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Designing type today

The field of type design has always felt reverberations from artistic movements, but it was not until the twentieth century that its base was shaken so radically. The twentieth century turned an essentially linear progression of letterforms into an entanglement of brash innovations and historical reimaginations, a visual manifestation, not only of writing, but of our culture and history. Design theorist Steven Heller writes:

...at [Modernism’s] core was an ethic—the responsibility that a designer has to actively contribute to, indeed enhance, the social, political, and cultural framework—that continues to inform even the most diehard Post-modernist...In fact, it’s foolish to deny that anyone who seriously explores the outer limits and the inner soul of visual communication is not in some way a modernist.

These designers encoded aesthetic ideals, cultural artifacts, and political messages into the logic and structures of their designs, and typography continued to grow as a richer and more multifaceted discipline.

Typography developed hand-in-hand with new advertising techniques and technologies of mass production. “Type designers are very fond of the problems imposed by the technology,” designer Peter Bilak explains. “They work in a discipline where restrictions and conventions define the frame of work. A problem is the type designer’s muse, and in the last decades we were blessed by enough problems to solve.” Progressing from cold metal to hot metal to photo to digital, the technologies behind movable type indeed changed more radically in the twentieth century than they had since Gutenberg.

Contemporary type designers must address an entirely new set of challenges—not only in terms of technological problems, but aesthetic, cultural, and functional ones as well. More typefaces are being offered with expanded families, and extended language support, providing distinctive and flexible identities and character sets required to thrive in a multicultural setting.

In the past twenty years, both type design and typography have undergone rapid democratization and despecialization. Producing a font, once a long, arduous process requiring specialized craftspeople, can now be done by anyone with a personal computer and the correct software. While digital fonts are produced at incalculable rates by amateurs and professionals alike, faces that are both unique and useful sometimes still seem hard to come by.

While it is rarely taught, typography is an everyday skill for the desktop publisher, and most computer users have at least a minimal awareness of fonts.
Still, even surrounded by an overabundance of font options, many typographi-
cal decisions have become non-choices, pre-selected by the desktop publishing
software. Users interact with a wide variety of typefaces, using them to navigate
the internet and the subway system. Many use the computer for a majority of
their written communication (formal and informal). Type is no longer only read
on paper, and must be designed to function within the nonlinearity and im-
mediacy of on-screen reading and writing. For some designs, that might mean
programming automatic ligature substitution for easy typesetting; for others, it
might mean helping the writer find an expressive typographic voice.

While the shapes of our letters are arbitrary enough to allow for a certain
degree of self-expression, in the end, type design is a necessarily conservative
discipline. These shapes remain deeply rooted in their history; to this day they
are profoundly affected by the writing hand of the Renaissance scribe and the
550 years of slight modifications made by generations of punchcutters and
type designers. Frederic Goudy had a point when he said that all of the old guys
stole our best ideas.

On the other hand, brand new ideas aren’t always what type designers are
necessarily after. Peter Biľak sees these old guys in a different light:

Their aim was not to reinvent the existing, but to reveal an unknown
aspect of the art itself. Typefaces designed to fulfill the needs of their
times contribute their small part to the knowledge accumulated across
the centuries; not necessarily by inventing anything revolutionary,
but by extending and adapting collective knowledge to contemporary
conditions. The spirit of continuity is crucial: each new creation is
an answer to what has come before and each new typeface contains
accumulated knowledge.

The virtue of a type design falls somewhere in the gap between its history, its
function, and its audience. All too aware of this, the type designer carefully
reexamines historical precedence, but at the same time seeks to address current
technological and cultural demands.
Type as bodily gesture

Like any new technology, type began as an imitation of its predecessor. The first types built upon centuries of lapidary and calligraphic tradition, virtually emulating a scribal hand. It is easy to document type’s subsequent history as the gradual reduction of calligraphic elements and reemergence of letters as abstracted forms. While it is true that type has become much more than mechanized writing, “the conventions of calligraphic writing did and still do impose certain important characteristics on the design of typefaces that modern readers expect.” Our typographic letters owe much of their structure and visual logic to the progression of the Latin alphabet. Type’s first designers, the Renaissance punchcutters, had a deep understanding of both the theoretical, skeletal model of calligraphic letters and the black and white shapes that form as the calligraphy is executed.

**SKELETAL EVOLUTION**

Georges Jean writes that standardized writing “cannot be said to exist until there is an agreed-upon repertoire of formal signs or symbols that can be used to reproduce clearly the thoughts and feelings” of those who employ them. Twentieth-century calligrapher and type designer Edward Johnston writes that “the essential or structural forms...are the simplest forms which preserve the characteristic structure, distinctiveness, and proportions of each individual letter.” This includes the script’s ductus, the sequences and directions of strokes that most efficiently writes each letter.

From the birth of the Roman alphabet, the way in which these symbols were written—and subsequently, their appearance—was in perpetual evolution. Businesses and individuals kept more records, literacy spread, more books were required, and writing gradually became a more commonplace task. Naturally, more and more efficient scripts were needed to meet this continuously increasing demand. Calligrapher Marc Drogin, describing a pattern in the rise and fall of scripts, explains that the Roman Square Capital script, while beautiful, was not practical or economic for extended writing. It took painstakingly long to write in books, and its wide letters necessitated the use of more paper. Rapid and thin, the Roman Rustic script evolved, proving to be a much simpler replacement. Drogin explains:

> What then happened to the simpler replacement was to happen again and again. Roman Rustic became popular and talented scribes
added calligraphic touches to it. As these became popular and the script reached a higher calligraphic plateau, any use of it in simpler form became less acceptable to the discerning eye. The script, in effect, had nowhere to go but up. It could not stand still because the scribes’ creative instinct could not be kept still.

Drogin continues, “As we follow the history of scripts, we find that most came into prominence to fill a need for functionality, flourished, became ever more calligraphic, and died of a surfeit of scribal exuberance.” Every calligraphic script had a short lifespan in running text before reaching this peak; afterwards, the newly ornate script was reserved only for decorative titles and initials. By the tenth century, calligraphers and scribes had developed a more compact, more efficient minuscule alphabet, distinct from the majuscule alphabet used in Roman times. For example, the capital letter A, comprised of six or more strokes in Roman times, was simplified into two natural, flowing marks by the tenth century. The ductus of the minuscule, or what we now know as lowercase, caters to the preferences of the hand and the efficiency of the stroke.

That is not to say that the evolution of writing was not affected by the political climate. With the decline of the Roman Empire left no central power, or standard script for that matter, in Western Europe. The monasteries of each region developed their own distinctive scripts, so distinctive that they were virtually illegible to anyone outside the region. The national hands, especially the Lombardic hand in Italy, Visigothic in Spain, Merovigian in France, and Insular in Ireland, were less fixed than the imperial Roman hand, leaving much room for variation and exhibition by the scribe. As Charlemagne unified Western Europe, he implemented a standardized writing system, expediting the evolution of the minuscule form.

Monasteries could not keep up with the demand for books and writing that resulted from a better-educated public. Professional scribes lightened the load of the monasteries. Robert Bringhurst writes, “A well-trained European scribe might know eight or ten distinct styles of script. Each was defined as precisely as a typeface, stored like a font in the human memory, and each had certain uses. Sacred scriptures, legal documents, romance literature, business and personal letters all required different scripts, and particular forms evoked specific languages and regions.”

Northern European blackletter was the predominant European bookhand from the eleventh to fifteenth centuries. Although a direct descendant of the Charlemagne’s minuscule, the blackletter hand represented a distinct aesthetic shift. “Carolingian Minuscule was composed of independent and clearly defined letters that formed words...the direction that calligraphy then turned was one that emphasized the uniformity of the word, with the letters and their design being subservient...” Drogin continues to explain the practical reasoning...
behind this aesthetic shift: “Specifically, demand for texts required that scribes write faster and use less space, thus reducing time spent, the cost of materials, and thereby the cost of books.” Various forms of blackletter surfaced throughout the late middle ages, but as type appeared in Germany in the mid-fifteenth century, it had already reached its peak. Blackletter was slowly being replaced in most of Europe by the lighter, rounder humanist bookhand popular in Renaissance Italy. While the humanist bookhand greatly reduced the number of separate strokes required to make the letters, it could not be written as fast as a connected, cursive hand. The chancery italic script developed alongside the bookhand, and provided a faster, more flowing writing experience for the scribe.

While politics, nationalism, and style clearly influenced Western calligraphy, speed, functionality, and writing economy were the factors that spurred its evolution. As type slowly reduced the need for new, more efficient letters, the evolution of writing’s skeletal forms came to a virtual standstill.

LET THE TOOL DO THE TALKING

Writing without thicks and thins is virtually impossible. Many of our contemporary writing tools—the sharpened pencil, the ballpoint pen, or the fine-tipped marker, to name a few—can approximate a letter’s skeletal form, but even a writing implement that produces a monoline stroke creates subtle blots and contrasts resulting from variations in speed, pressure, and the spreading of ink. The idealized ductus of the letter dictates its identifying features and stroke order, but it is the markmaking tool and the manner in which it is used that controls the black—and by extension, the white—that appears on the page.

Used by display letterers since the Roman Empire, the brush is an incredibly powerful and versatile calligraphic tool, and was the first major influence on the Roman alphabet. It is unique because of the ease with which it can be rotated, especially at larger sizes. Father Edward Catich, a noted calligrapher, explains: “It is quite possible in writing letters, say, six feet tall, to use not only the joints of the writing arm, but the vertebral, hip, knee, and ankle joints, and in so doing to make changes from and into any cant angle.” However, in order to firmly define stroke beginnings and endings, the calligrapher is required to edge the brush into and out of the stroke. The resulting nonstructural flares at the beginnings and ends of strokes formed the basis of the Roman inscriptive serif. The brush can also be moved at upward angles and at quick speeds that would cause problems with reeds and pens. These fast strokes bend the soft, pliable brush and create a distinctive swelling in the line.

While the brush flourished at the largest sizes, it proves to be unwieldy at the small size required for most writing. Historically, the broadnib pen was the central tool of Western writing and calligraphy, used for most bookhands and
scribal work until the late Renaissance. Like any artistic tool, the broad nib pen has certain preferences that the calligrapher must either accept or painstakingly circumvent.

With its squared-off edge, the broad nib pen produces thick and thin strokes relating to the angle at which the pen is consistently held. Writing theorist Gerrit Noordzij labels this contrast as translation contrast because the direction of the stroke is the only variable factor; the width of the nib and the angle at which it is held remain relatively constant. To vary this contrast, a skilled calligrapher can occasionally rotate the angle of the pen, adding another variable and creating a more complex contrast. However, because of the added time, skill, and attention needed for smooth rotation, it is reserved only as a special effect and never used consistently in a body of writing.

While writing, the broad nib pen requires a small edge-in to begin the flow of ink to the writing surface. Catich explains this need: “Ink is fed from the ink retainer down the slit of the reed to the reed tip and, in order to get an even distribution of ink along the entire writing edge of the reed, the initial wiggle is needed.” By force of habit, a beginning calligrapher soon incorporates this “initial wiggle” into the flow of the stroke, forming a head and foot serif at the extremities of each stroke.

The broad nib pen naturally creates a downstroke, begun at the top and pulled towards the body of the writer. When writing in a formal bookhand, the pen is then picked up and moved back to the top to create the next stroke, and letters are constructed from series of overlapping, but separate, strokes. However, in the cursive style of writing, the pen double back, flicking upwards and returning to the top of the line. This creates a continuous, flowing movement of the hand that allows the calligrapher to write more efficiently.

At the dawn of the Renaissance, the textura blackletter script epitomized the first type of letter construction; letters were literally broken into their strokes, their texture emphasized over the letter’s individuality. The humanist minuscule script, the basis for the typographic roman letter, is a lighter, more ribbonlike version of the interrupted construction, but the italic script (and consequently italic type) is differentiated from the roman by its roots in cursive writing and its returning-stroke construction.

The introduction of the flexible pointed pen in the sixteenth century not only influenced the appearance of formal and informal writing, but also the types that use this writing as a model. The flexible pointed pen produces a very different contrast than that of the broad nib. The contrast it creates is one of expansion: the stroke swells and thins due to variance in pressure if the stroke is perpendicular to the orientation of the pen. Expansionist letter tend to be completely upright, and, especially when used forcefully, have extreme and abrupt shifts in weight. “Where the stroke is thin,” Noordzij writes, “the
distinction between upstroke and downstroke loses its meaning. The difference between roman and cursive rests only on an interpretation of the tradition.” With the flexible pointed pen, the need for the distinction that separates the interrupted and returning constructions is eliminated; calligraphers are left to approximate them superficially.

CHIROGRAPHIC POTENTIAL IN PROGRAMMATIC TYPES

In most current digital font formats, the shapes of the letters are defined by their outlines, not by the calligraphic execution of a ductus. However, while successful implementations are limited, designing type with computer programs and languages gives the designer the opportunity to distance the design of the letter from the final output, just as the process of writing distances the skeleton from the end result. Donald Knuth’s Metafont proves that defining type by programs and parameters can reintegrate calligraphic logic directly into the making of digital type. Instead of defining character shape by its outline, the original 1977 version of Metafont defined character shapes with what Richard Southall describes as “parameterized virtual pens.” He quotes Knuth:

Most of these digits are drawn by using another idea taken from the history of typography, namely to imitate the calligrapher who uses pen and ink...Notice that instead of describing the boundary of the characters as the Renaissance geometers did, my Metafont system describes the curve traveled by the center of the pen and the pen’s shape is allowed to vary as the pen moves. The main advantage of this approach is that the same definition readily yields a family of infinitely many fonts of type, each font being internally consistent.

Metafont emulates both components of calligraphy: the definition of a basic skeletal structure, and the execution of a letter with a writing tool. First, the ductus defines the basic underlying form of a character by describing the path of the virtual “pen.” Then, this idealized character trace is informed by 60 parameters that determine the pen’s thickness, contrast, axis, serif definition, and more. This means that a thin, contrasted serif and a bold, monoline sans can be made from the exact same set of curves, differing only in the parameters of their execution. Knuth envisioned Metafont as more than a set of drawings of letters; he saw it as a “schematic description of how to draw a family of fonts” that was expandable, flexible, and that would survive changes in type composition technology.

While primary digitizations in Metafont were admirable in their flexibility and expandability, the letters lacked the fine-tuning that is possible with direct outline manipulation. Five years later, Knuth admitted that he was naïve when
he thought that shape edges would work themselves. However, he remained committed to the essential chirography in lettermaking: “On the other hand, we are not abandoning the pen metaphor, because it gives the correct “first-order” insights about how letters are drawn; the edge details are important second-order corrections that refine the designs, but they should not distract us from the chief characteristics of the forms.”

Metafont demonstrates that a calligraphic model can be successfully implemented into a typographic system, but at the same time exposes the limitations of calligraphic logic. Had it been as successful as PostScript, TrueType, and other outline-defined type models, it would have reimposed a more direct chirographic logic into contemporary type design.

VARIATION AND EXPRESSION

Despite the fact that digital types continue to be defined by their outlines, typefaces that emulate handwriting and calligraphy—or at least have a distinct calligraphic influence—are more abundant than ever. This is motivated by a variety of factors, including nostalgia for professional sign painting and hand lettering as well as a desire to humanize writing as an expressive markmaking activity.

Limited by static repetition and its small and fixed size, type historically could not rival the dynamic energy employed by professional hand letterers for eye-catching signs and displays. However, as typesetting technology developed, type transcended its physical limitations; designers were able photographically reproduce letters at any size and could creatively arrange and overlap them in virtually any fashion. Efficient and inexpensive tools, technologies such as Letraset (pre-printed dry-transfer lettering) and phototypesetting quickly replaced the professional hand letterer during the latter half of the twentieth century.

Type designs effortlessly mimic calligraphic forms, but still struggle to simulate the character and variation that comes naturally to the hand of an experienced letterer. The skilled letterer would adjust the shapes of his or her letters to fit snugly within the specific word. Contemporary type designers can only emulate this with pre-drawn alternate characters that anticipate a variety of letter combinations. However, OpenType, a relatively new type format, gives the type designer the ability to automatically substitute alternates based on their contexts. It is true that a handful of typefaces have utilized OpenType technology to create incredibly dynamic scripts, but the full potential of this technology is still being realized as support for OpenType features broadens. With enough alternates and contextual substitution, digital fonts could essentially function as lettering systems instead of modular typefaces.
Writing with Type

Historically, the structures and contrasts of a type have been based on the formal written script of its time: Gutenberg’s type relates to the German blackletter; Jenson’s, with the humanist minuscule, and Bodoni’s, with the flexible pointed pen. Today, a great deal of formal and informal writing is done electronically; the writer directly interacting with the type. “Type is idealized writing...” writes Bringhurst, “yet there is no end of typefaces and there is no end to visions of the ideal.”

Type is an extension of writing, which is in turn an extension of speech. Just as one would establish a sensory connection to a speaker by his or her voice, reading a handwritten manuscript allows a reader to visually connect with the author, as well as the time and place in which it is written. Writing turns the fleeting words of speech into fixed and permanent objects, and handwriting itself is the only artifact of the author’s presence amidst his or her words. When typeset, for better or worse, that connection to the author’s mark is lost; it is the role of the typographer to either reestablish—or compensate for—that connection.

Today, type replaces handwriting not only for the reader, but for the author as well. Linearity and sequence are important factors in handwriting, but not necessarily so on the computer. Electronic writing is restructured and fragmented by both the author and the active reader: “The experience becomes fragmentary and malleable, or oral, rather than unified and stable, or literate.” As the World Wide Web develops and hypertext and interactivity become a more important part of communication, orality plays an increasingly important part in communication. How does one design a type that is to be read, written, and spoken?

If electronic writing is simultaneously a systematic rendition of handwriting and a direct symbolic expression of speech, digital type designs must reflect this in their chirographic logic. Used for such a magnitude of reading, writing, and communication, contemporary typefaces rely more than ever on the flexibility and immediacy of their written and spoken roots. While programmatic type and lettering systems offer the potential to achieve this flexibility, type designers continue to explore the relationship between chirographic structures, calligraphic gestures, and shapes derived from the actual processes of creating type.

Bringhurst, p. 209.

A typographic language

Speaking with type designer Adrian Frutiger, typographer and publisher Robin Kinross proposed the notion that there are two different classes of type designers: calligraphers and cutters. He explained, “The former see and generate strokes, as if with a pen. The latter work by cutting away, seeing rather the space within and around the letters. Hermann Zapf, the leading German type designer, obviously belongs to the first group. We wondered about Eric Gill, in between, but more towards the second pole. And Frutiger himself?...Unquestionably a cutter.”

While both designers transcend these labels, Kinross's polarizing division is useful in pointing out two very different logics behind the development of typefaces. The method of construction and the designer’s approach clearly influences this logic: Is the black on the page a mark, a stroke, a line, or a shape? And what about the white surrounding it? What the division doesn’t account for, however, is that throughout its history, type design is rooted in both calligraphic and sculpted traditions. Eager to either undo art history or become its climactic inheritor, twentieth century expressionists and geometric modernists pitted gesture against abstraction: the writers and the cutters became superficially opposed.

Today’s typical text typeface is neither entirely written nor is it entirely sculpted. It is drafted, synthesizing its handwritten and sculpted histories. As type designers struggle to balance these histories with typography’s distinct visual language, the beauty of contemporary type designs springs from the play of calligraphic logic with abstractly modeled forms.

While type design often emulates calligraphy, it is not entirely an art of appearances. A type’s design is not a set of individual letters or letter concepts but rather a system of regularized, reorderable shapes. Consequently, type designers carefully design and scrutinize the whites of the letters in addition to the blacks. While whitespaces are incidental to calligraphers, the careful balance of black and white is essential to a successful type design.

STRUCTURE AND PROPORTION

We have already established that type has emulated the method of formal writing popular at its time. Gutenberg, was criticized for making a “fake” written letter, and endeavored to make his letters as “real” as possible to compete with manuscript books. The type used in his bible emulated the broken German blackletter; Jenson combined the gothic with the humanist minuscule, and
Arrighi, a master calligrapher, adopted the chancery italic to the typographic medium.

As the typographic letter developed, it cast off the oblique axis of the broadnib pen and began to stand upright. Its contrast increased dramatically. Robert Bringhurst says that this "remarkable shift in type design—like all structural shifts in type design—is the record of an underlying change in handwriting." He continues, "Romantic letters are forms from which the broadnib pen has vanished. In its place is the pointed and flexible quill." The popularity of copperplate scripts and the flexible-nib pen during the seventeenth and eighteenth centuries doubtlessly influenced the type designs of that period.

Writing again changed in the twentieth century, and monoline writing tools inspired slabby, low-contrast type designs. Modernists aestheticized the drafted elements of the letter, removing chirographic contrast and leaving only an essential skeleton.

**DRAFTED SHAPES**

The shape of a typographic letter, like a calligraphic one, is largely rooted in the tool that is used to make it. As such, metal type designs were inextricably linked to the specialized craft of punchcutting. "The men who cut the punches were the designers of typefaces. Though 'design' in our modern sense of planning, and drawing-as-instruction, had not then begun...design in this sense could not happen in cutting punches by hand." While calligraphers controlled the shape of the black on and around the white, cutting type into metal punches necessitated the careful and precise cutting of both the black and white shapes. The counterpunch, containing the inner shape of the letter, was cut independently from the punch and then impressed upon it. While the punchcutter needed to have in-depth knowledge of the letter ductus, the cutting process at such small sizes necessarily simplified the letterforms.

Type and printing technology remained mostly the same until the nineteenth century, where industrialization spurred the invention of various machines that hastened the typemaking and printing process. Instead of arduously cutting punches by hand, designers could use trace a two-dimensional drawn letter with a routing machine and create a wax or plaster plate at a quarter of the size. "The significant thing is that for the first time the type design now existed on paper in the form of accurate drawings—because type making had changed from a manual craft to a species of precision engineering." The punchcutter's sensitivity to optical sizes was lost; one drawing determined the outline of many sizes. No longer involved in the cutting of the type, type designers drew their designs with pencil and paper, losing the tangible experience of molding the counterform independently from the form.

References:

Bringhurst, p.130.


The drafted letter characterized type designs of the twentieth century, whether in metal, film, or computer. Attempting to recapture the immediacy and expressiveness of the calligraphic letter, designers redrew handwritten forms, regularizing and harmonizing their shapes. Designers sometimes became enamored with the gestural and expressionistic potential of the black of the letter, sometimes allowing the white to again become incidental.

At the same time, designers created types with unprecedented precision, and often favored straight lines and calculated curves. Geometric modernist faces are an extreme example, but not all drafted letters are so dehumanized. Type designer William Addison Dwiggins writes:

In the kind of geometrical spinach I have been growing for printers’ ornament, I note that straight-line forms and shapes of geometric curves properly put together achieve more effect of grace of line and curve and motion [than] do combinations of free-flowing curves and shapes. The ”grace” quality is somehow augmented—stepped up to a higher level by the sharp angular quality of the elements. Also, a new kind of tingle and life is added to the brew.

Dwiggins asserts that the conscious combination of line and curve gives letterforms freshness and clarity, even when seen at a distance. Instead of reducing a letter to its skeleton, a new, drafted shape—recalling, but not emulating, the pen in hand—is skinned around it.

New technologies eliminated the sculptural aspect of typography altogether. The end product of Phototypesetting is an entirely drawn and two-dimensional letter. With the limitations of metal pushed aside, designers were free to combine, modify, and abuse type with more flexibility than ever before. However, at the same time, ”a generation of type designers, graphic designers and typographers saw the full potential of Photo typography as an image related technology.” Built-up letters elaborated upon written and sculpted shapes, and display typography blossomed in the era of phototypesetting.

Computers store letter shapes as pixel data or a set of mathematical equations mapping the outlines of shapes. Simple and scalable, the latter is by far the dominant form. Composed of straight lines and curves, it would seem that outline fonts are designed more conceptually than ever. However, the immediacy and precision in on-screen manipulation endows the process of drawing with Bézier curves with a tangible, sculptural quality. In the same vein, type designer Sumner Stone writes, ”It is possible to use a letterform as a raw material for creating another one.” When described in outlines, digital type design is as much a process of modeling as it is a process of conceptualizing and drafting.
While structure and shape define the individual letters of a typeface, rhythm and modularity unify its design. Evolving from a texture of calligraphic strokes, rhythm in type design becomes more complex. Alejandro Lo Celso describes Sumner Stone’s distinction of outer and inner structures of a type family:

The outer structure is defined by distinctive elements such as bowls, serifs, joins, and arches. The inner structure of a typeface is harder to define and it is connected, for him, with the mysterious relationship existing "between the rhythms of the writing hand and the rhythms of the reading eye" which comes from the former craft to type design: calligraphy.

Type designs are essentially variations on the repetition of basic, modular forms. The rhythm that ties the design together is essential to the type's function, namely, to be read. Walter Tracy writes:

Letters do not live in isolation. They are the elements of meaning, the components of visible language, and their spatial relationship with each other is crucial, not only for the rapid recognition of words by the reader but for the regularity of texture that is essential if the reader's comprehension is to be maintained for a long period.

In this respect the type's design is inextricably connected to the manner in which it is set. The rhythm of letters within a word is a fundamental unit, determining the rhythm of words in a line, and consequently, lines on a page.

Designers have long used modular components as starting points for type designs. In hand-cut metal type, punchcutters had to cut every letter at every size individually, and consequently there were variations between letters, and even between the same letter at different sizes. However, some believe that punchcutters utilized the same counterpunch to form multiple letters’ whitespace, allowing the same countershapes to recur across different letters.

Drafted types used stencils, tracings to copy components, such as stems, serifs, and bowls, from letter to letter. On the computer, a designer instantly copies these same modular components to assemble letters rather than draw them.

Type designer Cyrus Highsmith defines a typeface as a kit of parts, designed to be combined in any order: "The networks of relationships between the parts, and the parts of parts, form the structures that hold the typeface together." Whether on a page, sign, or screen, typographic letters are designed to fit aesthetically and functionally in a variety of environments, rhythmically balancing the blacks and whites of text.
Today’s typefaces are forced to perform in more situations than ever before. Typography is used by designers for books, posters, websites, and signage alike. “Fonts are essentially modest semi-products,” writes Peter Biľak, “they don't have much meaning until they are used. And although type foundries and distributors often attach adjectives to fonts before they are used, in reality new typefaces are like blank sheets of paper.” It is the responsibility of the typographer, not the type designer, to give a type design a life outside of itself. However, a well designed typeface addresses a functional need not only in the shapes of its letterforms, but in the styles, characters, and features that it offers.

**TWO TYPOGRAPHIC FUNCTIONS**

If a writer is an artist of ideas, committing them to paper to form a text, then a typographer is responsible for containing these invisible words on a printed page. Robert Bringhurst writes that “typography is to literature as musical performance is to composition.” Beatrice Warde compares typography to crystal, explaining that “true connoisseurs of wine would prefer crystal to the finest gilded chalice...” because “...everything about it is calculated to reveal rather than to hide the beautiful thing which it was meant to contain.” As fine crystal, typography’s duty has traditionally been to avoid interfering with the text itself, allowing the flow of words to be as natural and accessible as possible. Its uniformity and consistency should not only demonstrate the complete and final authority of the text, but should render the type almost invisible. The reader should look through the type, but never at it.

Theorist Johanna Drucker believes that there is a duality between the content of text and its visual form and that tradition has separated and subordinated the visual presentation of a text. She argues that subdude typographic treatment underscores the authority of the writer: “The unmarked text, the even gray page of prose and poetic convention, appeared, as it were, to speak itself. Its production codes lent the text a transcendent character. The text appeared, was there, and the unmarked author was indeed the Author of the Text as pure Word—with all the requisite theological resonance.” The author’s scribblings are visually transformed into a completed and closed work. When the unmarked text is read, it unfolds linearly, as if it is being spoken to the reader by a disembodied voice. It is The Word, The Message revealed through text.

Drucker argues that the distinction between this unmarked text and its marked counterpart has existed since Gutenberg’s invention of movable type.
The prime example of Gutenberg’s unmarked text, naturally, is his bible: the uninterrupted Word of God. The Word is presented as a completed flow from its author on high; it speaks itself with no help needed from typography (save the occasional illuminated versal, mimicking the decorative illumination of calligraphic manuscripts). On the other hand, Drucker explains, the Indulgences that Gutenberg printed represent the beginnings of the marked page: “Different sizes of type were used to hierarchize information, to create an order in the text so that different parts of it appear to ‘speak’ differently, to address a reader whose presence was inscribed at the outset...with the graphic tools of a printer who recognized and utilized the capacity of typographic representation to manipulate the semantic value of the text through visual means.” Gutenberg’s visual manipulation of these Indulgences accentuate their usefulness as documents. According to Drucker, the literary text followed in the footsteps of the printed bible, the author deified by the authority of the unmarked page. Meanwhile, the marked text lay relatively dormant, only to reemerge in the age of advertising.

A manipulated page is a page with an agenda. The field of graphic design as we know it today has its roots in advertising, and persuasion is one of its primary functions. While the tools and resources of the typesetter changed little since Gutenberg, the nineteenth century saw the frequent use of many different type sizes and styles in fanciful arrangements. Visual communication was crucial, and persuasion came to be a primary goal of the commercial artist. This was furthered by the influx of propaganda posters and leaflets in the twentieth century, both on the side of the state and of those who wished to subvert it. Another factor that played into the success of the marked text in the nineteenth century is the newly-literate public (this was especially the case in France and England, where education was improved and promoted throughout the century). While most literary works were still purchased by intellectuals and the elite, illustrated weekly journals were very popular among the working classes. These weeklies were filled with wood-cut illustrations and decorated text, both of which served to navigate the reader through the news.

Drucker explains that at the end of the nineteenth century, marked typography consisted of the use of a wide range of typefaces in multiple sizes (even on the same line or in the same word), the breaking up of the page into distinct zones, and the use of circular or diagonal shapes and textblocks that contrasted or conflicted with the rectangle of the page. “Even without the incorporation of distinctly pictorial elements, the marked text became decidedly more visual, acting on the seductive methods and shock effects that could be generated by graphic variety.” On an unmarked page, the typography serves as a vessel that carries the authoritative message of the text; on a marked one, it interacts with the texts, shepherding the reader through its information.
A NEW MARKED TEXT

Invisible text isn’t always so transparent; in fact, in many cases the opposite is true. In reality, all text is marked, be it in a book or on a billboard. The visual presentation of text is separate from its message yet intimately connected, sitting on top of it like skin. Gutjahr and Benton analyze Drucker’s distinction: “Once given visual form, any text is implicitly coded by that form in ways that signal, however subtly, its nature and purpose, how its creators wish it to be approached and valued.” Since every readable text is in some way marked, Drucker’s marked/unmarked distinction serves to demonstrate the polarity of the two traditions and their contrasting takes on authorship and readership. For a sensitive publisher, the decision to follow traditional page layouts or to break up the page into navigable chunks is seen as a conscious interpretive choice, and should be one.

Marked and unmarked texts create contrasting roles for the reader. Drucker asserts: “Any text assumes a reader and marks that assumption to some extent. The texts which I am calling unmarked attempt to efface the traces of that assumption.” The unmarked text stands aloof to the needs of the reader; it focuses instead establishing the authority of the author’s message. Drucker continues: “The marked text, by contrast, aggressively situates the reader in relation to the various levels of enunciation in the text—reader, speaker, subject, author—though with manipulative utilization of the strategies of graphic design.” Even though the marked text is manipulative, it is transparent in its manipulation: the designer lays out his or her choices on the table for all to see. The reader simply allows him- or herself to be guided by the typographic cues.

The notion of designer as shepherd is inextricably tied to the marked text. When typographers use typography to actively interpret a text, they turn the focus of page design from the authoritative message of the author to the experience of the reader. With this death of the author, as Roland Barthes puts it, “we know now that a text is not a line of words releasing a single ‘theological’ meaning (the ‘message’ of the Author-God) but a multi-dimensional space in which a variety of writings, none of them original, blend and clash. The text is a tissue of quotations drawn from the innumerable centres of culture.” Barthes senses that reading is not about solving a set of mysteries and puzzles set forth by the author, but about experiencing writing as an interconnected web of citation and reference.

The issue for the typographer is no longer the accessibility of the text’s meaning but the usability of the text itself. In Thinking With Type, Ellen Lupton asserts that we can no longer think in terms of reader and writer, but that the dominate subject of our age is the user, “a figure conceived as a bundle of needs and impairments—cognitive, physical, emotional.” The visual presentation of a
"used" text anticipates, processes, and caters to a multitude of needs and impairments. One user may want to read a text from beginning to end, while another may be simply browsing. Another user might be looking for one particular point or reference. This goes beyond the unmarked text's definition of reader who always reads from front to back. The new text enables the user to actively use a text in a variety of ways.

"In the multiplicity of writing," Barthes asserts, "everything is to be disentangled, nothing deciphered; the structure can be followed, 'run' (like the thread of a stocking) at every point and at every level..." In this web of writing, different words have different functions: the bulk may serve narration, but others may be descriptions, captions, references, or citations. The multifunctionality of words demands more than a linear, unmarked page can offer. Only a marked page can divide and differentiate the functions of the text, helping the reader/user begin to understand it.

MARKING IN A WORLD OF MARKUP

As Drucker goes on to explore in The Visible Word, the relationship of content to its form is constantly in flux. In the early twentieth century, while Warde declared true typography to be invisible, futurist typographers created poetry whose typographic form was essential to their meaning. While this union was extremely popular in the twentieth century, now, Ellen Lupton writes: "form and content are being pulled back apart. Stylesheets...compel designers to think globally and systematically instead of focusing on the fixed construction of a particular surface. This way of thinking allows content to be reformatted for different devices or uses, and it also prepares for the afterlife of data as electronic storage media begin their own cycles of decay and obsolescence." However, this new separation of form and content is not a step towards invisible typography; it creates a system where the content and its form are separate entities, but at the same time, highly interactive.

A Markup language "contains text data formatted according to its structural meaning: headline, secondary headline, paragraph, numbered list, definition list, and so on." While it is possible to include junky presentational code right into the documents, the markup tags serve to designate a text's function, not its presentation. When done correctly, markup creates a document that is semantically coded: the markup is descriptive of the content, having nothing to do with the way it looks. This allows the same document to be adapted to a variety of presentations.

The stylesheets that Lupton mentions are separate documents that define the document's presentation. They operate on a global scale, assigning visual forms to the functions denoted in the structural markup. While a typographer
might italicize an exclamation, a programmer would mark up the phrase in
terms of its function, emphasis. Only later would the programmer designate
the visual appearance of emphasized text—bold, italic, or whatever—in the
stylesheet.

Although the document itself contains absolutely no visual formatting, the
result is clearly not what Drucker would call an unmarked page. Nor does it fit
within Drucker’s definition of a marked page, where the document is inextrica-
bly connected to its visual form. In separation of content and presentation, The
stylesheet, in a sense, does nothing more than reveal the document’s internal
structure. Text is visually marked in terms of the semantic structure of the text
itself.
Ted Nelson, creator of the world’s first hypertext system, sees literature similarly to Barthes, as “an ongoing system of interconnected documents.” His hypertext system, Project Xanadu, is based on the interconnected and non-sequential nature of writing. Project Xanadu was conceived in 1960 and has never been realized to date, but its aspirations are key to the development of hypertext. While the similar World Wide Web took hold thirty years later, it lacks various features that are essential to the Xanadu system, namely unbreakable, bidirectional linking, and history and version management.

Nelson describes Xanadu as a “fast linking electronic repository for the storage and publication of text, graphics, and other digital information; permitting promiscuous linkage and windowing among all materials; with special features for alternative versions, historical backtrack and arbitrary collaging; with royalties for copyright holders and capable of infinite growth.” It is a digitized archive supported by a simple yet powerful system of citation and reference.

Xanadu’s primary function is the storage of documents. Nelson attempts to avoid the redundancy of conventional storage by proposing that each individual change and fragment be stored separately. With simple indexing, this allows the user to examine the present version of the text, but also any previously published version and what changed between them. The Xanalogical document is essentially a list of contents, fragments that can be reassembled in any way on request. “This is the true structure of text, Nelson argues, because text is best viewed as an evolving Protean structure.” Not only can a document’s history be on call, but templates and alternate versions of documents can be easily assembled from these fragments without the repetition of any data.

Xanadu’s most powerful feature (and the one that relates it most to Barthes’s and Nelson’s views of literature) is its emphasis on hyperlinking. Due to the popularity of the World Wide Web, we are quite familiar with hyperlinks and the power they hold in connecting texts and concepts to one another. However, the underlined blue in our web browser is only the beginning of Nelson’s concept of linking. He believes that links should be used for commentaries, bookmarks, and placemarkers, footnotes, marginal notes. Links in Xanadu specifically relate one point or span in one document to a different point or span (in a different document or in the same). There are different types of links (ones that further explain the text, ones that refute the text, etc.) and links can have multiple endpoints (so that the same link can connect with a text and an image simultaneously). Nelson conceived of models where criss-crossing connections were literally drawn between two texts. He ensured that these
links would be unbreakable; the connection is related to a specific block of text and will be reflected in all versions of the document that include that text. Most importantly, links in Xanadu are bidirectional by nature; every document can define its own outgoing links, but is also contextualized by its incoming links, which it does not control. Additionally, Nelson adds, a link between two documents can reside in a third. Authors can only control the interconnectivity of their document through the outgoing links; they have little or no say in their role in the web of literature.

The connection of documents through reference and citation is fully realized by Nelson’s concept of transclusion. Transclusion is, simply, the inclusion of a document (or part of a document) into another document. This is almost identical to hyperlinking, but the document is actually providing a window through with the quoted portion of another document can be displayed. Not only does encourage conventional quoting (which accurately reflects the up-to-date quoted document), but it allows for intercomparison documents whose function is to point out relations between other documents. And, of course, a second document could be transcluded within the first transclusion, allowing for unlimited layers of citation. Both linking and transclusion systematize traditional methods of noting quotations and make reference an essential part of the document structure.

In many ways, Xanadu is the ideal hypertext system, illustrating Barthes’s view in a feasible system. Nelson never compromises the idea of the interconnected body of literature and the various functions of words on a page or screen. Since it was never fully developed, the visualizations of many of its features are still in their infancy, ripe for innovations in visual design. Almost half a century later, the World Wide Web only shows us the beginnings of the power of hypertext, transclusion, document histories, and alternate versions.

MARKING THE SPACE: THE BUILDING BLOCKS OF THE VISIBLE SCREEN

In a hypertext system, one of the most basic method of displaying hypertext on a screen is through visual metaphor. The designer attempts to mimic a physical organizational system in an attempt to make the interface more usable by incorporating something familiar. However, pages of an opened book, notebooks with tabs, and files within folders are metaphorical interfaces that attempt to simulate paper, but get caught up in paper’s limitations. For example, the common file organizational system with folders conceals the fact that files do not need to be stored in one specific place; they be easily searched and cross-indexed. Unless handled carefully, metaphorical interfaces tend to be inappropriately marked, even if they mimic the unmarked text of the page.

The building block of hypertext is the window. Windows are familiar to PC
and Macintosh users alike and are an extraordinarily useful way of displaying text. The user has the freedom to arrange the visible area to his or her liking, in a way creating his or her own marked screen. Content within windows can be viewed in different ways as well. Framed windows demand that the content is tailored to fit within the box. Often used as a metaphor for the page (whose size is also finished and all of the content can be seen at once), framed windows are inflexible, limiting the user’s control of how he or she browses the text. That said, they can be very useful for display images or other information that needs to be seen all at once. Meanwhile, Scrolling windows are much more appropriate for text, allowing the text to extend beyond the bounds of the screen or window and giving the user freedom to browse through it. Since the length of the text is no issue, the user can be free to resize the window or increase/decrease the type size without destroying the layout. Popup windows are a useful tool for displaying small amounts of disposable text. The user can activate the popup either by rolling over or pressing the mouse button on a link. As soon as the user is done with the popup, the message disappears. Popups are quickly accessed and don't distract the user by jumping or opening up a new window, maintaining the flow of reading.

While unmarked text has an implied navigation (read each line, top left to bottom right, repeat), hypertext requires visual marking to help the user find him- or herself within the tangled information.

Many navigational models rely on the user’s experience to help him or her get situated within the hypertextual environment. The most basic of these is the backtrack, which simply takes the user to the document he or she was viewing previously. “The great advantage of backtrack is that it serves as a lifetime for the user who can do anything in the hypertext and still be certain to be able to get back to familiar territory by using the backtrack.” Usability expert Jakob Nielsen illustrates that there are various forms of backtracking. It can be purely chronological, or it can overlook detours that the user took and pages that the user revisited. The logical extension of the backtrack is the history, a comprehensive list of where the user has been. Bookmarks are another method of helping a user feel comfortable in unfamiliar territory. They allows the user to establish his or her own history exclusively of documents that might be of special interest. Telling the user where he or she has been is comforting, enabling the user to feel more secure in further exploring the hypertext.

While these navigational models may be reassuring, they do not inform the user of the overall hierarchical structure of the hypertext. Lists of the hierarchical levels above the current document, commonly called footprints, situate a page in a linear fashion within a hypertext system. Indexes, menus, tables of contents, overview diagrams, and site maps are all effective ways of relating the individual page to the overall system.
One of the most successful navigational tools combines the user’s experience and the document’s structure. This works well with a fisheye view, a diagramming method which shows great detail for those parts of the information that are close to the user’s current location of interest and gradually diminishing amounts of detail for those parts that are progressively farther away. The fisheye view mimics physical perspective: the user sees the information closer to him or her much larger and in much greater detail. The user can then move through the information like it is a three dimensional space. In larger information spaces, fisheye views can get quite complicated, link inheritance allows for a vastly simplified overview. Instead of viewing every document and the complex set of links between all of them, the documents can be nested into clusters. Then, the simplified view merely displays the links between the clusters.

Just as hypertext is marked to reveal its function within the document, so must the structure of the system must be apparent through its interface. Guided tours with next and previous buttons stifle the beauty of hypertext, bringing the system back to the limitations of paper. Hypertext conventions such as backtracking and navigation menus, and the appropriate navigational model depends largely on the scale, structure, and complexity of the hypertext system.

MARKING THE TEXT: UTILIZING THE TYPE SUPERFAMILY

There are myriad virtues in the careful, marked design of hypertext. Ellen Lupton writes: “Designers provide ways into—and out of—the flow of words by breaking up text into pieces and offering shortcuts and alternate routes through masses of information. From a simple indent...to a highlighted link...typography helps readers navigate the flow of content.”

Marked design subverts the top-left-to-bottom-right linearity with headers, subheaders, notes, tangents, and sources arranged upon the page, and there are many ways of formatting text to serve different functions. Understandably, position is an essential part of this. Headlines are assumed to go on top, and footnotes will always be at the bottom. Vertical and horizontal alignment relates otherwise disparate elements on a page. Repetition of elements such as bullets and folios creates familiarity and consistency. And color is a powerful way to highlight information. It is dangerous territory, though, as it frequently reduces the contrast between foreground and background, and all too often does not address the needs of the colorblind. However, color is an extraordinarily important part of information design, especially on the screen where it can be implemented at no additional cost. Blue is commonly used in demarcating hyperlinks, and in Wikipedia it is taken a step further: blue links jump to another page while red links jump to a page that does not yet exist.
Used in conjunction with these formal design solutions, most texts will be marked by simple typographic conventions. Punctuation, typographic symbols, lines and rules are subtle but ubiquitous. Asterisks, boxes, and underlines have all been used to denote hyperlinks, even though all of those can be distracting and detrimental to reading comprehension. When comparing two windows side by side in a Xanalogical model, designers can draw links from point to point within the document, visually connecting the concepts while maintaining the original flow of both of the texts. Lines can also show differences between previous and current versions of the same document. Quotation marks are all it takes for the most basic transclusion of another work, while parentheses separate citations and interjections from the rest of the text. Typographic symbols such fleurons, dingbats, and bullets mark lists and the beginnings of textblocks. These subtle cues are only the beginning of devices the typographer can use to navigate the reader through the nonlinear page.

However, complex typographic situations require more extreme measures, and this is where the design of types comes into play. A powerful type design anticipates the problems that it will solve; it ensures that there are enough styles, variations, and alternates to accommodate any typographic solution within its scope. Alejandro Lo Celso argues that the systems thinking involved in designing a type system is simply an extension of the thinking that goes into designing a typeface itself. Just as a typeface is an set of distinct letters all guided by a shared formal logic, a type system is a set of distinct alphabets unified by the same design principle. In addition, Lo Celso writes, contemporary type technology lends itself to the development of extended type families. Using different master drawings, designers have the ability to interpolate fonts between different poles. These Multiple Masters can be used to easily generate a variety of styles, weights, widths, and optical sizes.

A distinct italic is perhaps the most useful addition to a type family. While faces citing early twentieth century influences use an obliqued roman, most find their cursive structure to be a better solution. A successful cursive or semi-cursive italic maintains the typographic color of the roman while creating a distinct texture on the page. Once used as an independent type style, italics are now subordinate to the roman, reserved generally for emphasis, and—with the underline’s dominion over the hyperlink—titles of literary works. Italics are also used to set apart foreign or important terms.

Small capitals are another useful form of typographic variation. Not only are capitals useful in strengthening titles, but they can signal abbreviations and acronyms without being disruptive in text. XHTML and other markup languages require the markup of abbreviations and acronyms so that the user can expand them if needed.

Larger superfamilies often come in related serif and sanserif styles, giving
the typographer an immense amount of flexibility without having to worry about combining multiple type families. The serif is generally used in body text, but with its low contrast, the sanserif counterpart works well in everything from headlines to captions. While swashes, titling alternates, and other styles are usually included for cosmetics more than anything else, they can be useful in directing the user’s attention to important texts.

Many superfamilies also come in a variety of weights—from featherweight to extra black—and widths—from compressed to superextended. This allows the designer to fill variable amounts of space with a variety of type styles while maintaining an overall consistency. While the first attempts to create letters extended and bolded to their extremes were related to the demands of nineteenth century advertising, the idea that one letter design can morph across a spectrum of different weights and widths is much newer invention.

Lastly, more sophisticated families incorporate optical sizes into the design. Optical sizes harken back to the days of metal type when every size of a typeface was cut individually. An optical size for captions would be thicker and denser than the text type, while in a headline face, the details would be finer and more elegant. While this marking is too subtle for most to notice, these designs can help to create a more harmonious page.

REFLECTIONS

The object of the marking typographer is to manipulate the visual structure of the page so that it underscores the semantic structure of the document and its relation to other documents within the web of literature. Text is no longer necessarily linear, and the visualization of its complex structure requires an active acknowledgement of its audience. The marked page must shepherd these users through the text without imprisoning them in a new linearity. The twentieth century saw the visual form move from the background to the forefront of reading, but contemporary demands necessitate that texts be easily repurposed and displayed across a variety of media. New markup practices reinforce the idea that the visual form of a text should not be used to structure its content; instead it must emerge from a freestanding hierarchy contained within the content.

Navigational techniques and typographic variations are important in helping the user access a text for all sorts of purposes. In a hypertext system like Project Xanadu, hyperlinks, histories, alternate versions, and transclusions must be visually distinguishable, but not to the point that they interrupt the flow of continuous reading. While placing a single quotation in red boldface might assist a user searching for that specific item, it will distract a second user who is reading the document in its entirety. On the other hand, hyperlinks that
provide tangential information would be of interest to the second user who is invested in the text, while it would just be more for the first user to sift through in finding what he or she needs. It might also be useful for a text to subtly distinguish keywords, names, places, titles, or different characters within a dialogue. However, the question of how to represent so many different functions without destroying the unity and flow text is difficult. Type superfamilies provide a variety of styles that can be utilized to clearly distinguish different functions on the marked page while maintaining a unified design. It is up to the typographer to anticipate different ways a text will be used and to seek out a balance in the design.

Ellen Lupton writes: "Although many books define the purpose of typography as enhancing the readability of the written word, one of design's most humane functions is, in actuality, to help readers avoid reading." In the structuring and marking of texts, the designer has no choice but to serve as an interpreter. Designs can persuade and manipulate users, but can also help them interact more freely and intuitively with the text. It is essential that the user understand the manipulative techniques at play so that he or she can actively begin the process of disentangling.
Type designs
Early designs

UNTITLED SEMI-SERIF (p. 35)

This was my first attempt at designing a typeface, and I went about it all wrong. I decided early on to design a semi-serif work well. I focused most of my attention on which serifs I had to keep and which I could chop off to maintain a balanced letter, ignoring the overarching structures and proportions that should define a typeface.

I brought a series of sketches to a week-long intensive type design course at the Wells Book Arts Summer Institute. My instructor, Peter Bain, helped me digitize the sketches and regularize the design, finding shapes that could be balanced standing alone and within the typeface as a whole.

HOTZMAKH’S SHPIEL (p. 36)

Lettering in the Hebrew script provides an entirely new set of challenges. In designing the poster for a Yiddish play, I quickly found that none of the Hebrew fonts I had access to would work. I needed something that was reminiscent of an ornate, nineteenth-century theatrical poster typical of Yiddish theatre of that period. The poster were loud and chaotic, and the lettering I that created needed to be deliberately unfinished and untrained. Inspired by Hebrew calligraphy, I added a playful, brushed quality, unpredictable stroke endings, and enough idiosyncrasies to create an unusual and dynamic piece.

THE REINCARNATION OF JAIME BROWN (p. 37)

To create a title piece for this whimsical play, I consulted the type specimens of nineteenth-century typefounder Vincent Figgins. The stark contrast of his fatface italic, along with its luscious terminals, served as a perfect model. Only a handful of letters were included in his specimens, so I was forced to design many of them without an exemplar. As a result, I had to come up with some inventive solutions, including the extended r and overlapping w.
We often forget the intricacy and personality of the teapot, remembering only the icon derived from our collective memory.

Historically, the teapot’s form could never be divorced from the sculptor’s individual hand. Working within the confines dictated by the teapot’s function, the artist transformed it from a tool into a decorative object, enriching it with his or her culture and tradition, leaving it with its own errors and quirks. As factories overtook the craftsperson’s workshop, the teapot came to be designed instead of sculpted. The physical process of molding and shaping was replaced by careful planning of the teapot’s essential form. Before long, there was hardly any sign of the artist’s hand at all. Bold and modern teapots emerged, embracing and celebrating the perfection of geometric forms, even at the risk of stifling personality.

Bezier curves and plotted coordinates pushed the teapot into a purely digital world, but endowed it, surprisingly, with new tangibility. Software demands greater attention to the complexity of the teapot’s form, but also fosters a returned sense of play and improvisation. Computers have enabled the digital artist to be both craftsperson and designer. In this, teapots are like typefaces.

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האצטמיך שピン
The Reincarnation of Jaime Brown
Manicotti

I've spent much of this year interested in typefaces that have a horizontal stress, and Manicotti shows why. In typefaces where the stress is on the tops and bottoms of letters instead of on the verticals, they create a unified set of tire tracks that clearly defines the line of text and guides the eye to the center of the letter. I started drawing this when I was first learning about the concept of notan, or the balancing of black and white forms. Manicotti's black, tightly-fitted letters create a dense and dark page, pushing the white shapes inside and in-between the letters into the spotlight.

It is based on the French Clarendon style, popular in display wood type in the nineteenth century. French Clarendons are normally condensed, and like other wood type, have a distinct "Western" flavor. Manicotti, of course, takes this to the extreme. Its axis is completely horizontal and its serifs are over three times the thickness of its stems.

Wood type is notorious for its poor kerning, inconsistent spacing, and uneven typographic color. While Manicotti's letterforms are reminiscent of wood type, its even color and rhythm are decidedly digital. Manicotti uses OpenType contextual alternates to solve awkward letter combinations when kerning pairs are not enough. These mostly involve the T and L, whose serifs are subtly shaved off to accommodate a tighter fit with a neighboring letter.

To make it more useful as a display face, I added in a set of swash characters for use at beginnings and ends of lines. It also includes two basic ligatures, TT and OO. The TT ligature was part of the design very early on, and comes with its own set of contextual alternates (see above). The OO ligature, on the other hand, was a latecomer to the design. Its only purpose is to mix things up.

I used Manicotti to experiment with OpenType programming and to get myself thinking creatively. I had fun with it, and never really took it too seriously. Surprisingly, the typeface was awarded the Certificate of Excellence in Type Design in the Type Directors Club TDC2 2007 international type design competition. This honor forced me reconsider what makes a successful typeface. A font doesn't necessarily have to be beautiful or elegant, nor does it have to be useful in a variety of applications. Its shapes just have to work together.
It was a bad year on the Old Western Trail; herd after herd was waterbound by the rising water. The South Canadian tumbled over her banks and the driftwood would have made it dangerous swimming for cattle. The men got impatient, making inquiries and searching along alternate routes.
As part of a redesign of Hampshire College’s student newspaper, The Climax, I developed an original type family specifically for the paper’s use. The type’s design attempted to address the less-than-ideal conditions that exist in both the layout and printing environments of an amateur publication by combining the economy, readability, and sturdiness of newspaper faces with the openness and rhythm of early humanist types.

Although it isn’t too apparent in the final result, my first inspiration was Nicolas Jenson’s Renaissance roman. I admired the color and rhythm of his types, and wanted to see if I could infuse his proportions into a typeface that still had the strength to survive the confines of newspaper typesetting. Typically, newspaper types have a mechanical, nineteenth-century appearance and modern (as opposed to classical) proportions. While I appreciate the sturdiness and economy of these types, my design found its similarities in more contemporary newspaper typefaces such as Jean-Francois Porchez’s Le Monde and Gerard Unger’s Swift, which are based on more humanistic models. At the same time, I also referred to contemporary book faces such as Kent Lew’s Whitman and Peter Biľak’s Fedra types.

The most important part of the design process for me was learning how to pay attention to the white space within and between letters. I made the counterforms as large and as open as possible so that they would stand up at large sizes. To make this happen, I minimized terminals and decorative elements and used short, chopped off serifs (dubbed stub-serifs) on the interiors of the letters. Meanwhile, the long outer serifs reach into the space of the neighboring glyph, tying the word together. This stark asymmetry may create a quirky and unbalanced letter, but helps to form a solid and balanced word.

Maintaining the design’s humanism, I based my capitals on classical proportions to achieve fluctuating, rhythmic widths, but expanded the thinnest letters to achieve better typographic color. The wedge-shaped serifs and an unwavering oblique axis give the face a slightly calligraphic feel. However, as a newspaper type, its calligraphic quality is balanced by its low contrast. The thicknesses are modulated, but not to the point where the letters are brittle. I designed them to stand up even when rapidly printed on newsprint. The serifs needed to have a slabby thickness to them so that they remain important elements at small sizes.

I digitized a handful of control characters early in the design process. However, I repeatedly returned to my sketch pad to rework and refine the forms. Using Fontlab Studio 5, I constructed a handful of test letters with Bézier
curves, trying to keep the number of nodes to an absolute minimum. I fleshed out the alphabet by using modular letter parts, but in the end spent much time fine-tuning each letter individually.

From text to headlines to captions to section headers, I designed a family of weights, styles, and optical sizes to match the needs of The Climax. As such, the newspaper family (excluding the book variant) has two weights (regular and bold), two optical sizes (text and headline), two styles (regular and italic), and inline titling caps, totaling eight variants. The bold weight is significantly heavier than the roman, is readable in text. While the text optical size is slabby and low in contrast, the headline optical size is slightly condensed, with thinner serifs and finer details. Although the italic slants a mere five degrees, it is easily distinguished from the roman because it has a cursive letter structure. However, it is not too distinct, and creates even typographic color when the two are used together in text.

FEATURES

Small-caps: I included specially-drawn small capitals in each version of the font. They are shorter and stouter than normal caps and work well with acronyms and other in-text situations where full capitals would prove distracting in a sea of lowercase.

Figures: For the same reason, I designed a set of text figures in addition to the titling set. Both are OpenType features and come with a matching set of symbols.

Ligatures: I originally designed the f to work without ligations, but I ended up adding a full set of ligatures, far beyond the standard ligatures of ff, fi, ffi, fl and ffl. For fun, I made some discretionary ligatures that imitate historical forms. Now, if the designer so desires, words such as student, affected, and especially, can be effortlessly flourished with one click in the OpenType menu.

Contextual alternates: During this process, I taught myself how to program OpenType contextual alternate glyph substitution. I created additional glyphs with short, stubby serifs to improve awkward letter combinations without the need of ligatures. These are applied automatically in Adobe InDesign (or any OpenType-savvy program). I also drew four uppercase Qs with varying tail lengths. The shortest tail avoids collisions, the second is standard, and the last two are specially fitted to accompany the lower-and uppercase U.

Extended character set: After the initial “cut” of Climax was done, I revisited the design and expanded it to encompass both Western and Central Euro-
pean character sets. This required research into both character encoding norms and cultural preferences of diacritic design. For example, Polish readers prefer their acute accents more vertical, while Western European countries prefer it at a horizontal. Although there is one Unicode spot for an each letter with an acute accent, Climax provides an OpenType Polish alternate for easy substitution.

CLIMAX BOOK

During the spring semester, I revisited and fine-tuned the design, refining some of the details and toning down the quirky serif structure. The new versions, called Climax Book and Book Italic, are designed to be more suitable for book work, but still holds up in newsprint. Additionally, I designed Climax Book Headline, a bolder, more condensed headline face.

A test using Multiple Masters to interpolate a variety of weights and optical sizes.
Legislation may affect Hampshire unions

By DAN KLEIN
Staff Writer

HAMPSHIRE COLLEGE LABOR supporters celebrated this past week when the House of Representatives passed a bill aiding the formation of new unions. If it is actually enacted, the bill has the potential to remove many of the obstacles faced by union organizers in 1994 and 1997.

The new bill, HR 800 or The Employee Free Choice Act, would eliminate an employer’s right to demand a secret ballot. Once a majority signed union authorization cards, employers would be forced to recognize the union, and collective bargaining would begin within 10 days of a written request by the union.

Under current law, for a union with tactics that include one-sided information sessions and intimidation.

“The statistics are shocking,” said Representative John Olver (D-MA), an Amherst resident. “Every 23 minutes, a worker is fired or otherwise discriminated against because of his or her union activity, and 25 percent of employers illegally fire at least one worker for union activity during an organizing campaign.” Other statistics show that 36 percent of employees who vote against union representation claim that their vote is a direct result of such methods.

Republican critics argued the opposite, saying that if HR 800 is made law, workers will be intimidated into joining unions against their will. Republican Chief Deputy Whip argued the bill should in order for this situation to be up-to-code, the heaters must be changed from electric to hot water. Hampshire has promised to change the heaters by 2008.

ART OR VANDALISM? What role does graffiti have on campus? For opposing viewpoints, see page 4.

Electrical heaters in Greenwich against fire code

By MO KARN
Staff Writer

RESIDENTS OF GREENWICH donuts received bright yellow fire codes.

In Greenwich, Connecticut, a fire marshal recently noticed that electrical heaters in rooms were not up-to-code. Residents have been advised to convert their heaters from electric to hot water. This is in order for this situation to be up-to-code, the heaters must be changed from electric to hot water. Hampshire has promised to change the heaters by 2008.

Under current law, for a union
Imagine that you have before you a flagon of wine. You may choose your favourite vintage for this imaginary demonstration, so that it be a deep shimmering crimson in colour. You have two goblets before you. One is of solid gold, wrought in the most exquisite patterns. The other is of crystal-clear glass, thin as a bubble, and as transparent. Pour and drink and according to your choice of goblet, I shall know whether or not you are a connoisseur of wine. For if you have no feelings about wine one way or the other, you will want the sensation of drinking the stuff out of a vessel that may have cost thousands of pounds; but if you are a member of that vanishing tribe, the amateurs of fine vintages, you will choose the crystal, because everything about it is calculated to reveal rather than hide the beautiful thing which it was meant to contain. Bear with me in this long-winded and fragrant metaphor; for you will find that almost all the virtues of the perfect wine-glass have a parallel in typography. There is the long, thin stem that obviates fingerprints on the bowl. Why? Because no cloud must come between your eyes and the fiery heart of the liquid. Are not the margins on book pages similarly meant to obviate the necessity of finger-}
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Imagine that you have before you a flagon of wine. You may choose your favourite vintage for this imaginary demonstration, so that it be a deep shimmering crimson in colour. You have two goblets before you. One is of solid gold, wrought in the most exquisite patterns. The other is of crystal-clear glass, thin as a bubble, and as transparent. Pour and drink according to your choice of goblet. I shall know whether or not you are a connoisseur of wine. For if you have no feelings about wine one way or the other, you will want the sensation of drinking the stuff out of a vessel that may have cost thousands of pounds; but if you are a member of that vanishing tribe, the amateurs of fine vintages, you will choose the crystal, because everything about it is calculated to reveal rather than hide the beautiful thing which it was meant to contain. Bear with me in this long-winded and fragrant metaphor; for you will find that almost all the virtues of the perfect wine-glass have a parallel in typography. There is the long, thin stem that obviates fingerprints on the bowl. Why? Because no cloud must come between your eyes and the fiery heart of the liquid. Are not the margins on book pages similarly meant to obviate the necessity of fingering the type-page? Again: the glass is colourless or at the most only faintly tinged in the bowl, because the connoisseur judges wine partly by its colour and is impatient of anything that alters it. There are a thousand mannerisms in typography that are as impudent and arbitrary as putting port in tumblers of red or green glass! When a goblet has a base that looks too small for security, it does not matter how cleverly it is weighted: you feel nervous lest it should tip over. There are ways of setting lines of type which may work well enough, and yet keep the reader subconsciously worried by the fear of ‘doubling’ lines, reading three words as one, and so forth. Now the man who first chose glass instead of clay or metal to hold his wine was a ‘modernist’ in the sense in which I am going to use that term. That is, the first thing he asked of his particular object was not ‘How should it look?’ but ‘What must it do?’ and to that extent all good typography is modernist. Wine is so strange and potent a thing that it has been used in the central ritual of religion in one...
SPECIAL REPORT: Community Council Update
College plans new residential community

Headlines
Candidates race for Governor’s Council
REEL COOL MOVIES YOU MAY HAVE SCENE
Admissions process revised
THEATRE BOARD DENIED FUNDING
CONTROVERSY
Library announces new catalog
Frisbee team claims 5–4 victory
ART COLLOQUIUM
“There’s no doubt in my mind that unions have been extraordinarily important champions for workers, and actually I think for a better society,” said the college president. He further said, “It’s unfortunate when you see the gains made by workers rendered meaningless as the influence of unions declines in America.” This, no doubt, is common ground for the president and the Students for the Freedom to Unionize (SFU), a student group that has been pressing him on
The problems with diversity

Continued from front page

He used the Princeton website’s financial aid calculator to determine that families with an income of $150,000 will actually get $16,000 in grants, as well as a work study job for their child. “Where does Princeton get that $16,000? It gets it from its endowment,” he said. “How does it build its endowment? Its endowment is tax-free.” In other words, according to Michaels, money is taken from the state that could otherwise—in a liberal administration at least—be used on healthcare, education, and other progressive programs. But instead, he said, “that money is going to people who are already rich—the 97th percentile—and it’s giving them a little more money.”

That, he said, “is the pure definition of welfare for the rich. It’s redistribution upwards instead of downwards. That’s structure.”

Conservatives have had a mixed reaction to his argument. He tried to sum up their standard response by mimicking right-wing talk show hosts that have interviewed him: “Yeah, yeah he’s really right about diversity—but he’s a communist!”

They are happy to find problems with diversity, but less than pleased to talk about wealth inequality. Reflecting on this dissatisfaction on both sides of the political spectrum, Michaels contemplated, “It’s not because my position is somewhere in the middle. It’s because it’s none of the above.” It’s because of slavery. It’s because of Jim Crow. It’s because of racism.

Amherst grad Kimmie Weeks wins service award

By EMILY RICHARDSON
Staff Writer

Kimmie Weeks, who graduated from Amherst College in 2005, has won a 2007 Brick Award, which honors those who do something to change the world before they are 25 years old. CNN has called the Brick Award the “Oscar of youth service awards.” Weeks was selected from more than 1,000 applicants to receive $10,000 for his organization, Youth Action International. He is also up for a Golden Brick Award, which would provide him with an additional $15,000 for his work.

As a child, Kimmie Weeks experienced violence and human suffering in the Liberian Civil War.

Said Weeks, “I was left for dead on a heap of decaying bodies when I was ten years old. It was the onset of the Liberian Civil War. My mother and I were among thousands of Liberians who were facing starvation and disease in a refugee camp. We came to the camp with no food and only the clothing we were wearing.

“A few days after we got into the camp we started drinking infested water and surviving on wild roots and leaves. The combination left me weak and sick for days. Eventually, I became so faint that I was pronounced dead and my body was taken out and thrown onto one of the piles of dead bodies.

“The only recollection I have of this was feeling a violent shaking on my body, opening my eyes and seeing the grief and tears in my mother’s eyes. My mother told me what had happened.

Unpopular views catch flack at liberal university

By JENNIFER RODRIGUEZ
Staff Writer

Last week I was studying with friends at the Mt. Holyoke library. We went for the architecture. Upon entering, we strode concentrate?

We studied for less time than we had hoped to and then decided to eat. Something about the silence was distracting. We were conditioned to favor the transient chatter of the Airport Lounge. Lap-
Roman Rustic

Asked to design posters and publicity for a modernization of Shakespeare's *Titus Andronicus*, I decided to take the opportunity to research the rich history of Roman lettering. The predictable thing to do would have been to consult Trajan's Column or the Roman Square Capital script. However, I was immediately captivated by the *Capitalis Rustica* bookhand, also known as Roman Rustic. While the Roman Square Capital was a penned bookhand based on brushed inscriptive letters, the Rustic script defers in every way to the speed and efficiency of the broad nib pen.

This typeface explores the geometry and rhythm inherent in the Roman Rustic script. True to its source, its axis of contrast is severe and the letters are remarkably condensed. Its finish is simple and harshly geometric, combining straight segments with bowed curves. However, the calligraphic structure of the letters overpower the geometric finish, resulting in something that is both extremely typographic and calligraphic.

In addition to the standard capital alphabet, I drew several alternates to both improve historical accuracy and to make the typeface more versatile in contemporary uses. Consistent with Roman calligraphy, I created ascending B, F, I, and L alternates. I also created swash forms for all letters with diagonals to for bits of calligraphic exuberance. More often than not, the Roman Rustic script was written without wordspaces or a crossed A. To make the design more accessible to the modern reader, I included a middot for wordspaces and an alternate A with a crossbar.
PATIENTIA NOSTRA? QUAM DIV ETIAM FVOR ISTE TVVS NOS ELDVET?

QUEM AD FINEM SESE EFFRENATA IACTABIT AVDACIA? NIHIIL NE TE

NOCTVRNVM PRAESIDIVM AD PALATI NIHIIL VRBIS VIGILIAE NIHIIL

TIMOR POPVLI NIHIIL CONCURVSVS BONORVM OMNIVM NIHIIL HIC

MVNTSSIMVS HABENDI SENATVS LOCVS NIHIIL HORVM ORA VOLTV

SQVE MOVERVNT? PATER ETVA CONSIDIA NON SENTIS CONSTRICTEM

LAM HORVM OMNIVM SCIENTIA TENERI CONIVRATIONEM TVAM

NON VIDES? QVID PROXIMA QVID SUPERIORE NOCTE EGERIS VBI FV

RIS QVOS CONVOCAVERIS QVID CONSILIIE CEPERIS QVEM NOSTRVM

IGNORARE ARBITRARIS? O TEMPAE O MORES! SENATVS HAEC INTEL

LEGIT CONSUL VIDET HIC TAMEN VIVIT VIVIT? IMMO VERO ETIAM IN

SENATVM VENIT FIT PVBLICII CONSILIIE PARTICPS NOTAT ET DESIGNAT

OCVLIIS AD CAEDEM VNVM QVEMQUE NOSTRVM NOS AVTEM FORTES

VIRI SATIS FACERE REI PVBLICAE VIDE MVR ISTIVS FVOREM AC TELA

VITEMVS AD MORTEM TE CATILINA DVCI I VSSV CONSVLIS IAM PR

DEM OPORTEBAT IN TE CONFERRI PESTEM QVAM TVN NOS OMNES

IAM MACHINARIS VERO VIR AMPLISSVMVS PSCIPIO PONTIFEX

MAXIMVS GRACCHVM MEDIOCRITER LABEFACTANTEM STATVM EI

PUBLICAE PRIVATVS INTERFECIT CATILINA ORBEM TERRAE CAE

DE ATQUE INCENDIIS VASTARE CVPIENTEM NOS CONSULES PERERE

EMVS? NAM ILLA NIMIS ANTIQUA PRAETEREO QUOD SERVILLVS

AHALA SP MAELIVM NOVIS REBUS STUDENTEM MANV SVA OCCIDIT

FVIT FVIT ISTA QVONDAM IN HAC RE PVBLICMV VIRTUS VT VIRI FORTES

ACRORIBVS SUPPLICIS CIVEM PERNICIOSVM QVAM ACERBISSIMVM

HOSTEM COERCERENT HABEMVS SENATVS CONSULTVM TE CATILINA

VEHEMENS ET GRAVE NON DEEST REI PVBLICAE CONSILIUM NEQVE

AVCTORITAS HVIVS ORDINIS NOS NOS DICO APerte CONSULES DESV

MVS DECREVIT QVONDAM SENATVS VT L OPLMVS CONSUL VIDERET

NE QVID RES PVBLICA DETRIMENTI CAPERET NOX NVLLA INTERCE

SIT INTERFECTVS EST PROPTER QUASDAM SEDITIONVM SUSPICIONES C

GRACCHVS CLARISSIMO PATRE AVO MAIORIBVS OCCISISVS EST.
Condensed wood type

In an effort to become more familiar with wood type, I drew this alphabet for a theatrical poster in preparation for my French Clarendon inspired text face. I relied heavily on actual wood type that I found in the Smith Art Department storage room as a model.

More than anything, this was simply an exercise in achieving even typographic color in a condensed all-caps face. I paid little attention to proportions, and the finish of the outlines is rough and inexact. Wondering if I could maintain this color across scripts, I drew an accompanying Greek alphabet as well. The result is highly drafted and mechanized, but retains a Greek inscriptive feeling.
THE CAUCASIAN CHALK CIRCLE
IRONSHIRTS
МАРЬИСТИКΗ ΛΕΝΙΝΙΣΤΙΚΗ ΦΙΛΟΣΟΦΙΑ
ANTIREALIST THEATRE
NATELLA ABASHVILI AND SIMON CHACHAVA
BERTOLT BRECHT
ΑΛΛΟΥΣ ΓΕΡΜΑΝΟΥΣ ΣΥΓΓΡΑΦΕΙΣ
My second real text face got off to a bumpy start, and ended up nothing like what it was supposed to be. It began as a contemporary look at an old-style bookface, juxtaposing soft curves with pointed junctures. I was looking to build upon my Climax face, but to create something more elegant and lyrical. However, nothing seemed to work; the only aspect of the design that I liked was the that the thickness fell on the tops and bottoms of letters, and not so much in the stems. So that's the only aspect of the design that I kept.

While creating Manicotti, I enjoyed pushing the French Clarendon style to its formal extremes, creating a distinctive display typeface. This time, I was interested in pushing the style in the opposite direction: turning a display style into a workable bookface. Emphasizing the horizontal stress, I made the serifs slightly thicker than the stems and shifted all of the weight to the tops and bottoms of the letters. And instead of starting over, I made these changes directly to the older drawings. As a result, the design balances nineteenth-century proportions and a mechanical finish with the humanistic structure leftover from the previous design.

The italic proved to be an entirely separate challenge. A standard italic script has somewhat of a horizontal stress already; when I drew it and set it with the French Clarendon roman, the problem was that it looked too normal. To quirkify the italic, I increased the contrast even more and emphasized the waviness of the stems, turning the slabby serifs into flowing stroke endings. It creates a vastly different texture than the roman, but maintains its weight distribution, playfulness, and color.

This design is nowhere near complete, but I did have time to add basic Western European language support and separately drawn small capitals. While this design is not as nearly as versatile as my newspaper face, I find it to be highly readable, retaining its unique character even at small sizes.
Dissolute, abandoned, and irreclaimable

FRENCH PETE & KANAKA JOE

Oregon Trail

The camp rose to its feet as one man!

NATURE HAD STOPPED TO LISTEN

Roaring Camp

That character from Georgia?

the punishment of the first transgression so dreadful

ANTIQUE SHOP

a sharp, querulous cry

MAY GRAY OR JUNE GLOOM
There was commotion in Roaring Camp. It could not have been a fight, for in 1850 that was not novel enough to have called together the entire settlement. The ditches and claims were not only deserted, but “Tuttle's grocery” had contributed its gamblers, who, it will be remembered, calmly continued their game the day that French Pete and Kanaka Joe shot each other to death over the bar in the front room. The whole camp was collected before a rude cabin on the outer edge of the clearing.

Conversation was carried on in a low tone, but the name of a woman was frequently repeated. It was a name familiar enough in the camp, — “Cherokee Sal.” Perhaps the less said of her the better. She was a coarse and, it is to be feared, a very sinful woman.

But at that time she was the only woman in Roaring Camp, and was just then lying in sore extremity, when she most needed the ministration of her own sex. Dissolute, abandoned, and ir-claimable, she was yet suffering a martyrdom hard enough to bear even when veiled by sympathizing womanhood, but now terrible in her loneliness.

The primal curse had come to her in that original isolation which must have made the punishment of the first transgression so dreadful. It was, perhaps, part of the expiation of her sin that, at a moment when she most lacked her sex’s intuitive tenderness and care, she met only the half-contemptuous faces of her masculine associates. Yet a few of the spectators were, I think, touched by her sufferings. Sandy Tipton thought it was “rough on Sal,” and, in the contemplation of her condition, for a moment rose superior to the fact that he had an ace and two bowers in his sleeve.

It will be seen also that the situation was novel. Deaths were by no means uncommon in Roaring Camp, but a birth was a new thing. People had been dismissed the camp effectively, finally, and with no possibility of return; but this was the first time that anybody had been introduced AB INITIO. Hence the excitement. “You go in there, Stumpy,” said a prominent citizen known as “Kentuck,” addressing one of the loungers. “Go in there, and see what you kin do. You’ve had experience in them things.”

Perhaps there was a fitness in the selection. Stumpy, in other climes, had been the putative head of two families; in fact, it was owing to some legal informality in these proceedings that Roaring Camp—a city of refuge—was indebted to his company. The crowd approved the choice, and Stumpy was wise enough to bow to the majority. The door closed on the extempore surgeon and midwife, and Roaring Camp sat down outside, smoked its pipe, and awaited the issue.

The assemblage numbered about a hundred men. One or two of these were actual fugitives from justice, some were criminal, and all were reckless. Physically they exhibited no indication of their past lives and character. The greatest scamp had a Raphael face, with a profusion of blonde hair; Oakhurst, a gambler, had the melancholy air and intellectual abstraction of a Hamlet;
the coolest and most courageous man was scarcely over five feet in height, with a soft voice and an embarrassed, timid manner. The term roughs applied to them was a distinction rather than a definition. Perhaps in the minor details of fingers, toes, ears, etc., the camp may have been deficient, but these slight omissions did not detract from their aggregate force. The strongest man had but three fingers on his right hand; the best shot had but one eye. Such was the physical aspect of the men that were dispersed around the cabin. The camp lay in a triangular valley between two hills and a river. The only outlet was a steep trail over the summit of a hill that faced the cabin, now illuminated by the rising moon. The suffering woman might have seen it from the rude bunk whereon she lay,—seen it winding like a silver thread until it was lost in the stars above.

A fire of withered pine boughs added sociability to the gathering. By degrees the natural levity of Roaring Camp returned. Bets were freely offered and taken regarding the result. Three to five that Sal would get through with it even that the child would survive; side bets as to the sex and complexion of the coming stranger. In the midst of an excited discussion an exclamation came from those nearest the door, and the camp stopped to listen. Above the swaying of the pines, the swift rush of the river, and the crackling of the fire rose a sharp, querulous cry,—a cry unlike anything heard before in the camp. The pines stopped moaning, the river ceased to rush, and the fire to crackle. It seemed as if Nature had stopped to listen too. The camp rose to its feet as one man! It was proposed to explode a barrel of gunpowder; but in consideration of the situation of the mother, better counsels prevailed, and only a few revolvers were discharged; for whether owing to the rude surgery of the camp, or some other reason, Cherokee Sal was sinking fast. Within an hour she had climbed, as it were, that rugged road that led to the stars, and so passed out of Roaring Camp, its sin and shame, forever. I do not think that the announcement disturbed them.
Acknowledgments

Many thanks to my committee, Martin Antonetti, Donna Cohn, and Jim Wald, for their continuous support throughout this year. Thanks also to Copper Giloth and Barry Moser, for their advice and willingness to explore type design with me, even if it’s slightly beyond their comfort zones. Thanks to Sid Hall, Jr. and Peter Bain for beginning the training of my typographic eye, and to Carol Blinn for her encouragement. Thanks to the staffs of The Climax, The Reader, and the Five College Literary Review for working with me to test and implement my fonts in their publications. Thanks to Dan Carr and Julia Ferrari for inviting me to their workshop and introducing me to a non-digital type design technique, and to all of the designers, typographers, and letterers (including my grandfather) that volunteered to critique my work. Thanks to my friends and modmates, and finally, to Emily and my family for their shelter and love.

COLOPHON

This Division III was set in Climax Book, with titles in the unfinished Climax Book Headline. This version was specially formatted for viewing in unbound printouts and on the screen, and as such the pagination varies slightly from the original. The texts included in the type specimens are from:

MANICOTTI: Cattle Brands by Andy Adams

ROMAN RUSTIC: Catiline Orations by Marcus Tullius Cicero

CLIMAX: The Crystal Goblet by Beatrice Warde; articles from The Climax

FRENCH CLARENDON: The Luck of Roaring Camp by Bret Harte