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 countless other materials are employed by architects. Graphic designers sometimes create their own fonts 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 it 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).

JOHANNES
GUTENBERG
Printed text,
1456

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.

ilos appellatur mariti
euir dicitur frater mar
ratriæ appellantur qua
mitini fratrum & mat
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ben of iove and gladne

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

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Integer pharetra, nis
ullamcorper, augue t
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dignissim lectus. Nun

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.

Many fonts 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 fonts 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, or drawings that still exist; most rely solely on printed specimens.

Italic letters, also introduced in fifteenth-century Italy (as their name suggests), were modeled on a more casual style of handwriting. While the upright humanist scripts appeared in prestigious, expensively produced books, the cursive form was used by the cheaper writing shops, where it could be written more rapidly than the carefully formed *lettera antica*. Aldus Manutius was a Venetian printer, publisher, and scholar who used italic typefaces in his internationally distributed series of small, inexpensive books. The cursive form saved money because it saved space. Aldus Manutius's books 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 lowerface 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
Roman and italic types designed for Aldus Manutius, c. 1500. They are conceived as two separate typefaces.

JEAN JANNON
Roman and italic types for the Imprimerie Royale, Paris, 1642, coordinated into a larger type family.

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

On the complex origins of roman type, see Gerrit Noordzij, *Letterletter* (Vancouver: Hartley and Marks, 2000).
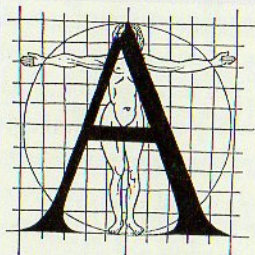
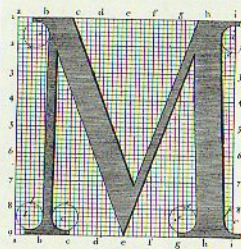**GEOFROY TORY** argued that letters should reflect the ideal human body. Regarding the letter A, he wrote: "the cross-stroke covers the man's organ of generation, to signify that Modesty and Chastity are required, before all else, in those who seek acquaintance with well-shaped letters."

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.

By WILLIAM CASLON,

ABCD
ABCDE

DOUBL
Quousque ta
lina, patient
nos etiam fu
quem ad fine
ABCDEF

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

SPECI

By JOHN BASKERVIL

Am indebted to you for two
Letters dated from Corcyra.

if to
Coun

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 in his own time, Baskerville's work was denounced by many of his contemporaries as amateur and extremist.

AUSTERLITII

A GALLIS

CE

E MAXI

GIAMBATTISTA BODONI created letters at the close of the eighteenth century that exhibit abrupt, unmodulated contrast between thick and thin and razor-thin serifs that are 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.

Aabcdef ABCD R

aabbccddee
A B C D
N O P Q

This accusation was reported to Baskerville in a letter from his admirer Benjamin Franklin. For the full letter, see F. E. Pardoe, *John Baskerville of Birmingham: Letter-Founder and Printer* (London: Frederick Muller Limited, 1975), 68. See also Robert Bringhurst, *The Elements of Typographic Style* (Vancouver: Hartley and Marks, 1992, 1997).

ENLIGHTENMENT AND ABSTRACTION

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 Geofroy 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 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 like 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, 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.

The severe vocabulary of Baskerville was carried to an extreme by Giambattista Bodoni in Italy and Firmin Didot in France at the turn of the nineteenth century. Their typefaces—which have a wholly vertical axis, extreme contrast between thick and thin, and crisp, waferlike serifs—were the gateway to a new 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.

MELIBOEUS, TITYRUS.

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 silvas.
   T. O Meliboee, 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:
Hic inter densas corylos modo namque gemellos,
15 Spem gregis, ah! silice 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, Meliboee, putavi
Stultus ego huic nostræ similem, quo sæpe solemus
Pastores ovium teneros depellere fœtus.
Sic canibus catulos similes, sic matribus hœdos

A   Noram;

LA THÉBAÏDE,

OU

LES FRERES ENNEMIS,

TRAGÉDIE.

~~~~~~~~~~~~~~~~~~~~~~~~

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 jamaïs,
Et m'empêcher de voir le plus noir des forfaits!
Mais en sont-ils aux mains?

1825;

At 10 o'Clock in the Morning:

A QUANTITY OF OL

ORDAG

Sails &c

ing the rem

ck of the Sch

[J. Soulb

RUDE

FAT FACE *is the name that was given to the inflated, hyper-bold type style introduced in the early nineteenth century. These faces exaggerated the polarization of letters into thick and thin components seen in the formal typography of Bodoni and Didot.*

EXTRA CONDENSED *typefaces are designed to fit in narrow spaces. Nineteenth-century advertisements often combined fonts of varying style and proportion on a single page. These bombastic mixtures were typically aligned, however, in static, centered compositions.*

EGYPTIAN, *or slab, typefaces transformed the serif from a refined detail to a load-bearing slab. As an independent architectural component, the slab serif asserts its own weight and mass. Introduced in 1806, this style was quickly denounced by purists as "a typographical monstrosity."*

GOTHIC *is a nineteenth-century term for letters with no serifs. Such typefaces could command attention with their massive frontality. Although sans-serif fonts often served in the twentieth century to convey neutrality, flamboyantly decorated gothics were once common.*

GU
hau
RIE

IARE
HONE
MEN

My person was hideous, my stature gigantic. What did this mean? Who was I? What was I?... Accursed creator! Why did you create a monster so hideous that even you turned away from me in disgust? Mary Shelley, *Frankenstein,* 1831

MONSTER FONTS

Although Bodoni and Didot fueled their designs with the calligraphic practices of their time, they created forms that collided with typographic tradition and unleashed a strange new world, where the structural attributes of the letter—serif and stem, thick and thin strokes, vertical and horizontal stress—would be subject to bizarre experiments. In search of a beauty both rational and sublime, Bodoni and Didot had created a monster: an abstract and dehumanized approach to the design of letters.

With the rise of industrialization and mass consumption in the nineteenth century came the explosion of advertising, a new form of communication demanding new kinds of typography. Big, bold faces were designed by distorting the anatomical elements of classical letters. Fonts of astonishing height, width, and depth appeared—expanded, contracted, shadowed, inlined, fattened, faceted, and floriated. Serifs abandoned their role as finishing details to become independent architectural structures, and the vertical stress of traditional letters migrated in new directions.

ANTIQUE	CLARENDON	LATIN/ANTIQUE TUSCAN	TUSCAN

Type historian Rob Roy Kelly (1926–2004) studied the mechanized design strategies that served to generate a spectacular variety of display letters in the nineteenth century. This diagram shows how the basic square serif form—called Egyptian or slab—was cut, pinched, pulled, and curled to spawn new species of ornament. Serifs were transformed from calligraphic end-strokes into independent geometric elements that could be freely adjusted.

Lead, the material for casting metal type, is too soft to hold its shape at large sizes under the pressure of the printing press. In contrast, type cut from wood could be printed at gigantic scales. The introduction of the combined pantograph and router in 1834 revolutionized wood-type manufacture. The pantograph is a tracing device that, when linked to a router for carving, allows a parent drawing to spawn variants with different proportions, weights, and decorative excrescences.

This mechanized design approach treated the alphabet as a flexible system divorced from the calligraphic tradition. The search for archetypal, perfectly proportioned letterforms gave way to a view of typography as an elastic system of formal features (weight, stress, stem, crossbars, serifs, angles, curves, ascenders, descenders). The relationships among letters in a font became more important than the identity of individual characters.

For extensive analysis and examples of decorated types, see Rob Roy Kelly, *American Wood Type: 1828–1900, Notes on the Evolution of Decorated and Large Letters* (New York: Da Capo Press, 1969). See also Ruari McLean, "An Examination of Egyptians," *Texts on Type: Critical Writings on Typography,* ed. Steven Heller and Philip B. Meggs (New York: Allworth Press, 2001), 70–76.

Lithographic trade card, 1878
*The rise of advertising in the
nineteenth century stimulated
demand for large-scale letters that
could command attention in
urban space. Here, a man is
shown posting a bill in flagrant
disregard for the law, while a
police officer approaches from
around the corner.*

FULL MOON (RIGHT)
Letterpress poster, 1875
*A dozen different fonts are used
in this poster for a steamship
cruise. A size and style of typeface
has been chosen for each line to
maximize the scale of the letters
in the space allotted. Although
the typefaces are exotic, the
centered layout is as static and
conventional as a tombstone.*

FULL MOON.

ST. MICHAEL'S
TEMPERANCE BAND !

Prof. V. Yeager, Leader, will give a

GRAND
MOONLIGHT
EXCURSION

On the Steamer

BELLE !

To Osbrook and Watch Hill,
On Saturday Evening, July 17th,

Leaving Wharf at 7½ o'clock.   Returning to Westerly
at 10½ o'clock.   Kenneth will be at Osbrook.

TICKETS, - FORTY CENTS.

THEO VAN DOESBURG, *founder and chief promoter of the Dutch De Stijl movement, designed this alphabet with perpendicular elements in 1919. Applied here to the letterhead of the Union of Revolutionary Socialists, the hand-drawn characters vary in width, allowing them to fill out the overall rectangle. The De Stijl movement called for the reduction of painting, architecture, objects, and letters to elemental units.*

BOND VAN REVOLUTIONNAIR· SOCIALISTISCHE INTELLECTUEELEN

DE STIJL

VILMOS HUSZÁR *designed this logo for the magazine De Stijl in 1917. Whereas Van Doesburg's characters are unbroken, Huszár's letters consist of pixel-like modules.*

abcdefghi jklmnopqr s tuvwxyz a   d d
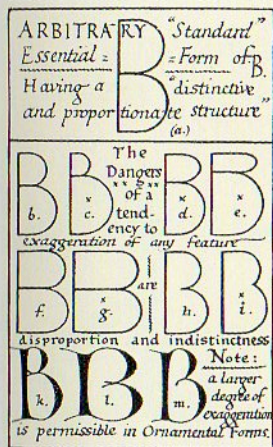
HERBERT BAYER *created this typeface design, called universal, at the Bauhaus in 1925. Consisting only of lowercase letters, it is built from straight lines and circles.*

FETTE FUTURA

GOETH STOFF

PAUL RENNER *designed Futura in Germany in 1927. Although it is strongly geometric, with perfectly round Os, Futura is a practical, subtly designed typeface that remains widely used today.*

REFORM AND REVOLUTION

On Futura, see Christopher Burke, *Paul Renner: The Art of Typography* (New York: Princeton Architectural Press, 1998). On the experimental typefaces of the 1920s and 1930s, see Robin Kinross, *Unjustified Texts: Perspectives on Typography* (London: Hyphen Press, 2002), 233–45.

Some designers viewed the distortion of the alphabet as gross and immoral, tied to a destructive and inhumane industrial system. Writing in 1906, Edward Johnston revived the search for an essential, standard alphabet and warned against the "dangers" of exaggeration. Johnston, inspired by the nineteenth-century Arts and Crafts movement, looked back to the Renaissance and Middle Ages for pure, uncorrupted letterforms.

Although reformers like Johnston remained romantically attached to history, they redefined the designer as an intellectual distanced from the commercial mainstream. The modern design reformer was a critic of society, striving to create objects and images that would challenge and revise dominant habits and practices.

The avant-garde artists of the early twentieth century rejected historical forms but adopted the model of the critical outsider. Members of the De Stijl group in the Netherlands reduced the alphabet to perpendicular elements. At the Bauhaus, Herbert Bayer and Josef Albers constructed alphabets from basic geometric forms—the circle, square, and triangle—which they viewed as elements of a universal language of vision.

Such experiments approached the alphabet as a system of abstract relationships. Like the popular printers of the nineteenth century, avant-garde designers abandoned the quest for an essential, perfectly shaped alphabet, but they offered austere, theoretical alternatives in place of the solicitous novelty of mainstream advertising.

Assembled, like machines, from modular components, these experimental designs emulated factory production. Yet most were produced by hand rather than as mechanical typefaces (although many are now available digitally). Futura, designed by Paul Renner in 1927, embodied the obsessions of the avant garde in a multipurpose, commercially available typeface. Although Renner rejected the active movement of calligraphy in favor of forms that are "calming" and abstract, he tempered the geometry of Futura with subtle variations in stroke, curve, and proportion. Renner designed Futura in numerous weights, viewing his font as a painterly tool for constructing a page in shades of gray.

The calming, abstract forms of those new typefaces that dispense with handwritten movement offer the typographer new shapes of tonal value that are very purely attuned. These types can be used in light, semi-bold, or in saturated black forms. Paul Renner, 1931

neu
alphabet

a possibility for the new development

een mogelijkheid voor de nieuwe ontwikkeling

une possibilité pour le développement nouveau

eine möglichkeit für die neue entwicklung

an introduction for a programmed typography

WIM CROUWEL *published his designs for a "new alphabet," consisting of no diagonals or curves, in 1967. The Foundry (London) began developing and releasing digital editions of Crouwel's typefaces in 1997.*

See Wim Crouwel, *New Alphabet* (Amsterdam: Wim Crouwel/Total Design, 1967); and Wim Crouwel, Kees Broos, and David Quay, *Wim Crouwel: Alphabets* (Amsterdam: BIS Publishers, 2003).

TYPE AS PROGRAM

Responding in 1967 to the rise of electronic communication, the Dutch designer Wim Crouwel published designs for a "new alphabet" constructed from straight lines. Rejecting centuries of typographic convention, he designed his letters for optimal display on a video screen (CRT), where curves and angles are rendered with horizontal scan lines. In a brochure promoting his new alphabet, subtitled "An Introduction for a Programmed Typography," he proposed a design methodology in which decisions are rule-based and systematic.
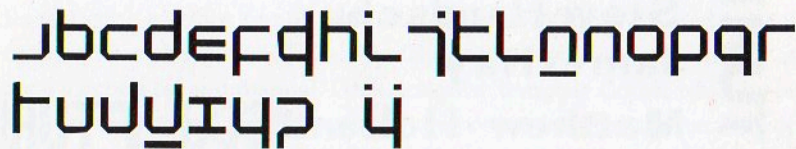
WIM CROUWEL *presented this "scanned" version of a Garamond a in contrast with his own new alphabet, whose forms accept the gridded structure of the screen.*

In the mid-1980s, personal computers and low-resolution printers put the tools of typography in the hands of a broader public. In 1985 Zuzana Licko began designing typefaces that exploited the rough grain of early desktop systems. While other digital fonts imposed the coarse grid of screen displays and dot-matrix printers onto traditional typographic forms, Licko embraced the language of digital equipment. She and her husband, Rudy VanderLans, cofounders of Emigre Fonts and *Emigre* magazine, called themselves the "new primitives," pioneers of a technological dawn.
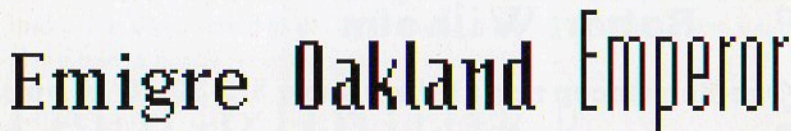
ZUZANA LICKO *created coarse-resolution fonts for desktop screens and printers in 1985. These fonts have since been integrated into Emigre's extensive Lo-Res font family, designed for print and digital media.*

See Rudy VanderLans and Zuzana Licko, *Emigre: Graphic Design into the Digital Realm* (New York: Van Nostrand Reinhold, 1993).

By the early 1990s, with the introduction of high-resolution laser printers and outline font technologies such as PostScript, type designers were less constrained by low-resolution outputs. The rise of the Internet as well as cell phones, hand-held video games, and PDAs, have insured the continued relevance of pixel-based fonts as more and more information is designed for publication directly on screen.

Living with computers gives funny ideas. Wim Crouwel, 1967

CURATOR : JOSEPH WESNER

Linda Ferguson

Steve Handschu

James Hay

Matthew Holl and SCULPTURE

Gary Laatsch

Brian Liljeblad

Dora Natella

Matthew Schellenberg

Richard String

Michell Thomas

Robert Wilhelm

Opening Reception : Friday June 8, 5:30—8:30 pm

SCULPTURE

JUNE 8—JULY 7, 1990

Detroit Focus Gallery

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743 Beaubien, Third Floor

DETROIT, MICHIGAN 48 2 26

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Hours: Noon to 6 pm

ALSO IN THE AREA: THE MARKET PRESENTS Peter Gilleran · Gordon Orear   Opening 5 - 7:30 pm. Friday, June 8.

ED FELLA *produced a body of experimental typography that strongly influenced typeface design in the 1990s. His posters for the Detroit Focus Gallery feature damaged and defective forms, drawn by hand or culled from third-generation photocopies or from sheets of transfer lettering. Collection of the Cooper-Hewitt, National Design Museum.*

TYPE AS NARRATIVE

In the early 1990s, as digital design tools began supporting the seamless reproduction and integration of media, many designers grew dissatisfied with clean, unsullied surfaces, seeking instead to plunge the letter into the harsh and caustic world of physical processes. Letters, which for centuries had sought perfection in ever more exact technologies, became scratched, bent, bruised, and polluted.

Template Gothic: flawed technology

Barry Deck's typeface Template Gothic, designed in 1990, is based on letters drawn with a plastic stencil. The typeface thus refers to a process that is at once mechanical and manual. Deck designed Template Gothic while he was a student of Ed Fella, whose experimental posters inspired a generation of digital typographers. After Template Gothic was released commercially by Emigre Fonts, its use spread worldwide, making it an emblem of "digital typography" for the 1990s.

Dead History: feeding on the past

P. Scott Makela's typeface Dead History, also designed in 1990, is a pastiche of two existing typefaces: the traditional serif font Centennial and the Pop classic VAG Rounded. By manipulating the vectors of readymade fonts, Makela adopted the sampling strategy employed in contemporary art and music. He also referred to the importance of history and precedent, which play a role in nearly every typographic innovation.

CcDdEeFfGgHhIiJjKk

The Dutch typographers Erik von Blokland and Just van Rossum have combined the roles of designer and programmer, creating typefaces that embrace chance, change, and uncertainty. Their 1990 typeface Beowulf was the first in a series of typefaces with randomized outlines and programmed behaviors.

The industrial methods of producing typography meant that all letters had to be identical....Typography is now produced with sophisticated equipment that doesn't impose such rules. The only limitations are in our expectations. Erik van Blokland and Just van Rossum, 2000

BACK TO WORK

Although the 1990s are best remembered for images of decay, typeface designers continued to build a repertoire of general purpose fonts designed to comfortably accommodate broad bodies of text. Rather than narrate the story of their own birth, such workhorse fonts provide graphic designers with flexible palettes of letterforms coordinated within larger families.

Mrs Eaves: working woman

Zuzana Licko, fearless pioneer of the digital dawn, produced historical revivals during the 1990s alongside her experimental display faces. Her 1996 typeface Mrs Eaves, inspired by the eighteenth-century types of John Baskerville (and named after his mistress and housekeeper Sarah Eaves), became one of the most popular typefaces of its time.
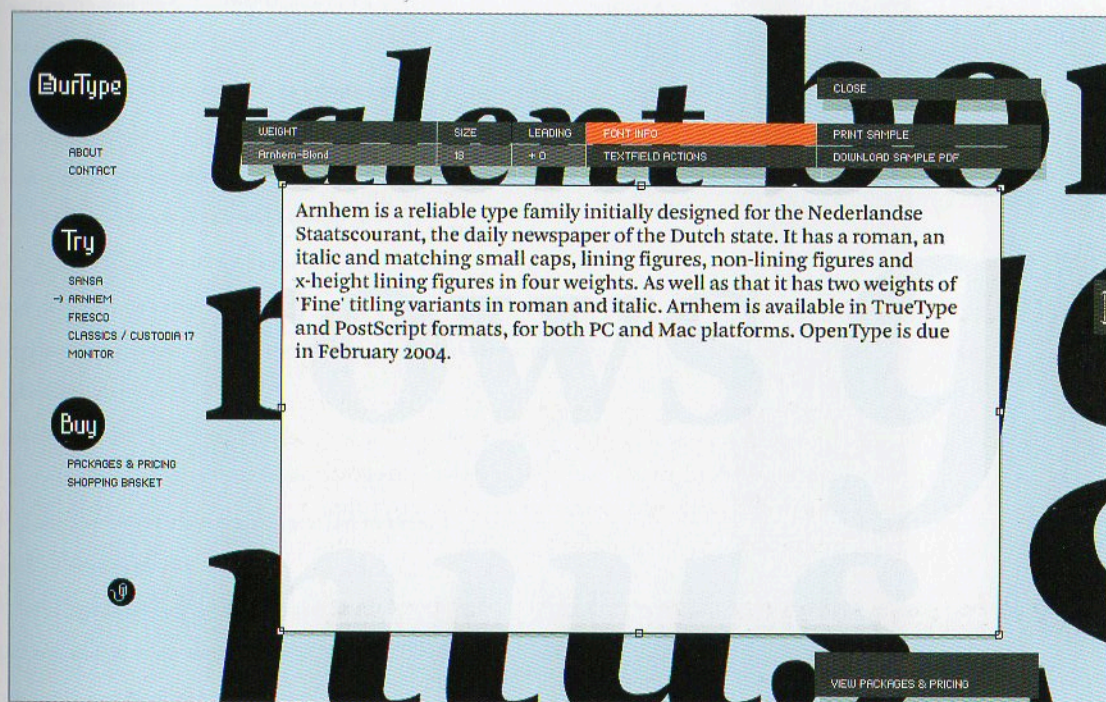
Quadraat: all-purpose Baroque

Designed in the Netherlands, typefaces such as Martin Majoor's Scala (used for the text of this book) and Fred Smeijers's Quadraat offer crisp interpretations of typographic tradition. These typefaces look back to sixteenth-century printing from a contemporary point of view, as seen in their decisively geometric serifs. Introduced in 1992, the Quadraat family has expanded to include sans-serif forms in numerous weights and styles.

Gotham: blue-collar curves

In 2000 Tobias Frere-Jones introduced Gotham, derived from letters found at the Port Authority Bus Terminal in New York City. Gotham expresses a no-nonsense, utilitarian attitude that persists today alongside the aesthetics of grunge, neofuturism, pop-culture parodies, and straight historical revivals that are all part of contemporary typography.

When choosing a font, graphic designers consider the history of typefaces and their current connotations as well as their formal qualities. The goal is to find an appropriate match between a style of letters and the specific social situation and body of content that define the project at hand. There is no playbook that assigns a fixed meaning or function to every typeface; each designer must confront the library of possibilities in light of a project's unique circumstances.

Arnhem is a reliable type family initially designed for the Nederlandse Staatscourant, the daily newspaper of the Dutch state. It has a roman, an italic and matching small caps, lining figures, non-lining figures and x-height lining figures in four weights. As well as that it has two weights of 'Fine' titling variants in roman and italic. Arnhem is available in TrueType and PostScript formats, for both PC and Mac platforms. OpenType is due in February 2004.

OURTYPE.COM
Web site, 2004
Designers and publishers: Fred Smeijers and Rudy Geeraerts
This Flash-based Web site for a digital type foundry allows users to test fonts on the fly. The designers launched their own "label" after creating fonts such as Quadraat for FontShop International. Displayed here is the typeface Arnhem.

1. a font that asks more questions than

2. a font that has projective memory that reminds you to

3. a font with a limited

4. a font with an ex

5. a font that's

Can we envision

6. a font without temporal inflection, without the imprint of

7. an apolitical font, a font that do

8. a font unaffected by the force of gravity and the weight of hum

9. a font without family, without

10. a Marshall McLuhan font that stubbornly persists in bidding farewell

11. a font that takes advantage of all that promised "processing

12. a font that does something other than sit on its ass in a digital

13. a font with the capacity to breed with

14. a recombinant font — every letterform the unruly child of a predictable but rand

15. a font that sounds as good

16. a font that writes its

17. a font that thicken

18. a font that responds and reacts to the meaning it carries and

19. a font that assumes the intelligence of

20. a font that might sense your level of agitation, fear, or

21. a font prone to sudden outbursts and

22. a font that exceeds the typograph

23. a font whose parents are Father Time and the Mother of

24. an ambient font, a font without

25. an everyday font, a font of

a font that slows the pace of reading for the difficult passages (and skips along through easy bits)

a font that writes between the lines

a font that refuses to utter imperatives or commands

a karaoke font, a lip-synching font, a font without a voice of its own

a font that listens while it speaks

a font that toggles effortlessly between languages

a font for speaking in tongues

a font that speaks in dialects

a metropolitan font for uptown, the ghetto, and suburbia alike

a font that simultaneously translates

a font that sings the plaintive songs of lonely whales

a font that grows

a font that learns

an evolutionary font

an entropic font

a "live" font

a promiscuous font, a font that fucks fonts, a font-fucking-font

a font that emerges, unfolds, performs, evolves, and passes away

a font of youth

twin fonts, identical but distinct

a generative font that renders itself according to behavioral tendencies

a font that is something other than a recording

a font that is different every time you "play" it

a font with the metabolism of a fly

a font with a demographic algorithm that projects itself onto you, the average reader

LIFE STYLE
Book, 2000
Designer and author: Bruce Mau
Publisher: Phaidon
Photograph: Dan Meyers

In this post-industrial manifesto, graphic designer Bruce Mau imagines a typeface that comes alive with simulated intelligence.

CAP HEIGHT

X-HEIGHT

BASELINE

Fancy

STEM   BOWL   SERIF   DESCENDER

LIGATURE   ASCENDER

flesh

FINIAL

TERMINAL   ASCENDER

fresh

SPINE

UPPERCASE   SMALL CAPITAL

Blood

CROSS BAR   COUNTER   LOWERCASE

CAP HEIGHT
is the distance from the baseline
to the top of capital letter.
The cap height of a typeface
determines its point size.

Some elements may
extend slightly above
the cap height.

skin, Bones

X-HEIGHT is the height of the
main body of the lowercase letter
(or the height of a lowercase x),
excluding its ascenders and
descenders.

THE BASELINE is where all the
letters sit. This is the most stable
axis along a line of text, and it
is a crucial edge for aligning text
with images or with other text.

The curves at the bottom of
letters such as o or e hang
slightly below the baseline.
Commas and semicolons also
cross the baseline. If a typeface
were not positioned this way,
it would appear to teeter
precariously, lacking a sense
of physical grounding.

body

Although kids learn to write
using ruled paper that divides
letters exactly in half, most
typefaces are not designed that
way. The x-height usually
occupies slightly more than half
of the cap height. The bigger
the x-height is in relation to the
cap height, the bigger the letters
will look. In a field of text, the
greatest density occurs between
the baseline and the top of the
x-height.

Hey, look!
They supersized
my x-height.

Two blocks of text
are often aligned along
a shared baseline.
Here, 14/18 Scala
(14-pt type with 18 pts
of line spacing) is paired
with 7/9 Scala.

12 points
equal 1 pica

6 picas
(72 points)
equal 1 inch

Big

HEIGHT Attempts to standardize the measurement of type began in the eighteenth century. The *point system*, used to measure the height of a letter as well as the distance between lines (*leading*), is the standard used today. One *point* equals 1/72 inch or .35 millimeters. Twelve points equal one *pica*, the unit commonly used to measure column widths.

Typography also can be measured in inches, millimeters, or pixels. Most software applications let the designer choose a preferred unit of measure; picas and points are a standard default.

60-POINT SCALA
A typeface is measured from the top of the capital letter to the bottom of the lowest descender, plus a small buffer space.

In metal type, the point size is the height of the type slug.

ABBREVIATING PICAS AND POINTS

8 picas = 8p

8 points = p8, 8 pts

8 picas, 4 points = 8p4

8-point Helvetica with 9 points of line spacing = 8/9 Helvetica

WIDE LOAD

INTERSTATE BLACK
The set width is the body of the letter plus the space beside it.

TIGHT WAD

INTERSTATE BLACK COMPRESSED
The letters in the condensed version of the typeface have a narrower set width.

WIDTH A letter also has a horizontal measure, called its *set width*. The set width is the body of the letter plus a sliver of space that protects it from other letters. The width of a letter is intrinsic to the proportion of the typeface. Some typefaces have a narrow set width, and some have a wide one.

WIDE LOAD

TIGHT WAD

TYPE CRIME:
HORIZONTAL & VERTICAL SCALING
The proportions of the letters have been digitally distorted in order to create wider or narrower letters.

You can change the set width of a typeface by fiddling with its horizontal or vertical scale. This distorts the proportion of the letters, forcing heavy elements to become thin, and thin elements to become thick. Instead of torturing a letterform, choose a typeface with the proportions you need, such as condensed, compressed, or extended.

Do I **look fat** in this paragraph?

These letters are all the same point size, but they have different x-heights, line weights, and proportions.

When two typefaces are set in the same point size, one often looks bigger than the other. Differences in x-height, line weight, and character width affect the letters' apparent scale.

Mrs Eaves, designed by Zuzana Licko in 1996, rejects the twentieth-century appetite for supersized x-heights. The font, inspired by the eighteenth-century designs of John Baskerville, is named after Sarah Eaves, Baskerville's mistress, housekeeper, and collaborator. The couple lived together for sixteen years before marrying in 1764.

nice *x-height*

Bigger x-heights, introduced in the twentieth century, make fonts look larger by maximizing the area within the overall point size.

Every typeface wants to know, "Do I look fat in this paragraph?" It's all a matter of context. A font could look perfectly sleek on screen, yet appear bulky and out of shape in print. Some typefaces are drawn with heavier lines than others, or they have taller x-heights. Helvetica isn't fat. She has big bones.

Every typeface wants to know, "Do I look fat in this paragraph?" It's all a matter of context. A font could look perfectly sleek on screen, yet appear bulky and out of shape in print.

Every typeface wants to know, "Do I look fat in this paragraph?" It's all a matter of context. A font could look perfectly sleek on screen, yet appear bulky and out of shape in print. Some typefaces are drawn with heavier lines than others or have taller x-heights. Mrs Eaves has a low waist and a small body.
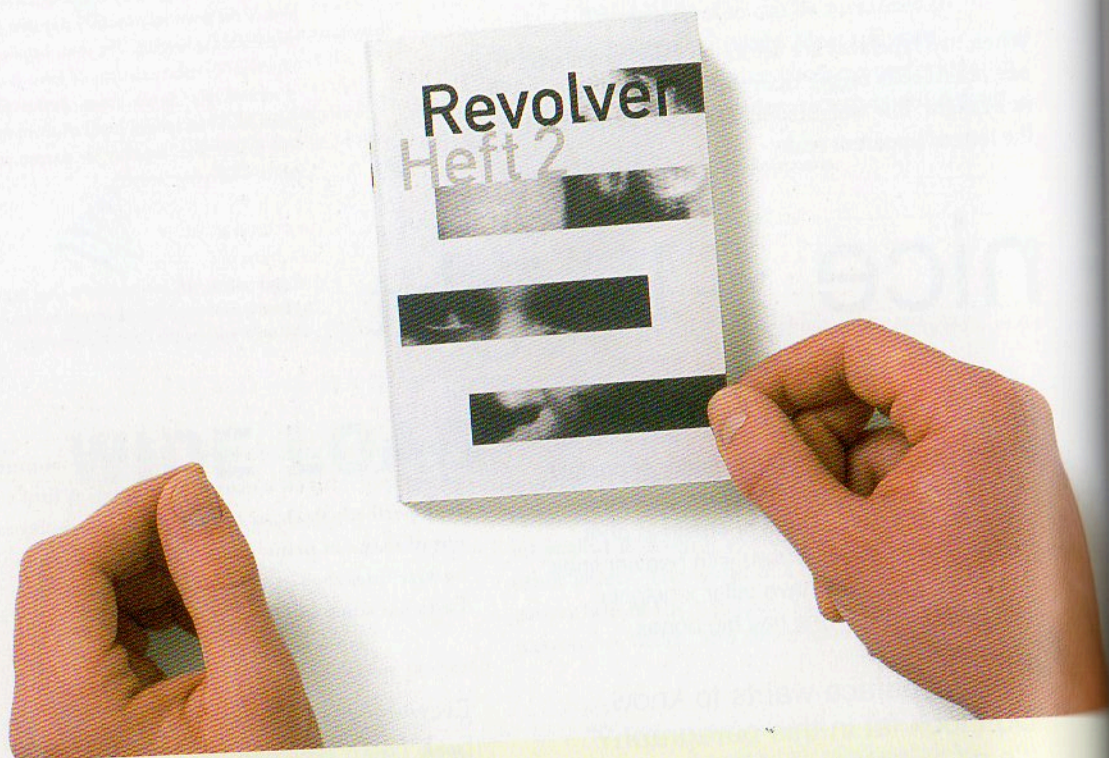
Every typeface wants to know: "Do I look fat in this paragraph?" It's all a matter of context. A font could look perfectly sleek on screen, yet appear bulky and out of shape in print. Mrs. Eaves has a low waist and a small body.

The default type size in many software applications is 12 pts. Although this generally creates readable type on screen displays, 12-pt text type usually looks big and horsey on a printed page. (12 pts is a good size for children's books.) Sizes between 9 and 11 pts are common for printed text. This caption is 7.5 pts.
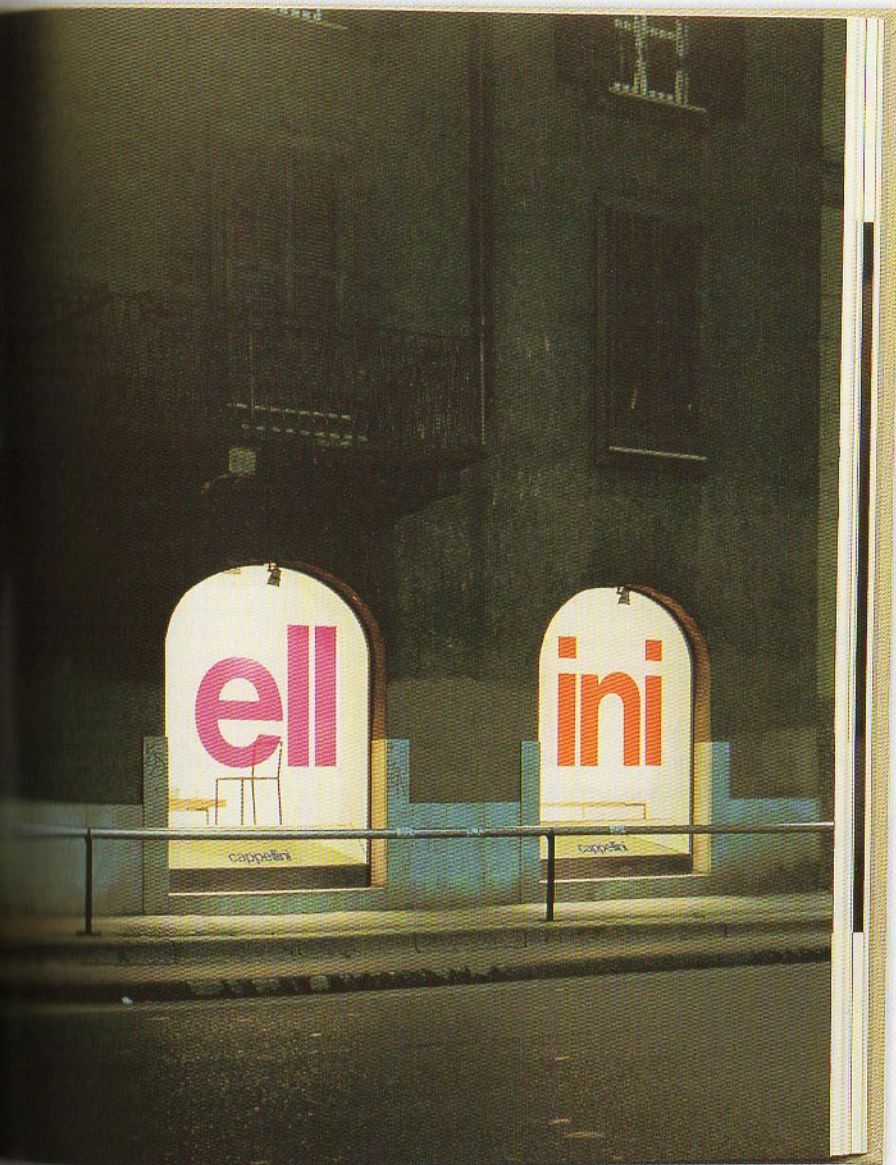
die schä-del knacken hören

42

REVOLVER:
ZEITSCHRIFT FÜR FILM
(MAGAZINE FOR FILM)
Magazine, 1998–2003
Designer: Gerwin Schmidt
*This magazine is created by and
for film directors. The contrast
between the big type and the small
pages creates drama and surprise.*

JASPER MORRISON:
EVERYTHING BUT THE WALLS
Book, 2002
Book designers: Jasper
Morrison, Lars Müller,
Matilda Plöjel
Publisher: Lars Müller
Cappellini store windows
designed by Jasper Morrison
Photograph: Dan Meyers
*Typography is realized at an
urban scale in this storefront
created by the industrial designer
Jasper Morrison. The existing
architecture determines the size
and pacing of the monumental
letters.*

SABON

Aa

BASKERVILLE

Aa

BODONI

Aa

HUMANIST OR OLD STYLE
The roman typefaces of the fifteenth and sixteenth centuries emulated classical calligraphy. Sabon was designed by Jan Tschichold in 1966, based on the sixteenth-century typefaces of Claude Garamond.

TRANSITIONAL
These typefaces have sharper serifs and a more vertical axis than humanist letters. When the fonts of John Baskerville were introduced in the mid-eighteenth century, their sharp forms and high contrast were considered shocking.

MODERN
The typefaces designed by Giambattista Bodoni in the late eighteenth and early nineteenth centuries are radically abstract. Note the thin, straight serifs; vertical axis; and sharp contrast from thick to thin strokes.

TYPE CLASSIFICATION A basic system for classifying typefaces was devised in the nineteenth century, when printers sought to identify a heritage for their own craft analogous to that of art history. *Humanist* letterforms are closely connected to calligraphy and the movement of the hand. *Transitional* and *modern* typefaces are more abstract and less organic. These three main groups correspond roughly to the Renaissance, Baroque, and Enlightenment periods in art and literature. Historians and critics of typography have since proposed more finely grained schemes that attempt to better capture the diversity of letterforms. Designers in the twentieth and twenty-first centuries have continued to create new typefaces based on historic characteristics.

CLARENDON

Aa

EGYPTIAN OR SLAB SERIF
Numerous bold and decorative typefaces were introduced in the nineteenth century for use in advertising. Egyptian fonts have heavy, slablike serifs.

GILL SANS

Aa

HELVETICA

Aa

FUTURA

Aa

HUMANIST SANS SERIF
Sans-serif typefaces became common in the twentieth century. Gill Sans, designed by Eric Gill in 1928, has humanist characteristics. Note the small, lilting counter in the letter a, and the calligraphic variations in line weight.

TRANSITIONAL SANS SERIF
Helvetica, designed by Max Miedinger in 1957, is one of the world's most widely used typefaces. Its uniform, upright character makes it similar to transitional serif letters. These fonts are also referred to as "anonymous sans serif."

GEOMETRIC SANS SERIF
Some sans-serif types are built around geometric forms. In Futura, designed by Paul Renner in 1927, the Os are perfect circles, and the peaks of the A and M are sharp triangles.

Sabon
14-PT SABON

This is not a book about fonts. It is a book about how to use them. Typefaces are essential resources for the graphic designer, just as glass, stone, steel, and other materials are employed by the architect.
9/12 SABON

Selecting type with wit and wisdom requires knowledge of how and why letterforms evolved.
7/9

Baskerville
14-PT BASKERVILLE

This is not a book about fonts. It is a book about how to use them. Typefaces are essential resources for the graphic designer, just as glass, stone, steel, and other materials are employed by the architect.
9/12 BASKERVILLE

Selecting type with wit and wisdom requires knowledge of how and why letterforms evolved.
7/9

Bodoni
14-PT BODONI

This is not a book about fonts. It is a book about how to use them. Typefaces are essential resources for the graphic designer, just as glass, stone, steel, and other materials are employed by the architect.
9.5/12 BODONI BOOK

Selecting type with wit and wisdom requires knowledge of how and why letterforms evolved.
7.5/9

Clarendon
14-PT CLARENDON
LIGHT

This is not a book about fonts. It is a book about how to use them. Typefaces are essential resources for the graphic designer, just as glass, stone, steel, and other materials are employed by the architect.
8/12 CLARENDON LIGHT

Selecting type with wit and wisdom requires knowledge of how and why letterforms evolved.
6/9

Gill Sans
14-PT GILL SANS

This is not a book about fonts. It is a book about how to use them. Typefaces are essential resources for the graphic designer, just as glass, stone, steel, and other materials are employed by the architect.
9/12 GILL SANS REGULAR

Selecting type with wit and wisdom requires knowledge of how and why letterforms evolved.
7/9

Helvetica
14-PT HELVETICA

This is not a book about fonts. It is a book about how to use them. Typefaces are essential resources for the graphic designer, just as glass, stone, steel, and other materials are employed by the architect.
8/12 HELVETICA REGULAR

Selecting type with wit and wisdom requires knowledge of how and why letterforms evolved.
6/9

Futura
14-PT FUTURA

This is not a book about fonts. It is a book about how to use them. Typefaces are essential resources for the graphic designer, just as glass, stone, steel, and other materials are employed by the architect.
8.5/12 FUTURA BOOK

Selecting type with wit and wisdom requires knowledge of how and why letterforms evolved.
6.5/9

THANKFUL · EMBOLDENED

McSWEENEY'S

FULL TO BURSTING! FULL TO BURSTING! FULL! BLOOD OF US ALL!

& HOT-BLOODED · LIFE-SAVING · PERPETUAL &

THE PRESUMPTION OF GOOD WILL

IRRATIONAL (OR MORE LIKELY, IRREDUCIBLY RATIONAL)

A necessary topic.

NO. **9** PROMPTLY.

GABE HUDSON	NATHANIEL MINTON
Comelies! The greatest of Letters. Bring it back!	*Being lost. Being buried. Longing. Heat. Topography.*
DENIS JOHNSON	ELLEN MOORE
Depravity. The count of a new essays. For whom?	*Listening to music with headphones next to the person you love.*
ROY KESEY	VAL VINOKUROV
The possibilities of penuries of exile. Redemice?	*Russian Larding. Revelsers flashing. Revenues marching.*
K. KVASHAY-BOYLE	W.T. VOLLMANN
Floating. Watching. The responsibility of accusation.	*Cassandra. Corpses. Of course there are jokes.*

DOUG DORST · *Greed. Lust. The burden of being unduly wrong.*
JEFF GREENWALD · *Conflict without reason or result. This is the problem.*
A. M. HOMES · *A true creation myth. A flight into a loose life.*

NO. **9** WITH GUSTO

TAKE: *your aggression.* QUESTION: *your aggression.* REMOVE IT: *from the company of others.* WALK WITH IT: *to a faraway place.* ALONE? *Yes, alone.* LEAVE IT: *under a great wide sky, exposed, apart.* DO NOT: *bury it.* DO NOT: *live with it.* NEVER: *in your home.* NOT: *in your life.* IT IS: *viral. It grows: like a shadow.* WE MUST: *carry it away.*

TRUST THIS GODDAMN LAND

HOLD THEM CLOSE

KNOW THEM.
KNOW THEM.
THEY CAN TALK! THEY CAN TALK!
CARRY IT. CARRY THEM.
KEEP IT SWEET.
DO NO HARM.
Breathe.
And yet:
HARM IS HARM IS HARM.
YOUR HARM IS OUR HARM.

CANNOT. WILL NOT. CANNOT. WILL NOT. CANNOT. CANNOT. WILL NOT. CANNOT. WILL NOT. CANNOT. WILL NOT. CANNOT. LIVE THAT WAY AGAIN.

REMEMBERING!
WRAP YOUR TINY AND ATROPHYING ARMS! WEAK & RUBBERY BUT YOURS
REMEMBERING!
YOU MUST — REMEMBERING!
MORE FOR YOUR SAKE THAN THEIRS

Breathe.
Breathe.

EFFLORESCENCE

BLOOMING · OR RASH? · · THE HIGHEST POINT. · OR SOMETHING · THAT ITCHES? · HE IS GONE

Our motto this time: "WE GIVE YOU SWEATY HUGS." *Do you sense it?*

GEG ENSC HEIN

NO MORE

Alternate scene: "WE ARE OUT LOOKING."

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LATE SUMMER EARLY FALL **2002** WE WILL DO FOUR THIS YEAR

FRIDTJOF

The idea of organizing typefaces into matched *families* dates back to the sixteenth century, when printers began coordinating roman and italic faces. The concept was formalized at the turn of the twentieth century.

Adobe Garamond was designed by Robert Slimbach in 1988.

The roman font is the core or spine from which a family of typefaces derives.

ADOBE GARAMOND REGULAR

The roman form, also called "plain" or "regular," is the standard, upright version of a typeface. It is typically conceived as the parent of a larger family.

Italic fonts, which are based on cursive writing, have forms distinct from roman.

ADOBE GARAMOND ITALIC

The italic form is not simply a mechanically slanted version of the roman: it is a separate typeface. Note that the letter a has a different shape in the roman and italic variants of Adobe Garamond.

SMALL CAPS HAVE A HEIGHT THAT IS SIMILAR TO *the lowercase* X-HEIGHT.

ADOBE GARAMOND EXPERT (SMALL CAPS)

Small caps (capitals) are designed to integrate with a line of text, where full-size capitals would stand out awkwardly. Small capitals are slightly taller than the x-height of lowercase letters.

Bold (and semibold) typefaces are used for emphasis within a hierarchy.

ADOBE GARAMOND BOLD AND SEMIBOLD

Bold versions of traditional text fonts were added in the twentieth century to meet the need for emphatic forms. Sans-serif families often include a broad range of weights (thin, bold, black, etc.).

Bold (and semibold) typefaces each need to include an italic version, too.

ADOBE GARAMOND BOLD AND SEMIBOLD ITALIC

The typeface designer tries to make the bold versions feel similar in contrast to the roman, without making the overall form too heavy. The counters need to stay clear and open at small sizes.

A full type family has two sets of numerals: *lining* (123) and *non-lining* (123).

ADOBE GARAMOND REGULAR AND EXPERT NUMERALS

Lining numerals occupy uniform units of horizontal space, so that the numbers line up when used in tabulated columns. Non-lining numerals, also called "text" or "old style" numerals, have a small body size plus ascenders and descenders, so that they mix well on a line with lowercase letters.

A *type* **family** CAN BE faked by *slanting*, or **inflating**, or SHRINKING letters.

ITALIC   BOLD   SMALL CAPS

TYPE CRIME:
PSEUDO ITALICS
The wide, ungainly forms of these skewed letters look forced and unnatural.

TYPE CRIME:
PSEUDO BOLD
Padded around the edges, these letters feel blunt and dull.

TYPE CRIME:
PSEUDO SMALL CAPS
These shrunken versions of full-size caps are puny and starved.

THESIS FAMILY

Designed by Lucas de Groot, LucasFonts, 1994
Thesis is one of the world's largest type families.

This is not a book about fonts. It is a book about how to use them. Typefaces
THESIS SERIF MEDIUM ROMAN

are essential resources for the graphic designer, just as glass, stone, steel, and
THESIS SERIF MEDIUM ITALIC

OTHER MATERIALS ARE EMPLOYED BY THE ARCHITECT. SOME DESIGNERS CREATE
THESIS SERIF MEDIUM SMALL CAPS

their own custom fonts. But most
THESIS SERIF BLACK ROMAN

graphic designers will tap the vast
THESIS SERIF EXTRA BOLD ROMAN

store of already existing typefaces,
THESIS SERIF BOLD ROMAN

choosing and combining each with
THESIS SERIF SEMI BOLD ROMAN

regard to the audience or situation.
THESIS SERIF MEDIUM ROMAN

Selecting type with wit and wisdom
THESIS SERIF SEMI LIGHT

requires knowledge of how and why
THESIS SERIF LIGHT ROMAN

letterforms have evolved. The history
THESIS SERIF EXTRA LIGHT ROMAN

of typography reflects a continual tension between the hand and machine, the
THESIS SANS MEDIUM ROMAN

organic and geometric, the human body and the abstract system. These tensions
THESIS SANS MEDIUM ITALIC

MARKED THE BIRTH OF PRINTED LETTERS FIVE CENTURIES AGO, AND THEY CONTINUE TO
THESIS SANS MEDIUM SMALL CAPS

energize typography today. Writing
THESIS SANS BLACK ROMAN

in the West was revolutionized early
THESIS SANS EXTRA BOLD ROMAN

in the Renaissance, when Johannes
THESIS SANS BOLD ROMAN

Gutenberg introduced moveable type
THESIS SANS SEMI BOLD ROMAN

in Germany. Whereas documents and
THESIS SANS MEDIUM ROMAN

books had previously been written by
THESIS SANS SEMI LIGHT ROMAN

hand, printing with type mobilized all
THESIS SANS LIGHT ROMAN

of the techniques of mass production.
THESIS SANS EXTRA LIGHT ROMAN

Interstate Light
Interstate Light Compressed
Interstate Light Condensed
Interstate Regular
Interstate Regular Compressed
Interstate Regular Condensed
Interstate Bold
Interstate Bold Compressed
Interstate Bold Condensed
Interstate Black
Interstate Black Compressed
Interstate Black Condensed

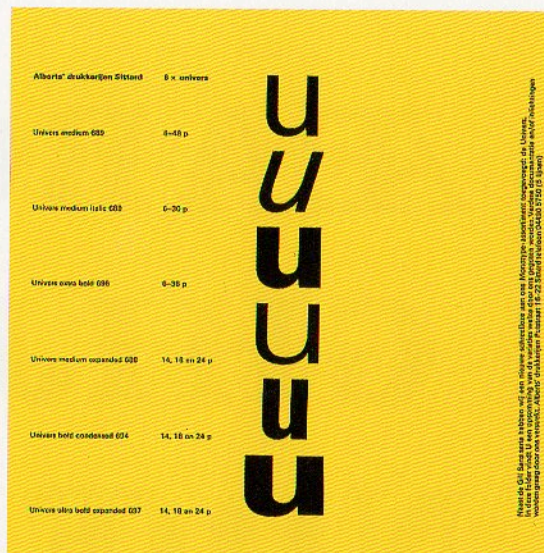*Designed by Tobias Frere-Jones, Font Bureau, 1993*

UNIVERS *was designed by the Swiss typographer Adrian Frutiger in 1957. He designed 21 versions of Univers, in five weights and five widths. Whereas many typographic families grow over time as they become popular, Univers was conceived as a total system from its inception.*

Scala

Scala Italic

SCALA CAPS

Scala Bold

Scala Sans

Scala Sans Italic

SCALA SANS CAPS

Scala Sans Bold

Scala Sans Bold

SCALA JEWEL CRYSTAL

SCALA JEWEL DIAMOND

SCALA JEWEL PEARL

SCALA JEWEL SAPHYR

Martin Majoor's Scala, used throughout this book, began as a serif typeface. Majoor later added a sans-serif sub-family as well as an ornamental "jewel" set. Majoor's diagram above shows how the serif and sans-serif forms have a common spine.
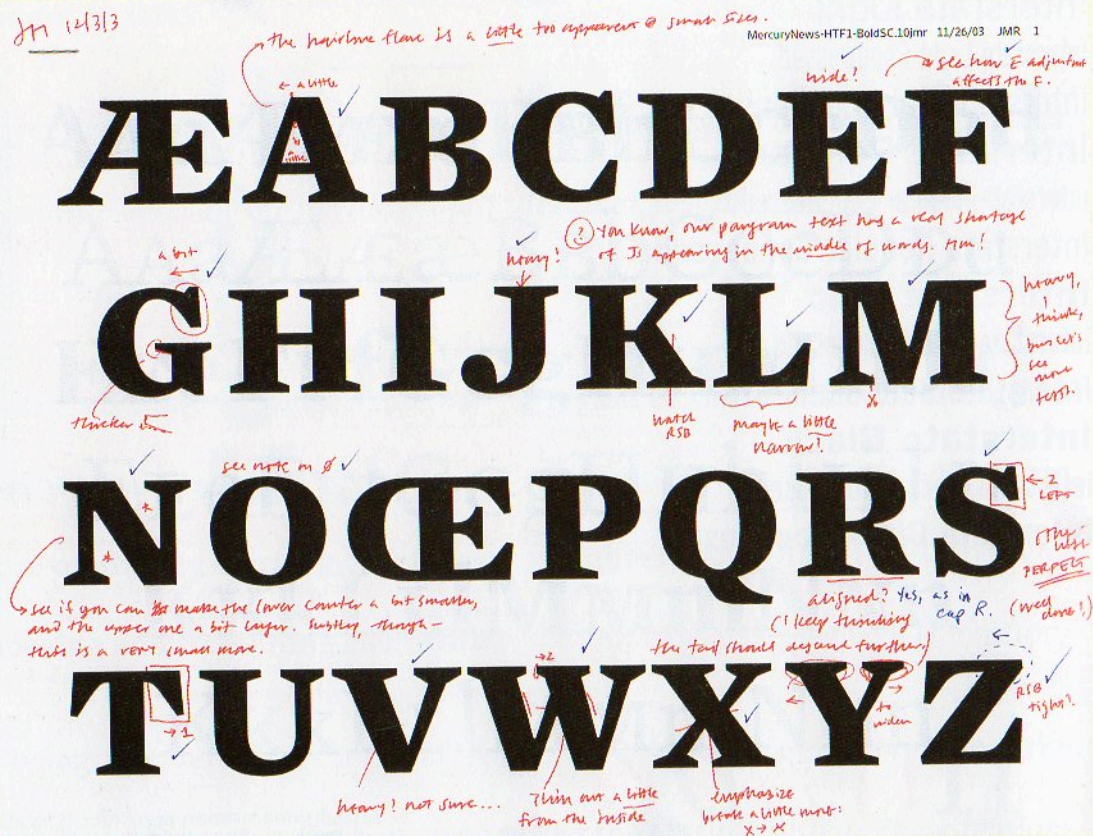
A traditional roman book face typically has a small family—a "nuclear" group consisting of roman, italic, small caps, and possibly bold and semibold (each with an italic variant). Sans-serif families often come in many more weights and sizes, such as thin, light, black, compressed, and condensed. In the 1990s, many type designers created families that include both serif and sans-serif versions. Small capitals and non-lining numerals (a courtesy traditionally reserved for serif fonts) are included in the sans-serif versions of Thesis, Scala, and many other big contemporary families.
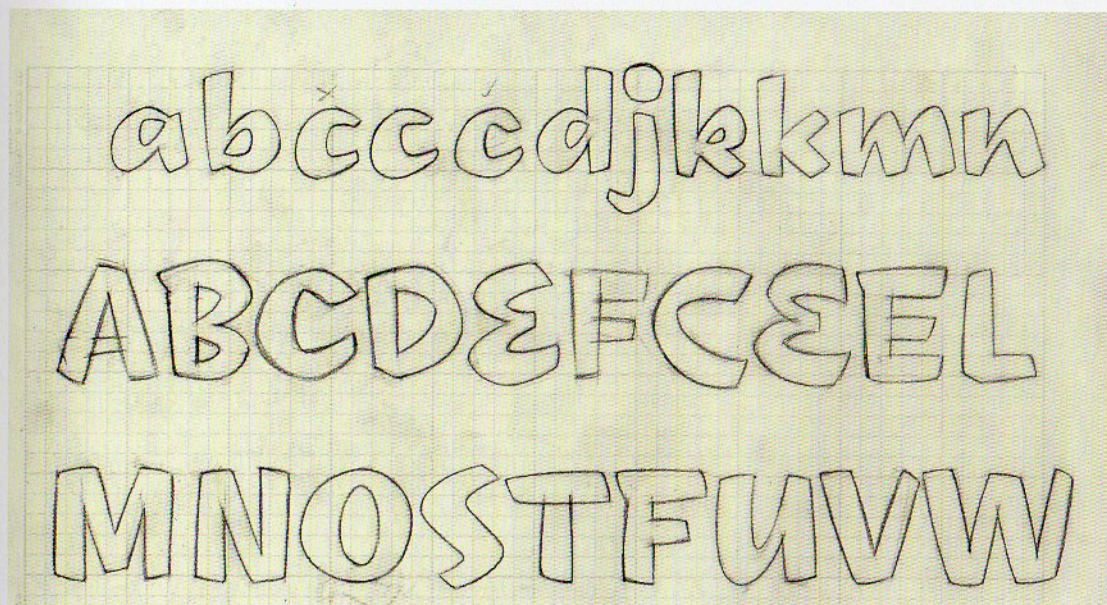
MERCURY BOLD SMALL CAPS
Proof, 2003
Designer: Jonathan Hoefler,
The Hoefler Type Foundry
*Mercury is designed for modern
newspaper production—fast, high-
volume printing on cheap paper.
The notes marked on this proof,
which shows sample letters from just
one variant of the vast Mercury
family, comment on everything from
the width or weight of a letter to the
size and shape of a serif.*

Castaways

Castaways is from a series of digital fonts based on commercial signs in Las Vegas. The original signs were created by lettering artists who worked by hand to make custom graphics and logos. House Industries is a digital type foundry that creates typefaces inspired by popular culture and design history. Designer Ken Barber makes pencil drawings by hand and then digitizes the outlines.

For more than five hundred years, typeface production was an industrial process. Most type was cast from lead until the rise of photo typesetting in the 1960s and 1970s; early digital typefaces (also created in that period) still required specialized equipment for design and production. It was not until the introduction of desktop computers that typeface design became a widely accessible field. By the end of the twentieth century, digital "type foundries" had appeared around the globe, often run by one or two designers.

Producing a complete typeface remains, however, an enormous task. Even a relatively small type family has hundreds of distinct characters, each requiring many phases of refinement. The typeface designer must also determine how a font is to be spaced, what software platforms it will use, and how it will function in different sizes, media, and languages.

Screenprint posters, 2002
Designer: Nolen Strals
*Not all letters are typographic.
Hand lettering remains a
vibrant force in graphic design,
as seen in these posters
for Baltimore music events.
Hand lettering is also the basis
of many digital typefaces, but
there is nothing quite as potent
as the real thing.*

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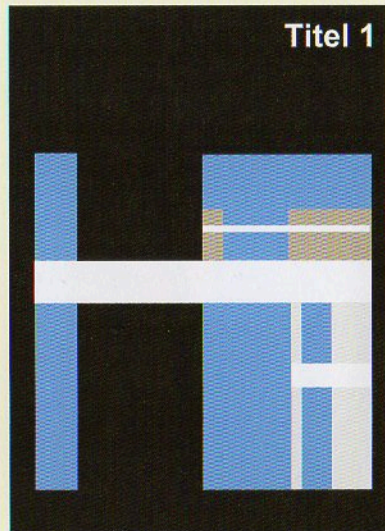
Hübner

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HÜBNER
Identity program, 1998
Designer: Jochen Stankowski
*This identity for an engineering firm
uses the letter H as a trademark.
The proportions of the mark change
in different contexts.*

Titel 1

LOGOTYPES use typography or lettering to depict the name of an organization in a memorable way. Whereas some trademarks consist of an abstract symbol or a pictorial icon, a *logotype* uses letters to create a distinctive visual image.

Logotypes can be built with existing fonts or with custom-drawn letterforms. Modern logotypes are often designed in different versions for use in different situations. A logotype is part of an overall identity program, which the designer conceives as a "language" that lives (and changes) in various circumstances.

RACHEL COMEY
Logotypes, 2003
Designer: Anton Ginzburg
These logotypes for a fashion designer use traditional letterforms in a contemporary manner. Writing the designer's name in lowercase letters softens the formality of the classic script characters, while the capital letter M in "coMey" injects the name with an element of surprise.

THE NOGUCHI MUSEUM
Logotype, 2004
Designers: Abbott Miller and Jeremy Hoffman, Pentagram
The sides of a square have been gently contoured in reference to the work of Isamu Noguchi, namesake of the Noguchi Museum. The concave square coordinates with the typeface Balance, used in the logotype, which also has softly curved elements.

letterscapes
by peter cho

LETTERSCAPES
Web site, 2002
Designer: Peter Cho
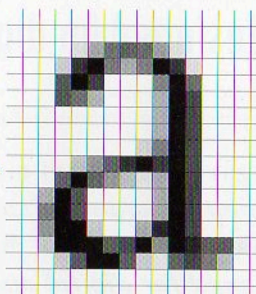*This experimental Web site features bitmapped letters animated in three-dimensional space.*

I became tired of cries for more *anti-aliased* type to correct the jagginess of digital type. While one side of me cried to see Garamond butchered on the pixel grid, another side thought, "Who cares?" John Maeda, 2001

Anti-aliasing, which uses shades of gray to create the illusion of a curved edge, is effective for presenting text on screen at large sizes.
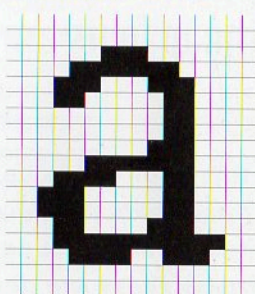
At small sizes, however, anti-aliased text looks blurry. Many designers (and readers) prefer pixel fonts for text.

Anti-aliasing creates the appearance of a smooth edge by rendering some of the pixels along the edge of the letter in shades of gray. It is more effective for displaying large headlines than small text.

ANTI-ALIASED LETTER   BITMAPPED LETTER

FONTS FOR PRINT

Helvetica, created in Switzerland in 1957, is one of the most popular typefaces in the world.

Although Helvetica is the sans-serif default font for many computer users, it was designed for print.

12- AND 8-PT HELVETICA *Designed by Max Miedinger, 1957*

Times Roman, created for a London newspaper, is also hugely popular, owing largely to its broad distribution.

This font is a default for many Web sites, because users can be expected to have it on their own computers.

12- AND 8-PT TIMES *Designed by Stanley Morison, 1931*

FONTS FOR THE SCREEN

Verdana is a sans-serif font designed by Matthew Carter especially for digital display.

Verdana has a larger x-height, simpler curves, and more open forms than Helvetica.

12- AND 8-PT VERDANA *Designed by Matthew Carter, 1996*

Georgia is a serif screen face that is designed with simple curves, open forms, and generous letterspacing.

Georgia and Verdana, commissioned by Microsoft, have been widely distributed, making them useful Web fonts.

12- AND 8-PT GEORGIA *Designed by Matthew Carter, 1996*

Bitmap fonts are designed for digital display.

Bitmap fonts are designed for digital display at a specific size.

Bitmap fonts are designed for digital display.

Bitmap fonts are designed for digital display.

Bitmap fonts are designed for digital display at a specific size.

Bitmap fonts are designed for digital display at a specific size.

LO-RES FAMILY *Designed by Zuzana Licko for Emigre, 1985*
These bitmap fonts incorporate Licko's earlier Emigre, Emperor, Oakland, and Universal font families.

Bitmap fonts are designed for digital display at a specific size.
Bitmap fonts are designed for digital display at specific size.
Bitmap fonts are designed for digital display at specific size.
Bitmap fonts are designed for digital display at a specific size.

8-POT PIXELLA REGULAR, ITALIC, BOLD, AND BOLD ITALIC
Designed by Chester for Thirstype, 2003

Bitmap fonts are designed for digital display at a specific size.
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8-PT FFF CORPORATE *Designed by Walter Apai for Fonts for Flash, 2003*
These fonts are designed specifically to work with the Macromedia Flash multimedia authoring application.

BITMAP FONTS are built out of the *pixels* (picture elements) that structure a screen display. Whereas a PostScript letter consists of a vectorized outline, a bitmap character contains a fixed number of rectilinear units that are either "on" or "off."

Outline fonts are *scalable*, meaning that they can be reproduced in a high-resolution medium such as print at nearly any size. Outline fonts are often hard to read on screen at small sizes, however, where all characters are translated into pixels. (Anti-aliasing can make legibility even worse for small text.) In a bitmap font, the pixels do not melt away as the letters get bigger. Some designers like to exploit this effect, which calls attention to the letters' digital geometry. Pixel fonts are widely used in both print and digital media.

8 px Corporate

16 px Corporate

24 px Corporate

32 px Corporate

A bitmap font is designed to be used at a specific size, such as 8 pixels, because its body is precisely constructed out of screen units. A bitmap font should be displayed on screen in even multiples of its root size (enlarge 8-px type to 16, 24, 32, and so on).

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BOEKHANDEL NIJHOF & LEE
   STAALSTRAAT 13-A
   1011 JK AMSTERDAM


22/05/03 13:12          01
000000 #0094    BED.1

VERZENDKOST.         42.50
TYPOGRAFIE            6.00
TYPOGRAFIE           16.50
TYPOGRAFIE           19.50
TYPOGRAFIE           33.95
TYPOGRAFIE           55.35
TYPOGRAFIE           32.00
TYPOGRAFIE           59.00
TYPOGRAFIE           40.00
TYPOGRAFIE           50.40
TYPOGRAFIE           47.25
TYPOGRAFIE           80.00
TYPOGRAFIE           37.70
SUBTOTAL            520.15
BTW LAAG             29.44

STUKS                  130
CREDIT          520.15

   DOK ANTIQUARIAAT
   TEL:020-6203980
   FAX:020-6393294
```
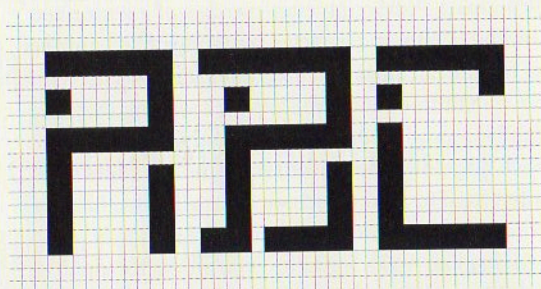
NIJHOF & LEE
Receipt, 2003
This cash register receipt, printed with a bitmap font, is from a design and typography bookstore in Amsterdam. (The author is still in debt from this transaction.)

Create a prototype for a bitmap font by designing letters on a grid of squares. Substitute the curves and diagonals of traditional letterforms with rectilinear elements. Avoid making detailed "staircases," which are just curves and diagonals in disguise. This exercise looks back to the 1910s and 1920s, when avant-garde designers made experimental typefaces out of simple geometric parts. The project also reflects the structure of digital technologies, from cash register receipts and LED signs to on-screen font display, showing how a typeface functions as a system of elements.
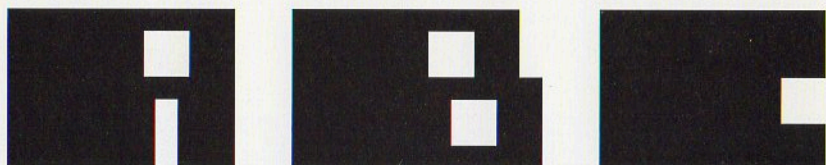
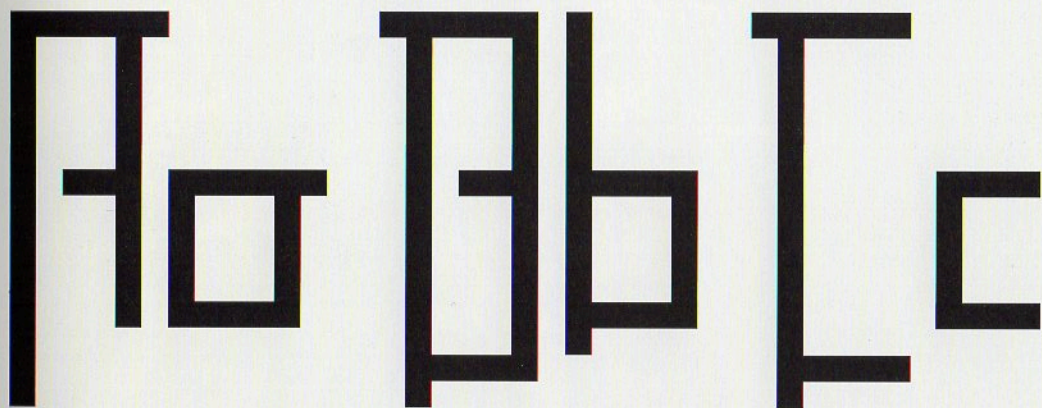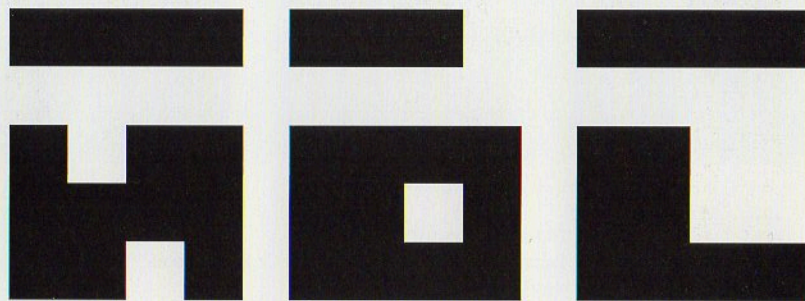*Examples of student work from Maryland Institute College of Art*

WENDY NEESE

JAMES ALVAREZ

JOEY POTTS

BRUCE WILLEN

BRENDON MCCLEAN