aram
Sæpe tener nostris ab ovilibus imbuet agnus.
Ille meas errare boves, ut cernis, et ipsum
10 Ludere, quæ vellem, calamo permisit agresti.
M. Non equidem invideo; miror magis: undique totis
Usque adeo turbatur agris. en ipse capellas
Protenus æger ago: hanc etiam vix, Tityre, duco:
5e858d947f51ed56ef18e9b0af769e19 Hic inter densas corylos modo namque gemellos,
ebruary 15 Spem gregis, ah! filice in nuda connixa reliquit,
Sæpe malum hoc nobis, si mens non læva fuisset,
De cœlo tactas memini prædicere quercus:
Sæpe sinistra cava prædixit ab ilice cornix.
Sed tamen, iste Deus qui sit, da, Tityre, nobis.
20 *T.* Urbem, quam dicunt Romam, Melibœe, putavi
Stultus ego huic nostræ similem, quo sæpe solemus
Pastores ovium teneros depellere foetus.
Sic canibus catulos similes, sic matribus hædos

A

Noram;

LA THÉBAÏDE,
OU
LES FRÈRES ENNEMIS,
TRAGÉDIE.

5e858d947f51ed56ef18e9b0af769e19
ebrary

VIRGIL (LEFT) Book page, 1757. Printed by John Baskerville. The typefaces created by Baskerville in the eighteenth century were remarkable—even shocking—in their day for their sharp, upright forms and stark contrast between thick and thin elements. In addition to a roman text face, this page utilizes italic capitals, large-scale capitals (generously letterspaced), small capitals (scaled to coordinate with lowercase text), and non-lining or old-style numerals (designed with ascenders, descenders, and a small body height to work with lowercase characters).

ACTE PREMIER.

SCENE I.

JOCASTE, OLYMPE.

JOCASTE.

Ils sont sortis, Olympe? Ah! mortelles douleurs!
Qu'un moment de repos me va coûter de pleurs!
Mes yeux depuis six mois étoient ouverts aux larmes,
Et le sommeil les ferme en de telles alarmes!
Puisse plutôt la mort les fermer pour jamais,
Et m'empêcher de voir le plus noir des forfaits!
Mais en sont-ils aux mains?

5e858d947f51ed56ef18e9b0af769e19
ebrary

RACINE (RIGHT) Book page, 1801. Printed by Firmin Didot. The typefaces cut by the Didot family in France were even more abstract and severe than those of Baskerville, with slablike, unbracketed serifs and a stark contrast from thick to thin. Nineteenth-century printers and typographers called these glittering typefaces “modern.”

Both pages reproduced from William Dana Orcutt, *In Quest of the Perfect Book* (New York: Little, Brown and Company, 1926); margins are not accurate.

5e858d947f51ed56ef18e9b0af769e19
ebrary

440 *Plan for the Improvement of the Art of Paper War.*
whilst a passionate man, engaged in a warm controversy,
would thunder vengeance in

French Canon

It follows of course, that writers of great irascibility should be charged higher for a work of the same length, than meek authors; on account of the extraordinary space their performances must necessarily occupy; for these gigantic, wrathful types, like ranters on the stage, must have sufficient elbow-room.

For example: Suppose a newspaper quarrel to happen between * M and L. M begins the attack pretty smartly in

Long Primer.

L replies in

Pica Roman.

M advances to

Great Primer.

L retorts in

Double Pica.

And so the contest swells to

Rascal, Villain

* Left some ill-disposed person should misapply these initials, I think proper to declare, that M signifies Merchant, and L Lawyer.

Conard.

COW- ard,

in five line Pica; which, indeed, is as far as the art of printing, or a modern quarrel can well go.

A philosophical reason might be given to prove that large types will more forcibly affect the optic nerve than those of a smaller size, and are therefore naturally expressive of energy and vigour. But I leave this discussion for the amusement of the gentlemen lately elected into our philosophical society. It is sufficient for me, if my system should be found to be justified by experience and fact, to which I appeal.

I recollect a case in point. Some few years before the war, the people of a western county, known by the name of Paxton Boys, assembled, on account of some discontent, in great numbers, and came down with hostile intentions against the peace of government, and with a particular view to some leading men in the city. Sir John St. Clair, who assumed military command for defence of the city, met one of the obnoxious persons in the street, and told him that he had seen the manifesto of the insurgents, and that his name was particularised in letters as long as his fingers. The gentleman immediately packed up his most valuable effects, and sent them with his family into Jersey for security. Had sir John only said that he had seen his name in the manifesto, it is probable that he would not have been so seriously alarmed: but the unusual size of the letters was to him a plain indication, that the insurgents were determined to carry their revenge to a proportionable extremity.

I could confirm my system by innumerable instances in fact and practice. The title-page of every book is a proof in point. It announces the subject treated of, in conspicuous characters; as if the author stood at the door of his edifice, calling

PLAN FOR THE IMPROVEMENT OF THE ART OF PAPER WAR Satirical essay by Francis Hopkinson, *The American Museum*, Volume 1 (1787). Courtesy of the Boston Public Library. This eighteenth-century essay is an early example of expressive typography. The author, poking fun at the emerging news media, suggests a "paper war" between a lawyer and a merchant. As the two men toss attacks at each other, the type gets progressively bigger. The terms Long Primer, Pica Roman, Great Primer, Double Pica, and Five Line Pica were used at the time to identify type sizes. The ¶ symbol is an s. Hopkinson was no stranger to design. He created the stars and stripes motif of the American flag.