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PAUL RENNER AND FUTURA: THE EFFECTS OF CULTURE, TECHNOLOGY, AND
SOCIAL CONTINUITY ON THE DESIGN OF TYPE FOR PRINTING

by

Charles Leonard

Under the direction of Maria Gindhart

ABSTRACT

This thesis reviews the circumstances that led to what Paul Renner called “the inflation of historicism,” places his response to that problem in the context of the Weimar Republic, details how the German attributes with which he began the project were displaced from the typeface that emerged in 1927, demonstrates that Futura belongs to a new category of serif-less roman fonts rooted in Arts and Crafts lettering, and considers why the specifically German aspects of the project have gone unrecognized for over seventy years. Renner’s writing is compared to ideas prevalent in early twentieth-century German cultural discourse, and Futura’s design process is placed in the context of Renner’s personal experience of Weimar’s social and economic crises. Objective measurements are employed to establish the relationship between drawings attributed to Renner and are used to compare features of Futura with other fonts of the period.

INDEX WORDS: Bauer foundry, Twentieth-century graphic design, Typography, Type-founding, Culture of inflation, Edgar Dacquè, Roman capital, Carolingian minuscule, Gothic lettering, Bruchschrift, Blackletter, Fraktur, Neue Sachlichkeit, Panose, Gill Sans, Kabel, Grotesk, Grotesque, Semper, Riegl, Schrift unserer zeit, Evolution of European scripts

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DESIGN OF TYPE FOR PRINTING

by

Charles Leonard

A Thesis presented in Partial Fulfillment of Requirements for the Degree of

Master of Arts

Georgia State University

2005

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THE EFFECTS OF CULTURE, TECHNOLOGY, AND SOCIAL CONTINUITY ON THE
DESIGN OF TYPE FOR PRINTING

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Dedicated to

Dr. Thomasine H. Bradford.

19 February, 1939

27 October, 2001

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Introduction

The typeface Futura is an exemplar of its time and certainly the most commercially successful German type design of its era.¹ Paul Renner began the design in 1924 and submitted it to the Bauer type foundry of Frankfurt-am-Main in 1925. Futura has remained in continuous production since its release in 1927; revisions, updates, and elaboration of the Futura ‘family’ continued into the early 1970’s. Comparing Renner’s initial conception with both the 1927 original foundry character set and the reduced set of 1933 provides an opportunity to investigate the forces leading to the invention of new visual norms and the cultural systems that constrain them.

Social, technological, and economic shifts are paralleled by changes in the forms of visual expression. Two forces drive creation of a new form of public script: developments in the technology used to create the script and governing attitudes at the time of its creation. Because writing, in the sense of using a script for the dissemination of information, is a social act, a third force—the moderating influence of cultural habit—strongly affects writing. Habit restrains any script created to serve the immediate needs of a group from extremes of shape alteration or arrangement and thereby prevents the isolation of the group within its cultural milieu. The presence of extreme letter shapes and new forms of the arrangement of writing in post-World War I Europe clearly indicates an attempt to respond to and control immense pressures in a society torn apart by a cataclysm of the first magnitude and sheds light on the cultural, technological, commercial, social, and political aspects of the period between the two world wars.

Futura began as a German typeface. Renner's initial concept for *die Schrift unserer Zeit* ("the type of our [his] time") was similar to the work of the early nineteenth-century Berlin printer, type designer, and typefounder Johann Friedrich Unger. Both Unger and Renner sought to create a new German type that would serve to diminish the variety of fonts required by German printing and reduce the overhead of maintaining multiple sets of letters.² Unger's efforts were directed at revising the style of German type. He redefined fraktur—the most elaborate of German scripts derived from the Gothic model—in keeping with the stroke contrasts and neo-classical proportional relationships of the roman fonts developed by French type-designer and printer Firmin Didot. Renner's concept was to apply an aesthetically informed geometric structure compatible with mechanized type matrix production to what he regarded as the essential forms of European scripts. For a period of Futura's development, those forms included both German and Latin features. Ultimately, Futura achieved success outside of Germany by taking on more roman characteristics and abandoning its "German" forms. Renner's application of a formalist aesthetic to the design of anationalist letterforms separates him from both the German functionalist and English historicist schools prevalent in 1920s Europe. Further, he sought to incorporate German typographic requirements and recognition of Northern European typographic traditions within a new, machine based, pan-European letterform.

There has been a recent increase of interest in German graphic design between World Wars I and II. Brief references to and footnotes about Paul Renner and Futura can be found in many books on the general history of graphic design or printing and type-founding technology. The impact of nineteenth-century technology on the typefounding business and its production processes is well documented, as is the general history of the art press revival, but Renner's own books and articles, which have never been published in English, tell a more complete story.

Renner's three books on typography—*Typografie als Kunst* (1922), *Mechanisierte Grafik; Schrift, Typo, Foto, Film, Farbe* (1930), and *Die Kunst der Typographie* (1939)³—provide an opportunity to establish Renner's conception of Futura over time. The letterforms and page design of the books themselves provide specific formal evidence of changes reflected in the text. *Typografie als Kunst* is set in Unger fraktur and remarks in the book make it clear that Renner admired both the type and Unger's program. *Mechanisierte Grafik*, set in a version of Futura medium that retains a Gothic inspired "post and ball" lower-case 'r,' shows that Renner believed that the modernization of German typography was under way but that an international style that incorporated German typographic traditions might not be possible. *Die Kunst der Typographie* was set in book weight Futura, but returns to the page proportions of the first book. The elegance of the lighter, taller pages contain a text of clearly written guidelines for typographic practice, not reform. This visual conception of the German book moves from a 1922 visual norm not essentially different from German books published in the early nineteenth century to one reflecting the imperatives of 1930 German printing technology, and, finally, in 1938, to a visual form which demonstrates how the sheet anchor of cultural continuity can mitigate the forces of technological and social change.

Chapter one surveys the forces that led to the proliferation of historical and art typefaces in the first two decades of the twentieth century. Primary among these are the revival of calligraphy and the development of a machine capable of turning hand-drawn letters into type. The private press movement that began with the Kelmscott Press in 1892 reestablished the hand-set, hand-printed, and hand-bound book as the aesthetic standard for the printed book. Simultaneously, machine-composed type and rotary press printing became the standard for the commercial press, and traditional foundries lost business to the manufacturers of 'hot-metal'

composing equipment. The foundries discovered they could compete with machine composition by catering to the taste for art and historic types inspired by the private press movement that grew up after the Kelmscott Press. In the first two decades of the twentieth century, the foundries appropriated Arts and Crafts inspired letters and engraved them using the process developed by Milwaukee type-founder and inventor Linn Boyd Benton, thus releasing an unprecedented flood of new type designs, and setting the stage for Paul Renner's application of a geometrically informed aesthetic for mechanized type production in a "conscious confrontation ... of the old form-world of handicraft."⁴

Chapter two considers Futura in relationship to the ideas that dominated German thought in the period of Futura's creation. Renner naturally saw the conflict of culture and civilization playing out in his field of expertise and, as early as 1909, embraced the *Deutsche Werkbund* resolution of these forces in the concept of quality manufacture. Under the *Werkbund* formula, quality production occurred when functionalist imperatives, which arose from technological civilization, were mitigated by *eine bestimmten und zweckbewußten Kunstwollen* ("certain and purposeful artistic volition")⁵ expressive of the culture. World War I certainly upended German society, however the devaluation of German currency—just that phrase puts all of German culture on the European sidelines—in the first five years of the Weimar Republic served to make every value suspect. Inflation provided Weimar Germans a metaphor for the destruction of culture by technological civilization and, for Renner, offered an opportunity for defining a new norm for German script. Just as the value of German currency was restored by a return to a sound fiduciary basis in November 1923, Renner provided the "type of our time" with a culturally authoritative basis: 'primal' origin.' He asserted that all European scripts descend from Roman⁶ capitals and that Carolingian minuscules, the letter developed in the scriptorium of

Charlemagne on which both Gothic and Latin scripts were based, provide a basis for claiming a German origin for lowercase letters. Recognizing that the mechanization of typography was inevitable, he devised a strategy of resolving the conflict between culture and civilization by seeking a reconciliation of form, which was technically derived, and style, which was the product of a “conscious and purposeful artistic volition.”⁷

Chapter three demonstrates how Renner, beginning with an Arts and Crafts model of the hand-drawn letter, shaped the letters he designed to reveal their fundamental form rather than clothing them in historical artifice. Renner’s early work on Futura was an attempt to create a modern hybrid of blackletter and roman forms. The work is reminiscent of the pre-World War I German fonts surveyed by Christopher Burke in “German Hybrid Typefaces 1900–1914.”⁸ Instead of copying the proportions of Italian humanist and Gothic⁹ letters on which earlier type designers had based their designs, Renner initial design for Futura’s lowercase characters applied the structural relationships of inscriptional Roman capitals to northern European scripts descended from Carolingian minuscules. As the model for his uppercase characters, he chose Roman inscriptional capitals instead of the enlarged minuscule and uncial forms that had long served as the majuscules of fraktur, schwabacher, and textura. Over the three-year period of Futura’s development, the typeface moved away from its origin as a new German typeface and took on features of roman type.

I will trace the development of the type through the remaining visual evidence of its development. To date, there has been little written that compares the features of these documents in detail. A more careful inspection reveals a developmental process that agrees with Renner’s statements about that process. This review indicates that the transformation of Renner’s original conception into letters corresponding with the accepted roman standard was in keeping with both

his desire to define a new German norm that could displace Gothic letters from their dominance of German book typography and with the need of the Bauer foundry for a font that would be successful in the international market.

Chapter four applies an industry standard system of objective measurements and comparisons to establish that a new category of typeface was developed following World War I that has more in common with traditional serified roman typefaces than it does with earlier sanserif typefaces. Futura, Gill Sans, and Kabel were produced within nine months of one another. All three have their roots in Arts and Crafts lettering and printing. Once I have established that Futura is a product of Arts and Crafts lettering arts, I will demonstrate how its characters are a specifically German interpretation of this aesthetic.

Drawing on the evidence of the first four chapters, the final chapter investigates why Futura has consistently failed to be recognized as a solution to a particularly German problem. Like Fritz Lang's *Metropolis* and other Weimar utopian visions, Futura is emblematic of promise and failure. Futura has been investigated for how it happened and what it was, but always from a contemporary perspective that has ignored the font's roots in Weimar Germany, and thus has consistently failed to consider why it came into existence and how, despite its international commercial success, it failed to fulfill Renner's objective of reforming German typography.

Seen from an English or American point of view, Futura seems to support English type historian Nicolette Gray's observation that all scripts undergo a period of experimentation and invention occasioned by change in the social order, and, with the return to social stability, revert to the stability of the Roman model.¹⁰ However, when placed in the context of its time and Renner's printed words, Futura provides a case where evolutionary opportunity created by the collapse of a governing social structure, where the scriptal norm was non-Roman letters, lead to

experiments with the Roman model rather than divergence from it. Renner participated in a process that converted his German typeface into a roman one, not because it was a return to “right understanding,” but to rid German typography of the accretions of history with which it had been encrusted.

Notes to the Introduction

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- ¹ Lewis Blackwell, *Twentieth-century Type* (New York: Rizzoli, 1992).
- ² Lawrence Mirsky, “The Crystalline Plant,” *Blackletter: Type and National Identity*, ed. Peter Bain and Paul Shaw, (New York: Cooper Union, 1998) 8.
- ³ None of the three books have ever been published in English, so I will rely on my own translation of those sections of the three books dealing with the history and design of type.
- ⁴ Paul Renner, *Mechanisierte Grafik, Schrift, Typo, Foto, Film, Farbe* (Berlin: H. Reckendorf, 1930) 10.
- ⁵ Based on what I have determined to be Paul Renner’s perspective at the time he wrote *Typografie als Kunst*, I have chosen to adopt Shearer West’s translation of Alois Riegl’s term *Kunstwollen* as “artistic-volition” instead of the more common “will to art” or Paul Crowther’s “art drive.” West’s translation of the term strikes a balance between the teleological connotations of the capitalized “Will to Art” and Kandinsky’s more deterministic “inner necessity.” I also think that “artistic volition” is a better fit for Renner who, raised in the household of a protestant-theologian father, was tempered to accept the belief in a fundamental, but not mystical, universal. Although his father was a theologian, Renner was more a student of philosophy than theology and would have associated Riegl’s concept with its origin in Schopenhauer rather than with the more mystical evocations it takes on in the written work of the expressionists.
- ⁶ Capitalization of the word “Roman” indicates reference to letterforms used in ancient Rome. Uncapitalized, the word “roman” refers to a style of writing that developed in the vicinity of Rome during the fifteenth century and to those typefaces descended from this style. In its narrowest sense, the term “italic” refers to a style of letter developed in Florence, Padua, and Venice during the fifteenth century. However, to avoid confusion with its more common contemporary meaning I will use “italic” as descriptive of a form of letter that slopes to the right and is somewhat calligraphic in proportion and pattern. The term “Italian humanist” refers to aspects of style related to letters used by humanists for writing and typefaces in fifteenth-century northern Italy. Finally, the word script is used to refer to forms that are both written and printed, but type and typeface refer only to printed letters.
- ⁷ Although the phrase was common in Werkbund literature, Renner attributes it to its true source in the work of Alois Riegl (Paul Renner, *Typografie als Kunst*. Munich: Müller, 1922, 17).
- ⁸ Christopher Burke, “German Hybrid Typefaces 1900–1914.” *Blackletter: Type and National Identity*, ed. Peter Bain and Paul Shaw (New York: Cooper Union, 1998) 32–39.
- ⁹ When capitalized, “gothic” refers to script directly related to the letterforms developed after the decline of the Carolingian writing reforms. The primary distinction between Gothic and

roman, or Latin, script is that where roman scripts use characters derived from Roman capitals for emphasis, Gothic scripts commonly use enlarged uncial and minuscule letterforms. When not capitalized, “gothic” is the American commercial trade description for letters without serifs, which, in Europe, are referred to as “grotesque.”

¹⁰ Nicolette Gray, *A History of Lettering, Creative Experiment and Letter Identity* (Boston: Godine, 1986) ¹⁰.

Chapter 1

The Proliferation of Art- and Historically-derived Typefaces 1900–1914

In the last two decades of the nineteenth century, problems inherent in mechanized printing led to the emergence of a new standard for the creation of printing types. The standard developed from what at first seems to be two antithetical concepts: the use of remote historical models for modern printing type and the mechanical production of type. The invention of on-demand ‘hot-metal’ type composition had created a great deal of competition among traditional type foundries and the manufacturers of the new type casting machines. This competitive atmosphere led foundries to use new mechanical means to manufacture type different from that offered by rival businesses. To differentiate their offerings, foundries developed fonts drawn from remote, even obscure, historical sources and the work of artists and architects practicing outside the realm of typography. The use of mechanical means to create type from drawings taken from diverse sources led to an unprecedented proliferation of type designs that, in the opinion of Paul Renner was evidence of the destruction of culture by industrial civilization.¹

Development of a New Standard: The Historical Model

In the last half of the nineteenth century, a taste for historicism began to influence the design of printing type. Prior to that time, font design possessed an inherent inertia. Making a new font required the labor-intensive creation of punches, the hand-made tools used for embossing casting matrices, but once a punch was created, it could produce an essentially limitless supply of printing type. Since the supply of a typeface was inexhaustible, new type designs only emerged when the conjunction of technological innovation and significant cultural

change made it cost effective to replace what was, for any printer, a significant investment. In stable societies, inherited symbols sustain cultural continuity, but times of upheaval require new organizational templates.² Thus, prior to the political, scientific, and industrial disruptions of the nineteenth century, design of a new typeface was commonly based on the model of a proximate letterform,³ neither remote in time nor unfamiliar to readers.

Renner explained the origin of typographic historicism by reference to architecture. He wrote that the romantic taste for remote historical styles began with an earnest interest in restoring antique buildings, but gave way to historicized ornamentation of commercial structures. Division of labor separated the functions of design and construction leading to facades embellished with misunderstood historical visual elements appropriated to enhance the market value of the product superficially. Nineteenth-century reformers attempted to remedy the situation not by abandoning the historic styles, but by resurrecting the work processes that had originally produced them.⁴

Renner traced the origin of typographic historicism to the private press movement that began with the restoration of the art of the book initiated by English designer William Morris. Morris' attempt at the reform of book arts did not absolutely require that he return to the start of the art of the printed book, but his social agenda did.⁵ Printing presented him with a particular problem: the printing press literally spelled the end for medieval artisan practices on which his system was based.⁶ Morris' social and aesthetic agenda required that he restart at the beginning. Morris held that the roman typefaces of produced by Nicolaus Jensen and Jacques le Rouge in Venice in the second half of the fifteenth century were the finest of all roman fonts.⁷ Venetian printing of this period marks the point at which both medieval letterforms and labor practices began to give way to modern practice. Venetian printers, who like Jensen and le Rouge were

often German or French, instrumentally participated in the birth of capitalism by devising a means of financing the production of their volumes by selling shares in the enterprise.⁸

For the creation of his first typeface, the Golden type, William Morris began with the study of photographic enlargements of pages from an edition of Leonardus Brunus Aretinus' *Historia Florentia* printed in 1476 (figs. 1 and 2). Following Morris' drawings, and advised by Morris' friend Emery Walker, Edward Prince manually cut the punches for the type.⁹ The two other fonts created for Morris' Kelmscott Press, Troy and Chaucer, are based on the Gothic type used by Peter Schoeffer to print his 1462 Bible (fig. 3).¹⁰ Generally speaking, the private press movement in England and the United States did not follow Morris' lead back toward Gothic fonts, but developed a taste for typefaces based on the Italian humanist model.¹¹ Morris' romantic emulation of the era of incunabula found more fertile soil in Germany, where the programmatic use of both blackletter—including textura, rotunda, fraktur, and schwabacher—and roman typefaces led to a proliferation of blackletter and roman fonts.¹²

Reassertion of the value of crisp, legible letters compatible with the means of printing clearly has an aesthetic component. For Morris, and later Renner, establishing a governing standard of work that valued typographic quality over of mechanized quantity fulfilled a social responsibility as well. Morris envisioned a simple social system, wherein the self-interested artisan produces quality work. Renner's formula, derived from the Deutsche Werkbund, was more complex. The machine enables quantity, the enlightened worker assures quality, the capitalist provides the capital investment in the equipment and materials, and the artisan provides the spiritual investment in the work itself. Quality becomes an essential aspect of industrial success, a position from which the improvement of working conditions can be negotiated, and the means of assuring the ongoing value of machine-made goods.¹³

Development of A New Standard: Machine Production

As the Scottish historian and critic Thomas Carlyle observed, the printing press was one of the great discoveries that led to modern civilization.¹⁴ Its ability to disseminate information and its example as a machine with interchangeable parts made the industrial revolution all but inevitable. Although the press had been automated as early as 1816, a successful type-composing machine was not developed until the early 1880s. The Linotype was the first workable type setting machine. Invented by Otmar Mergenthaler, a German emigrant working in Baltimore the device solved the problem of the redistribution of used type by the simple expedient of casting all type in the machine itself and circulating the casting matrices instead.¹⁵ Despite almost immediate international demand for the Linotype and the competing devices that quickly appeared after its introduction, the on-demand casting machines could not be widely distributed without a way to manufacture the matrices.¹⁶ The machine that made modern typography possible was Linn Boyd Benton's punch and matrix engraver first patented in 1885. Benton's engraver was the first significant change in type manufacturing since the invention of moveable cast type in the mid-fifteenth century. His invention replaced the labor-intensive crafting of steel punches with a process that used hand-drawn letterforms to guide the precise machining of casting matrices.¹⁷ His invention not only provided the means of manufacturing the matrices required by the Linotype, he generously made his matrix engraver available to rival foundries that quickly used it to fill in any gaps in their product lines.¹⁸ Although extensive engineering expertise was still required on the part of the foundries, Benton's process enabled foundries to call on designers from outside the realm of traditional type design. From this time forward type design was not restricted to specialists and typefaces began to be designed by architects, artists, and calligraphers.¹⁹

Development of a New Standard: Foundry Competition

Machine typesetting was introduced to Europe in 1894. Mergenthaler established a subsidiary in England in 1890. Machine typesetting began in continental Europe in 1894 in Amsterdam and a German subsidiary, Mergenthaler Casting Machines, was founded in Berlin in 1896. By 1904, there were over 10,000 Mergenthaler Linotype machines operating worldwide.²⁰ The foundries used two strategies to compensate for the loss of the newspaper and magazine trade: consolidation and developing new markets. By the turn of the century, fourteen of the largest American foundries had merged into the American Type Founders Company.²¹ The compound names of the European foundries—Stempel-Haas; Stephenson, Blake & Company; Deberny and Peignot—attest to the process of consolidation in Europe. The mergers provided the consolidated foundries with greatly expanded type catalogs that initially could not be matched by the hot-metal machines.²² Foundries responded to new releases from competitors by creating original designs and counterfeiting the fonts of their rivals. Benton's process made it possible to produce both book faces and specialty-jobbing fonts in a variety of sizes and weights.²³ A wide range of expressive letter styles and the ability to cast type in sizes beyond the reach of the hot-metal compositors allowed foundries to compensate for lost business by providing display fonts for advertising. To satisfy the needs of advertisers and commercial printers, the foundries developed sans-serif styles with large x-heights (the ratio of the vertical size of lower-case characters to the vertical size of capitals), short ascenders and descenders (like in 'b' and 'p'), and narrow set widths (the lateral measurements of the characters in a font). The design features of these "grotesque" fonts are derived from serified jobbing fonts of the day, but are incidentally similar to the proportions of fraktur. Germany, with its tradition of the use of blackletter type,

was a particularly fertile field for the grotesque style. By 1926 a German typographer could choose from over 300 grotesque faces.²⁴

Traditional foundries retained the business of commercial book printers by offering faces that emulated the historical designs used in luxury books published by the small private presses that succeeded the Kelmscott press.²⁵ A cost-effective matrix production process enabled the foundries to fill out their lines by reviving styles of type that had been created over the preceding four and a half centuries. In addition to the work produced by their own staffs, the foundries acquired faces from the independent efforts of private press designers. Individuals like Americans Bruce Rogers and Frederick Goudy, who began their careers designing typefaces for private presses, later had their typefaces issued for the commercial printing trade by Monotype, Linotype, and American Typefounders.²⁶ Scholarship, artistry, effete practice, and outright thievery fueled the competitive search for the next typeface that would satisfy the trade's increased appetite for the visually distinct and innovative.

A tenet of the history of writing holds that when one kind of writing becomes technologically obsolete its visual forms survive through adaptation to a new use. In doing so, they serve as a sign of an earlier era or dominant social value.²⁷ Demand by book printers for new prestige typefaces and the advertising trade's need for novel designs provided an ongoing source of revenue for foundries struggling to survive competition from machine-set type. The mechanization of type production freed the foundries from the labor-intensive punch-cutting and hand-casting process that had restrained the evolution of new letterforms and styles since the end of the incunabula era.²⁸ An increasingly commercial civilization absorbed the products of this new capacity and, in turn, drove the development of more and more different letter styles. The result was a overflowing of stylistic richness and excess.

These forces played a significant role in the fortunes of the foundry that produced Futura. At the end of the nineteenth century, a misjudgment that the effects of mechanization would impact typefounding more than typesetting brought the Frankfurt *Bauersche Gießerei* (“Bauer Foundry”) near to collapse.²⁹ The Bauer firm was purchased in 1898 by Georg Hartmann, who initiated an ambitious program of commissioning typefaces from designers from all areas of the visual arts.³⁰ Under Hartmann’s leadership over the following thirty years, Bauer’s receptivity to the work of those outside the type-casting business became a hallmark of the foundry and culminated in the development of Futura during Hartmann’s last years at the firm. The Bauer foundry began offering its own grotesque family, Venus, in 1906. The font was immensely popular in the United States (fig. 4).³¹ A new font that would generate American demand was particularly valuable for Bauer in the 1920s. With high labor costs paid in devalued marks and value of a typeface based on design rather than raw materials, type was a perfect German export commodity in the economic environment following World War I, and type exported to the United States provided the Bauer foundry with hard currency. After economic stability was restored in 1924, a font with a strong market position in the United States enabled Hartmann to resist the wave of acquisitions that swept German foundries in the 1920s.³² Whereas Renner started the Futura project to address problems specific to German printing, Futura offered Hartmann an opportunity to repeat the success of Venus and he undoubtedly pressed for the development of a typeface that would appeal to non-Germanic audiences as well.

Proliferation and Historicism

The confrontation between functionalism and formalism is the basis of Renner’s analysis of the Arts and Crafts movement’s failure to establish a valid new typography. The first paragraph of his book *Typografie als Kunst* calls for the Arts and Crafts movement to “shake off

the common craftsman of old practice and his bookish designs.”³³ Renner’s critique of Arts and Crafts typographic practices is more fully developed in material written after Futura’s release where his rejection of historicism is more fully explained. There were two nineteenth century evils that the Arts and Crafts movement needed to remedy: soul-less mechanization and the mindless repetition of historical styles.³⁴ The Arts and Crafts practitioners dealt with the issue of mechanization by the expedient of using manual methods. Concentration on manual processes of calligraphy, punch-cutting, and book presswork produced beautiful products that did nothing to directly remedy the effects of bad type design, typography, and printing that plagued the mechanized press of Renner’s day.

Historicism, relying on the aesthetics of a different historic period, proved more impossible for the Arts and Crafts movement to avoid. Morris was not satisfied solely with the restoration of quality; he also sought social change by replacing the capitalist model with that of the medieval craftsman. Arts and Crafts romanticism led to the resurrection of antique style, and handwork produced better-crafted versions of the antique than those manufactured by industrialists pandering to the nostalgic longings of the English and German public. However, applying an antique model to both aesthetic and production considerations created a structural link between the two that simply led to more refined versions of historical models that inevitably were produced en masse by machine.

In the years preceding World War I, the work of the independent type designers was strongly influenced by the work of the great Scottish calligrapher Edward Johnston.³⁵ In addition to his calligraphic work Johnston was a respected lecturer and writer on the subject of the formation of letters. His *Writing and Illuminating and Lettering*, published in 1906, is considered the most influential book on lettering ever published. He had a particularly strong impact in

Germany where his teachings were incorporated into the Werkbund movement and lettering classes were taught by his disciples.³⁶ The lessons of Arts and Crafts lettering were incorporated into the programs of German *Kunstgewerbeschulen* (“Arts and Crafts schools”).³⁷ As a longtime educator and member of the Werkbund, Renner was well acquainted with Johnston’s program in calligraphic instruction and the efforts of Johnston’s disciple Anna Simons. In Renner’s view, technology had turned the *Kunstschreiber* (“lettering-artist”) into one who “ekes out an artificial existence in his pseudo-medieval-ness like the last elm in a nature reserve.”³⁸ However, he believed that drawing classic letterforms was an essential aspect of art education and that elementary art education should include instruction in “recognizing the relationship between script and the formal fundamental properties of art.”³⁹ Classes he taught in Frankfurt and directed in Munich attest to his belief in the instructional value of hand lettering as a means for novice and advanced students of typography to acquire sensitivity to typographic form and style.⁴⁰

It is certain that the work of Johnston affected Renner. Beginning in 1905, the Leipzig publishing firm Insel Verlag published a series of classic German literature with typographic design by Emery Walker, the Doves Press designer, and the calligraphic titles by both Edward Johnston and his pupil Eric Gill.⁴¹ In the same year, Renner returned to Germany after a year in Italy, and began studying book decoration and illustrations at Munich’s Debschitz school and began to accept commissions for the design of book bindings and illustrations.⁴² Specifically, the influence of the Insel books can be detected in the title pages of a series of books published prior to World War I by Georg Müller, the publisher who provided Renner with most of his book design and illustration work (fig. 5).

Technological innovation multiplied the effect of historicizing tendencies associated with nineteenth-century romantic movements. Six years before Edward Prince cut Morris’ Golden

type by hand and started the revival of Italian humanist typography, Linn Benton's pantographic matrix engraver made it possible to dispense with the labor-intensive manual punch-cutting process by which type had been produced since the fourteenth century, and to produce engraving masters directly from drawings.⁴³ Renner recognized the importance of the development. In *Mechanisierte Grafik*, he wrote that the freedom to create type directly from outline drawings of the characters "made any form plausible and released design from the hold of craft-like punch-cutting."⁴⁴ However, the new freedom did not come without a cost. Two paragraphs later he noted that "the modern artist also ended with the writing implements of the medieval book-scribe for his letter forms" and thus "typographic historicism did not experience its most ungovernable degeneracy in the nineteenth century, but in the first third of the twentieth."⁴⁵

The process employed by the American designer Bruce Rogers to create the typeface Centaur illustrates the impact of Arts and Crafts typographic historicism and the mechanical reproduction of hand-drawn letters. In 1902, Rogers emulated Morris when he created the design for a humanist revival font by rapidly drawing over enlarged photographic copies of a page from *De Praeparatione Evangelica* of Eusebius printed by Nicolaus Jenson in 1470. The design, Montaigne, was, like Morris' Golden type, cut manually by a punch-cutter working from Rogers' drawings. In 1914, the same drawings were used to guide the mechanized engraving of matrices for Centaur (fig. 6). Rogers always expressed greater satisfaction with the second outcome.⁴⁶

Renner would have used a used similar process to create the title pages and book covers he designed prior to 1924, including those for *Typografie als Kunst*. The change in attitude that led to Futura can be seen in how Renner ultimately applied the lessons he derived from Arts and Crafts hand-lettering. Seeking the essence of the letter in the interaction of hand, brush and paper, Rogers' method chose the machine's ability to reflect the effect of craft over craft itself.

By the time of Futura, Renner sought to isolate the form of Roman capitals by drawing the letters with a tool “that regardless of the direction of motion always yielded the same stroke weight.”⁴⁷ He then charged the machine with the responsibility of eliminating the trace of the hand. Statements written by Renner in 1922 and 1925 reveal the change in his attitude. In 1922, he was sympathetic to Rogers’ methods: “Two different arts contribute to the formation of printing-type: scriptal art, which provides the model; and engraving, which is capable of duplicating what is handwritten.”⁴⁸ Three years later he invoked technology as a means of purifying type design of its historicizing tendencies: “Such a specific task of our time seems to me, to be the conscious confrontation with the mechanical, the cleansing of mechanized technology of the old form-world of handicraft.”⁴⁹ At the time that Renner specified the “task of our time,” he was engaged in the drawing of Futura and supervising its initial tests. However, his change of opinion cannot be attributed solely to his exposure to the Bauer typefounding process. The origin of his perception that German typography required cleansing must be sought in the wider social and cultural context of his era.

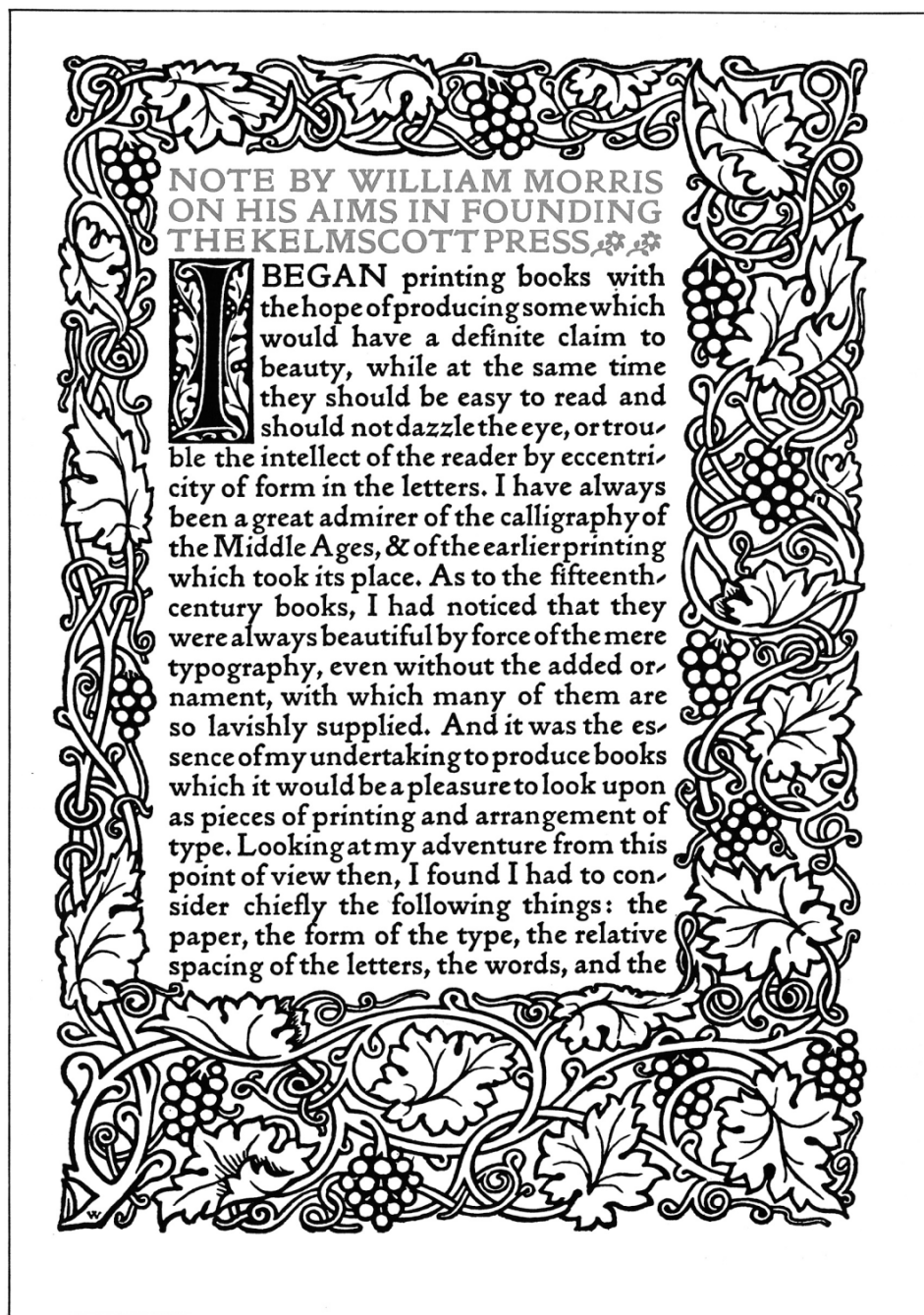


Figure 1. The Golden type, 1892, drawn by William Morris and cut by Edward Prince. The opening page of William Morris' *A Note by William Morris on His Aims in Founding the Kelmscott Press*. This last publication of the Kelmscott press features the Golden type, which was drawn by Morris and cut by Edward Prince in 1892. As reproduced in William Morris, *The Ideal Book: essays and Lectures on the Art of the Book*, ed. William S. Peterson (Berkeley: University of California Press, 1982) 74.

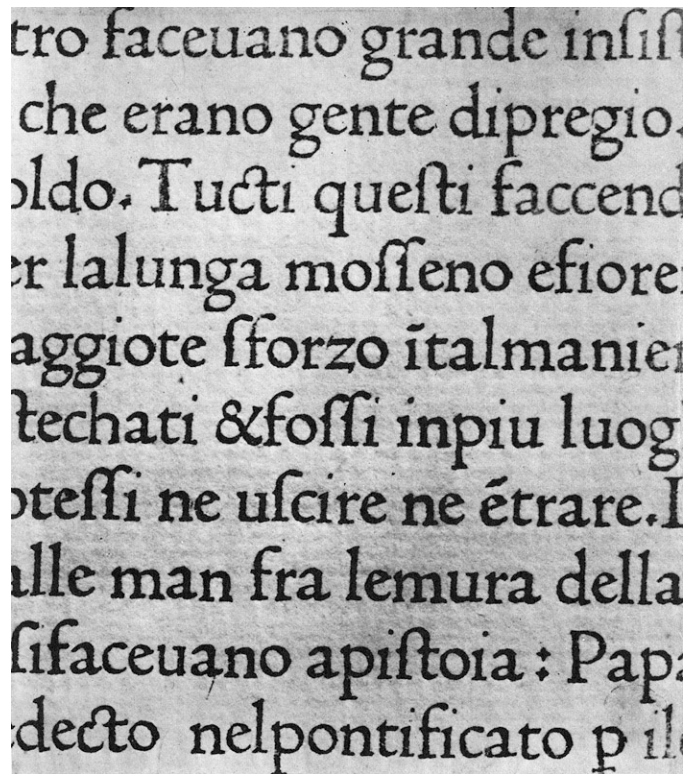


Figure 2. Leonardus Brunus Aretinus, *Historia Florentia* (Venice: Jacobus Rebeus), 1476, folio H6r; a photographic enlargement made by Emery Walker used by Morris as the model for the Golden type. St. Bride Printing Library as reproduced in William Morris, *The Ideal Book*, ed. William S. Peterson (Berkeley: University of California Press) 1982.

This is the Golden type.
This is the Troy type.
This is the Chaucer type.

Figure 3. The three fonts of the Kelmscott press. The Golden type and the Chaucer type were 12–point fonts. The Troy type uses the same forms and style as the Chaucer but was cut at 14–point. All are dated from c. 1892. The first used in publication was the Golden Type. Figure prepared by the author from images published in Kapr, *The Art of Lettering, The History, Anatomy, and Aesthetics of the Roman Letter Forms* (Munich: Saur, 1984).

ABCDEFGHIJKLM
 NOPQRSTUVWXYZ&
 abcdefghijklmnopqrstuvwxyz
 1234567890\$

Figure 4. Venus medium. Bauer c. 1907. Adapted from V & M Typographical, Inc., *The Type Specimen Book*, (New York: Van Nostrand, 1974) 562.

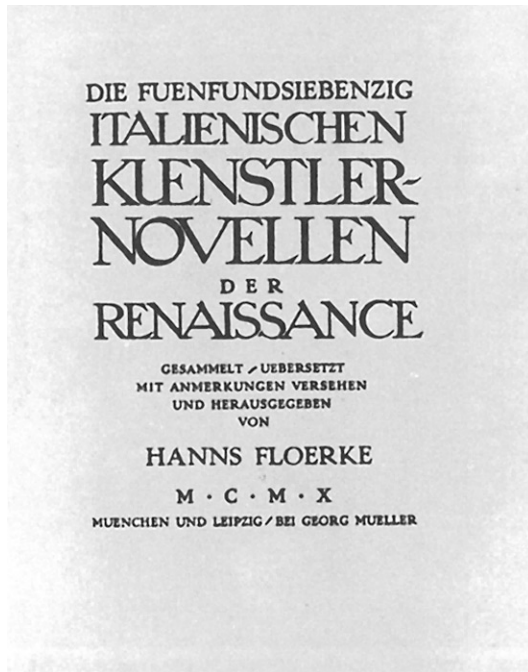


Figure 5. Title page from an edition in the Georg-Müller-Verlag series “Pearls of Prose in the Romance languages.” 1910. 245 x 180 mm. Reproduced in Christopher Burke, *Paul Renner: The Art of Typography* (New York: Princeton Architectural Press, 1998) 29.

THE ELEVENTH CHAPTER.

Of Crueltie.



HE thinks vertue is another manner of thing, and much more noble, than the inclinations unto goodnesse which in us are ingendered. Mindes well borne and directed by themselves follow one same path, and in their actions represent the same visage that the vertuous doe. But vertue importeth and soundeth somewhat, I wot not what, greater and more active, than by an happy complexion, gently and peaceably, to suffer it selfe to be led or drawne to follow reason. He that through a naturall facilitie and genuine mildnesse should neglect or contenne injuries received, should no

THE CENTAUR. WRITTEN BY MAURICE DE GUÉRIN AND NOW TRANSLATED FROM THE FRENCH BY GEORGE B. IVES.



Was born in a cavern of these mountains. Like the river in yonder valley, whose first drops flow from some cliff that weeps in a deep grotto, the first moments of my life sped amidst the shadows of a secluded retreat, nor vexed its silence. As our mothers draw near their term, they retire to the caverns, and in the innermost recesses of the wildest of them all, where the darkness is most dense, they bring forth, uncomplaining, offspring as silent as themselves. Their strength-giving milk enables us to endure without weakness or dubious struggles the first difficulties of life; yet

Figure 6. Samples of Bruce Roger's Montaigne (top) and Centaur (below). Both fonts were based on the same original drawings: Montaigne was cut by hand but Centaur was engraved using a matrix engraving machine like that invented by Linn Boyd Benton. Figure prepared by the author from images published in Alexander Lawson, *Anatomy of a Typeface* (Boston: Godine, 1990.)

Notes to Chapter 1

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- 1 Paul Renner, *Mechanisierte Grafik* 27.
 - 2 Clifford Geertz, "Ideology as a Cultural System," *The Interpretation of Cultures: Selected Essays*, qtd. in Victor Margolin, *The Struggle for Utopia, Rodchenko, Lissitzky, Mohology-Nagy 1917–1946* (Chicago: University of Chicago Press, 1997) 5.
 - 3 The word letterform, in this instance, includes both the concept of form and style. For example, the sturdy slab-serifed fonts of the industrial revolution retained the roman form and neoclassical proportions of fonts like Didot and Bodoni while increasing the weight of the hairline strokes and serifs in order to produce a new letterform capable of withstanding the rigors of mechanized printing.
 - 4 Renner, *Mechanisierte Grafik* 25–32.
 - 5 Philip Meggs, *A History of Graphic Design*, Second Edition (New York: Van Nostrand Reinhold, 1992) 174–175.
 - 6 Renner, *Typografie als Kunst* 27.
 - 7 William Morris, *The Ideal Book: Essays and Lectures on the Arts of the Book* ed. William S. Peterson (Berkeley: University of California Press, 1982) 61.
 - 8 Martin Lowry, *Nicolas Jenson and the Rise of Venetian Printing in Renaissance Europe* (Oxford: Basil Blackwell, 1991) 224.
 - 9 Alexander Lawson, *Anatomy of a Typeface* (Boston: Godine, 1990) 49.
 - 10 Lawson 21.
 - 11 Lawson 54.
 - 12 For a good overview of early twentieth century German blackletter fonts see Christopher Burke, "German Hybrid Typefaces 1900–1914," *Blackletter: Type and National Identity* (New York: Cooper Union, 1998) 32–39.
 - 13 Renner, *Typografie als Kunst* 13–14.
 - 14 *The Columbia World of Quotations* (New York: Columbia University Press, 1996) 26 March 2005 <www.bartleby.com/66/>
 - 15 Lewis Blackwell, *Twentieth Century Type* 13.
 - 16 Richard E. Huss, *The Development of Printers' Mechanical Typesetting Methods 1822–1925* (Charlottesville: University of Virginia Press, 1973) 9.

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- 17 The most complete explanation of Benton's machine and the engraving process used by American Typefounders Company can be found in Patricia Cost, "Linn Boyd Benton, Morris Fuller Benton, and Typemaking at ATF," *Printing History: The Journal of the American Printing History Association*, 16.1 (1994) 27–44.
 - 18 Lawson 395–96.
 - 19 Lawson 281.
 - 20 Mark Solsburg, "Linotype Library: A company with a (very) long tradition," *Lino Type Library*, 5 July 2005 <<http://www.linotype.com/10-49-10/history.html>>
 - 21 Blackwell 18.
 - 22 Lawson 238.
 - 23 Meggs 228.
 - 24 Walter Tracy, *Letters of Credit: A View of Type Design* (Boston: Godine, 1986) 92.
 - 25 Lawson 354.
 - 26 Lawson 60–67.
 - 27 See Albertine Gaur's *A History of Writing* (New York: Cross River Press, 1992) pages 36–37. The fate of commercial script, or running hand, serves as a case in point. Commercial script was promulgated to provide a social norm for handwritten correspondence. Its utility ended in the late nineteenth century with the adoption of the typewriter, but its visual forms survived in ever more complex styles. This letter style of refined, and sometimes tortured, stroke articulation and elaborate embellishment became a sign of commercial stability and was taken up by emerging companies engaged in producing and selling new products of unproven reliability or utility. General Electric and Coca-Cola provide two clear examples of this process.
 - 28 Renner, *Mechanisierte Grafik* 51.
 - 29 "Bauer of Frankfurt-am Main," *MyFonts*, December 2004 <<http://www.myfonts.com/foundry/bauer/>>
 - 30 Ron Eason and Sarah Rookledge, *Rookledge's International Handbook of Type Designers: A Biographical Directory* (Surry: Sarema, 1991) 22.
 - 31 Lawson states that at one time much of west-bound trans-Atlantic German shipping used Venus for ballast (301). The font proved durable and was renamed Folio and released by Bauer in 1957 to answer the challenge of Univers and Helvetica, a new class of grotesques that had displaced Futura as the most widely used sans-serif.

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- 32 During the period of the ascendancy of the dollar as the reserve currency of choice, American typographic equipment firms in order to have both a European manufacturing base and access to German type catalogs began to acquire German foundries, in the same way that Japanese companies periodically use the strength of the Yen to buy American motion picture studios for access to their film libraries. Mergenthaler Linotype began joint ventures with the Stempel foundry of Frankfurt in 1905. After 1917 it began a major program of acquisition. Between 1917 and 1927, Mergenthaler, through Stempel, acquired ownership or significant shareholdings in Klingspor, Hoffmeister, Drugulin, Brötz & Glock, and Haas'sche foundries ("Company History," Linotype Library, January 2005 <http://www.linotype.com/10-10-10-14023/1900.html>).
- 33 Renner, *Typografie als Kunst* 11.
- 34 Renner, *Mechanisierte Grafik* 31.
- 35 Gray 186.
- 36 Stanley Morison, *On Type Designs, Past and Present: A Brief Introduction*. (London: E. Benn. 1962) 65.
- 37 Stanley Morison, *A Review of Recent Typography in England, the United States, France and Germany* (London: Fleuron 1927) 52.
- 38 Renner, *Mechanisierte Grafik* 7.
- 39 Renner, *Typografie als Kunst* 22.
- 40 Paul Renner, "Vom Georg-Müller-Buch bis zur Futura und Meisterschule: Erinnerungen Paul Renners aus dem Jahrzehnt von 1918 bis 1927" ("From Georg-Müller-Buch to Futura and the Meisterschule; Recollections by Paul Renner From the Decade 1918 to 1927") *Imprimatur: ein Jahrbuch für Bücherfreunde*, 9 (Hamburg: Gesellschaft der Bücherfreunde, 1939) 5.
- 41 Morison, *A Review of Recent Typography* 48.
- 42 Christopher Burke, *Paul Renner: The Art of Typography* (New York: Princeton Architectural Press, 1998) 27–29.
- 43 Lawson 390–96.
- 44 Renner, *Mechanisierte Grafik* 51.
- 45 Renner, *Mechanisierte Grafik* 52.
- 46 Lawson 64–67.

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- 47 Renner, “Vom-Georg-Müller-Buch” 5.
- 48 Renner, *Typografie als Kunst* 52.
- 49 Renner, *Mechanisierte Grafik* 10. The introduction to this 1930 book was written in 1925 (Renner, “Vom Georg-Müller-Buch” 8).

Chapter 2

The Problem, the Task, and the Type of the Time

“Mithin”, sagte ich ein wenig zerstreut, “müssen wir wieder von dem Baum der Erkenntnis essen, um in den Stand der Unschuld zurückzufallen?”—“Allerdings,” antwortete er, “das ist das letzte Kapitel von der Geschichte der Welt.”

[“Therefore,” I said a little forgetfully, “must we again eat from the tree of knowledge, in order to return to a state of innocence?” “Indeed,” came the reply, “that is the last chapter of the history of the world.”]¹

The form of a script reflects the society that produces it. As Albertine Gaur observes, “Writing stores information essential to the social, economic and political survival of a particular group.”² Continuity of scripts confirms societal continuity, and variance from the constraints of cultural norms alerts us to the presence of a group consciously setting itself apart.³ Although the content among the three books on typography that Paul Renner wrote over a sixteen-year period is remarkably consistent, the differences among their visual forms reveal the degree of discontinuity present in the Weimar Republic (fig. 7).

Typografie als Kunst, laid out in a neo-classical mode using the ‘Golden Section’ ratio and set in Unger Fraktur, could have been created at any time after c. 1810. Because Paul Renner had wide experience designing books for the German market,⁴ and *Typografie als Kunst* was addressed to the German typographic community, its visual form can be taken to represent a post-World War I German norm for books about the arts.

Mechanisierte Grafik, with its ISO A4 pages and Futura type, demonstrates how much that norm had changed in only eight years. Another eight years later, *Die Kunst der Typographie* strikes a compromise between the extreme polarities of the earlier books, much like the resolution Futura achieved between historic form and modern style.

Futura's visual abstraction, formality, and uniformity, as well as its basis in European tradition, provide specific evidence that it was developed in reaction to the cultural, economic, political, and social instability experienced in Germany in the decade following World War I. *Die Schrift unserer Zeit* ("the type of our time") is not just any type but "the type" and not for any time but for Renner's modern moment, for Weimar Germany. He expressed the specifically German social context for Futura:

Type reveals not only the character of whoever designed it. It also reveals the character of the people who use it, just like the handwriting of the individual. Therefore, what sort of characters we use concerns us all ... Each populace has the script it deserves, for each time period, the script that corresponds to its nature. And what could our type be other than "a true, right landmark of the German soul, at the same time new and archaic, overripe and overabundant, today and in the future?"⁵

For Renner, the *Aufgabe unserer Zeit* ("task of our time") was the creation of *Die Schrift unserer Zeit*. The task was the transformation of the visual word, the most fundamental trace of any literate culture. This transformation by visually reconciling the conflict between modern, technological civilization and traditional German culture would create a new standard that could reduce Germany's cultural isolation from western Europe and the Americas; provide the popular press and commercial book printers with a

means by which they could approach the qualitative advances of Germany's private book presses; make it easier for German type foundries, compositors, and printers to compete successfully with their non-German counterparts; and improve the working conditions within the German printing industry.

German typographic practice in the first half of the twentieth century differed from the Latin typographic practice in the United States and England. Essentially, Latin practice employs a basic typographic vocabulary consisting of the roman upper- and lower-case alphabets with an accompanying italic, and it follows grammatical conventions based on classical Latin. German adoption of the American or English standard after World War I might have reduced German cultural isolation and provided better working conditions in more economically viable foundries and printing plants. However, adoption of non-German typographic practice would have amounted to a profound defeat of German culture and identity that simply was not acceptable to a prideful Germany chaffing under the burden of reparations and limited sovereignty imposed after World War I. Only a new German typographic norm could contribute to the resolution of the conflict between modern German civilization and traditional German culture that lay at the heart of 1920s German discussions of art, politics, and culture. To be successful in Weimar Germany, the new German norm had to integrate aspects of German culture with the emerging international style.

Inflation as Cultural Metaphor

Scripts are created by societies, so the creation of a new norm of writing cannot occur unless the society itself undergoes change.⁶ Scripts have evolved episodically like the societies they represent and serve. Interruption in a system opens a realm of

opportunity where forms that once struggled for survival may prosper in the altered environment. Features developed in the old system as a means of subsistence augment a form's competitive advantage in the new.⁷ However, for something so essential for social cohesion as a society's authoritative script, there is an abiding norm that limits the degree of variation tolerable in even a disturbed system. In countries that follow Latin typographic practice,⁸ that norm has always remained the inscriptional Roman capital, but in Germany *Bruchschrift* ("gothic script")⁹ defined the prevailing norm. World War I deposed the old political system, but it was the political and economic crises of Weimar Germany's first half-decade that provided an opportunity to replace *Bruchschrift* with a new norm for the printed German word. Foremost among those crises was inflation that, in destroying the value of money, disrupted the bond between representation and authority and called into question all values in German society. Inflation eroded the authoritative boundaries of strict cultural codes and opened new spaces of freedom in a more egalitarian society.¹⁰

Books and paper money not only share production processes, the origins of the concept of money and writing coincide. Western writing began with Mesopotamian scripts developed from the practice of encoding commodities through the use of three-dimensional clay tokens. The one-to-one correspondence between a token and the commodity it represented assured the token's value. To avoid devaluation of all tokens by easily fabricated counterfeits, sets of tokens were encased in clay balls authenticated with complex seals. Proto-Sumerian writing developed to provide each ball with an index of its authenticated contents.¹¹ Since representation requires acceptance of the abstraction of the real, writing was only possible when seals provided the necessary authentication of

value to the signs that represented the tokens, which in turn represented the actual commodity.¹²

The separation of representation and authenticity is fundamental writing is always problematic. Prior to the invention of printing, the visible trace of the author's hand helped authenticate the manuscript. In the case of copies, a reader who commissioned a transcription of another author's work could reasonably presume that the scribe had access to an authenticated source. Curial and chancery scripts—from which fraktur emerged—were styles specifically developed to provide visual authentication for theological, legal, and diplomatic transcriptions where the reader did not know either the scribe or the author (fig. 8).¹³ The visual connection between representation and authenticity grew more tenuous as printing developed, and early printers attempted to solve this problem by basing their type on authoritative hands.¹⁴ Renner expressed the opinion that “written book-script” is “the wellspring of all new printing fonts.”¹⁵

The punch was the tap that controlled the flow. From the birth of letterpress printing, manually cut punches were to type-founders what dies are to a mint. Possession of the punches assured ownership of the typeface. Nineteenth-century electroplating and mechanical reproduction processes rendered the protection provided by the craft of punch cutting worthless, and the vast amount of type made available by the new processes devalued any individual text and font. The mechanization of typefounding increased the frequency with which counterfeits and variants of typefaces were produced, thus diminishing the cultural authority projected by any typeface. Fonts, once the property of individual printers, became commodities sold in catalogs. Esteemed classics became just one more font in a printer's bag of stylistic tricks. Books printed with copied and pirated

fonts filled the shelves of discount booksellers. Even the Bible became a commercial product authenticated with machine-made copies of authorial scripts and sold, like soap and brushes, door-to-door by traveling salesmen.

In the years following the end of World War I, mechanized printing enabled the rapid expansion of the amount of both money and books in circulation, and the collapse of German currency that reached its peak in November 1923 became emblematic of the destruction of traditional culture by industrial civilization. Conceptualizing inflation as a process of uncontrolled and unpredictable massification and depreciation taking place in an ever faster circulation of money enabled understanding of parallel processes operating in German culture.¹⁶

Mechanized book production was inherently a devaluation of the currency of the book. The increased populations of industrialized areas provided the world's first mass population of readers, the mechanization of paper manufacturing provided a vast supply of paper at ever lower prices, and the invention of the steam-powered rotary press, by the German inventor Friedrich Koenig, made rapid high-volume printing a reality. Like other forms of massification, the mechanization of printing produced social and aesthetic problems. There were more readers, but what they read was ephemeral. Newspapers, broadsides, fliers, and promotional materials became the reading material of mass populations, and what they read was as transitory as the paper they were printed on:

...abstract philosophy created by the most important minds in laborious reflection becomes blurred when it is reproduced, fraught with error, in the amateur-philosophies and in the facile, feature articles of magazines and newspapers. These, contrary to real philosophical writing, deliver thoughtlessly repeated

expressions that form the concepts that the half-educated and uneducated more or less consider as their own philosophy.¹⁷

As an avid student of philosophy, Renner knew that not only visual standards were debased by mass media

The volume of printing rapidly expanded with the supply of paper. Figures on paper production provide a clear picture of the scale of the increase in the years between German unification and World War I.¹⁸ With wood pulp feeding continuous web paper making machines, the production of paper increased six-fold between 1875 and 1908. Paper manufacturers increased demand for their product by backing the founding and modernization of typographic shops. Change was particularly swift in Germany, where the printing industry grew from 18,000 employees in 1849 to 134,000 in 1907. Between 1907 and 1914, the rate of growth exploded to over 11% per year, and by the beginning of World War I nearly a quarter-million persons worked in the German printing industry. The increase in the supply of paper was instrumental in reducing the raw material costs of book manufacture. In 1870, raw materials accounted for 38% of the cost of a book, by 1912 the cost of raw materials had been reduced to only 12% of the production cost for a single volume.

Mechanized book production ensured the commodification of the book. Although approximately 90% of the populations of Germany, France, and England were literate in 1900, access to books remained restricted. The growth of the middle class and the development of a “cult of the book” among those of privilege led to an increase in the market for mass-produced books. Acquisition of well-made books was a prerogative of a literate elite catered to by the private press movement that began in England and rapidly

spread to the United States and continental Europe, particularly Germany.¹⁹ The taste for fine volumes spread to the middle-class, but limited production runs and extensive handwork of private press books put them beyond the means of average readers. With a ready made market of buyers willing to pay a slightly higher price for the appearance of prestige, commercial book printers stepped in to fill the gap.

Book printing, which had provided the standard for print production since the fifteenth century, became increasingly marginalized and its aesthetics compromised by the economies of mechanized production.²⁰ Following practice as old as printing itself, the manufacturers of mass-produced books strove to make their superficial appearance as similar to their elite models as possible.²¹ Machine embossed “leatherette” bindings emulated hand-tooled calfskin. Bleached pulp paper stood-in for hand-made rag paper. The reductions in cost came at a great price; of the 2 million books of that period in the collection of the Bibliothèque Nationale over 75,000 have been irretrievably lost and over a million are at risk.²²

The design of the manufactured page reflected its elite model as closely as the economies of mass production and distribution allowed. Typefaces emulating the form and style of fonts used by private presses were mass produced by the foundries and sold to commercial book printers, making up, in part, for the newspaper and magazine business the foundries had lost to machine composition. As machine typesetting began to make inroads in the book printing industry, typefaces, designed as reactions against the negative effects of mechanized printing, were themselves adapted for use in hot-metal typesetting machines. The books and scripts that for centuries had served as reservoirs of culture became products of industrial civilization.²³

Inflation reversed the process that had brought well-made books into the reach of the German middle class, the audience served by the publishers for whom Renner did most of his work. After World War I, the price of books steadily climbed with the cost of paper. Inflation eroded the purchasing power of the professional classes, and the sale of new books declined. As the inflation neared its peak in 1923, people and institutions quit buying books and began selling them. Books are prominent among the material possessions sold by the middle class to raise cash for food and shelter (fig. 9).²⁴

A particular problem faced by the German printing industry was that it was German. Industries that could produce export goods were able to obtain hard currency for their products and were somewhat protected from the effects of inflation, but most books printed in Germany had little export value. They were printed in German—an alien language for many in countries with hard currencies—and the majority of German books were printed in *fraktur* or *schwabacher*, scripts as alien as the language. German printers' operating costs were increased by the additional cost of stocking fonts not required by non-German competitors. However, among German graphic arts industries, type foundries did produce a product with excellent export value.²⁵ Their products were renowned for their quality, collectively their catalogs were the match of any nation, and the devalued mark made them lower in price than the type of French, English, and American foundries. German type became so popular in England after World War I that one of Stanley Morison's greatest challenges at Monotype was coming up with products distinctive enough to battle the flood of sans-serif type pouring out of Germany, and in particular Futura when it appeared on the market in late 1927.²⁶

Non-salaried middle-class professionals, like Renner, were among those most affected by the inflation.²⁷ In his reminiscences, he refers to the inflationary period following World War I. He ascribes to inflation a role in the aesthetic decline of Georg Müller Verlag, the firm with which he had an exclusive contract for the design of books. The diminution of quality after Müller's death in 1917 made him dissatisfied with the firm. Renner voluntarily terminated his exclusive design contract with the firm and retired to Lake Constance to resume painting, but he was drawn back into the world of typography partly by inflation's erosion of his income, and partly by a set of rules he wrote for the typesetting of books.²⁸ In March 1917, Renner published fifteen rules for the typographic composition of books. The rules were printed without "preface or commentary" in the trade journal *Börsenblatt für den deutschen Buchhandel*.²⁹ The vehement objections raised by members of the typographic trade to the idea that an artist would presume to write rules governing a trade practice led Renner to further develop his argument in *Typografie als Kunst*.³⁰

The first chapter of the book applied Deutsche Werkbund principles of art and labor to define the role of the artist in modern society. It initially appeared as "Künstler und Gerwerbe" ("The Artist and the Trade") in the February/March 1921 edition of *Deutscher Werkbund Mitteilungen*.³¹ Thus, he developed his first written history of European script and explanation of the interaction of form and style during the period of accelerating currency devaluation that ran from November 1918 until November 1923. By the time of the publication of *Typografie als Kunst* in 1922 the German typesetters union had adopted many of the book's tenets. Through appearances held in various German cities for discussion of the book's "typographic rules," Renner involuntarily

became a spokesman for typographic and printing reform.³² He also developed a personal affiliation with the *Deutsche Verlagsanstalt* (German Publishing Association) that, during the deteriorating economic situation of 1922 and 1923, provided him with a lifeline in the form of a position with the association.³³

In addition to referring to effects of economic inflation on his career, Renner used the word inflation to describe the effect of historicism on the design of typefaces. Inflation provided an economic metaphor for the maladies of historicism and cultural massification. A German cartoon that appeared at the height of the Weimar Republic's currency devaluation illustrates that this parallel was not lost on the literate public (fig. 10).³⁴ Paul Renner clearly drew a connection between economic inflation, which devalues the expression of economic value, and the mechanization of typesetting, with its attendant proliferation of typefaces, that devalues the written expression of culture. Renner recalled that he "became ever more clearly conscious, that mechanization had brought about not only the decay of art, but threatened human culture in general."³⁵

Renner's use of inflation to describe an aesthetic malady is in keeping with the culture of inflation detailed by Bernd Widdig in *Culture and Inflation in Weimar Germany*. Widdig describes Elais Canetti's analysis of inflation where "during times of inflation other representative systems also become suspect."³⁶ The erosion of social and cultural identity had long been a concern in Germany, but those who lived through the Weimar years experienced a radical acceleration of the process. The currency devaluation presented both an intense experience of and an economic model for the processes of modernity sweeping through Germany. This experience provided a means of perceiving "inflation's participation in the over arching dynamics of modern life."³⁷ Widdig also

cites a 1925 novella by Thomas Mann—a Munich resident and acquaintance of Renner’s—that weaves these threads into a story about the effects of modern, inflationary society on an academic family.³⁸ The story, *Disorder and Early Sorrow*, contains a philosophical sub-text drawn from Friedrich Nietzsche's criticism of historicism.³⁹ Renner applied Nietzsche’s critique to typography, stating, “If today, we use countless letter forms of old, long-lost cultures side-by-side ... that is not a sign of sound strength but incapability ... the inflation of historicism has always debased the historic forms and turned us from our course.”⁴⁰

For Renner, the dynamic of inflation in culture played out in his relationship to the mechanization of printing. A long-term member of the Werkbund, Renner’s reservations about mechanical printing processes and his part in advancing them were so significant that one quarter of his 1939 reminiscence of this period is taken up with a kind of internal dialog—in the form of an exchange with a hypothetical critic—expressing conflicts of conscience he experienced more than fifteen years earlier. In his reminiscence, he cites an article he wrote in 1925 as a testament to the views he held in the period that Futura was being created, and he goes on to claim, “my views on the relationship of the person and the arts to mechanization has, like myself, altered very little ... almost all those sentences just quoted from the 1925 Festschrift became part of *Mechanized Graphics* which appeared five years later.”⁴¹ He explains to his putative critic that he did not create mechanized printing, but realistically accepted it as inevitable. Furthermore, he reminds his German “critic” that mechanized printing came about through the efforts of three paragons of German genius and personal industry: Gutenberg, König—the inventor of the steam-powered rotary press, and Mergenthaler.⁴²

Germans of the Weimar period would have understood Walt Kelly's epigram "we have met the enemy and he is us."⁴³ The Gutenberg cartoon (fig. 10) includes representations of two of Renner's German printing triumvirate: Gutenberg and the Moloch-like maw of König's rotary press.⁴⁴ The general public through popular culture images knew the social and economic impact of Gutenberg's and König's devices. In plain view on the pages of any magazine of the period, the trace of Mergenthaler's invention was lost on the average reader, but not on Renner. Mechanical type setting belonged to the "ever newer machines" invented during the nineteenth century that "led step-by-step from the last remnants of antique culture into the tumult of our modern civilization."⁴⁵ However, it was not the machines themselves that were at fault. It was the "the specialization and mechanization of people employed in manufacture" that "created a mental misery."⁴⁶

Typografie als Kunst makes it clear that Renner believed that the entry of machine composition into book printing was as inevitable as that of the rotary press and that the negative visual effects of mechanization were not necessarily the result of poor machinery. The König press and the Linotype machines were both marvelous, intricate devices but without careful, sensitive design could not produce work of quality. Such operation required aesthetically trained operators and meaningful work. This is the Werkbund agenda applied to printing. The impact of mechanization on book aesthetics could be ameliorated by the intervention of the artist.⁴⁷

Renner understood that Gutenberg, like König and Mergenthaler, had a darker, inflationary side. Letterpress printing was the first mechanical process of mass production that relied on interchangeable, replaceable parts. It converted the written letter from

valued cultural artifact into a cog in a machine that diminished the status of persons who made books and enabled the devaluation of the cultural currency represented by the art of the book:

Before the advent of printing, the book—the work of a scriptal artist—equaled the most splendid graphic performances of the Middle Ages. This pillar in the cathedral of medieval art-diligence is converted to a mass commodity by a process that dictates the division of labor, and decade-by-decade loses artistic value.⁴⁸

Renner as a Man of his Time

The aesthetic theories and the social role of the artist in industry that Renner wrote about locate him securely in the discourse of Weimar Germany. He was what Max Weber's brother Alfred in a 1922 speech posited as the new man of the age, the *Arbeitsintellektuelle* ("working intellectual"), someone who could "combine intellectual education with a practical training that will allow him to earn a steady income ... while continuing to contribute to culture by challenging his expertise with the fruits of his education."⁴⁹ A designer, educator, and author, Renner fulfilled the "ambition of the artistic-social avant-garde." These Weimar architects, artists, and writers sought "to close the gap between discursive acts, which were confined to postulation and speculation, and pragmatic ones, which involved participation in building a new society."⁵⁰ During the period he was completing *Futura* and organizing the *Meisterschule für Deutschlands Buchdrucker*, he appeared with Thomas Mann, Heinrich Mann, Leo Weismantel, Walter Courvoisier, and Willi Geiger in a public forum held at Munich's town hall to respond to

the polemic of the political right that labeled any variance from the cultural historicism favored by right-leaning nationalist parties “cultural bolshevism.”

Renner was a social liberal with personal convictions of individual responsibility and service.⁵¹ In the fundamental Weimar dispute between *Gemeinschaft* (“cultural community”) and *Gesellschaft* (“organized society”), Renner distrusted extreme positions that would erode the ability of the artist to express the “certain and purposeful artistic volition” that is essential to the creation of art. He supported his contention that aesthetics should be left to artists with an argument he paraphrased from a 1916 essay on the beliefs of the German youth movement:⁵²

Is it necessary, to say that the determination of the contemporary artistic volition [*Kunstwollen*] cannot be established through majority rule? There is, in mankind, something beyond individual consciousness ... distributed only among the few, best minds of an era ... In this sense, we resemble the familiar state of the jellyfish, which allocates to individual animals the functions of the total-organism. The functions of the brain we leave to the “republic of the spirit,” in order that its body be protected. Likewise, this tiny minority further divides its own field of work into carefully delimited areas of authority.⁵³

For Renner feudalistic, capitalistic, national socialist, fascist, or communist systems all possessed the same denominator: to uphold authority by enforcing unity.⁵⁴ It must have been particularly galling for him when the political right appropriated popular cultural institutions like the youth movement and *Bruchschrift* to enforce authoritarian conformity. It was during the period when the political right became more adamant in their position on preserving blackletter scripts that his path began to diverge from

typographic conservatives like F.H. Ehmecke.⁵⁵ To some extent, the elimination of Futura's Germanic traces—discussed in the following chapter—can be attributed to this dispute.

Semper and Riegl, Form and Style, Functionalism and Formalism

Renner perceived the effects of rampant historicism as clearly as the average German felt the effects of economic inflation. While the general population neither understood the causes of inflation nor knew how to avoid its impact, Renner understood historicism as the mechanism that devalued culture, and he thought he knew what to do about it. The inevitability of mechanized printing and machine-set type did not relieve an artist of the responsibility for the preservation of the aesthetic and cultural value of the printed page. The task of the artist was not to turn to the past for solace, nor was it only to plan for a utopian future, but to act, to listen to his social conscience and turn the tools of technological civilization to the furtherance of culture. As he wrote in 1922, “The fight, as an artist, however will be the struggle of culture against organized society.”⁵⁶

While Paul Renner was firmly rooted in his own era, for today's graphic designers and students of design history and culture the typeface he created in these years is emblematic of a chronologically distant and culturally alien era. That distance has fostered discussion without much consideration of what the emblem represented in the time of its creation. The general attitude toward Futura as an artifact of European design of the first half of the twentieth century is expressed in the following sentence from Christopher Burke's excellent biography of Paul Renner: “Although Renner was attempting to design a typeface with associations of universality, he nevertheless still considered the particular needs of the German language.”⁵⁷ From a German point of

view, the sentence might read: ‘*Because* Renner was attempting to design a typeface with associations of universality, he considered ... ’ Perhaps the only way of restoring an appreciation of Futura’s Teutonic aspects is to take Paul Renner at his word. He believed the “*Aufgabe unserer Zeit*” was “to find the artistic form that corresponds to the ‘certain and purposeful artistic volition’ of our—*unserer*—time.”⁵⁸ He did not believe that Futura was solely an expression of his “particular artistic intent,” but served his era’s quest for its “*Absolutum*.” The specific task for the artist was written during the time he was working on the initial design of Futura. The task was to produce a printed script that would contribute to resolving the conflict between culture and contemporary civilization by purifying older scriptal styles through the application of modern typefounding technology. For Renner, a specific task required by his era was “the conscious confrontation by the mechanical—the purification by mechanized technology—of the old wealth of forms of handicraft.”⁵⁹

A visual comparison of Futura with pre-World War I type designs (fig. 11) makes the nature of the task evident. Hybrid typefaces designed to reduce the difference between German and Latin typefaces frequently use the simple expedient of applying Gothic decoration to a roman framework. However, Futura applies no decoration or artifact of hand written letters to its characters. Instead, the harmonies of Roman capitals are used to define the proportions of northern European minuscule letters. In the first column of figure 11, the forms of the letters are predominately roman. In the second column—except for Futura in the last line—the capitals are not of the Roman form but are instead enlarged uncial or minuscule forms. The form of the ‘a’ in the second column is also more typical of “Gothic” alphabets. All six of the “hybrid” typefaces exhibit

features of style derived from pen-formed letters. The most “roman” of the fonts is *Gotische Antiqua*. It features an x-height similar to *Futura* and lower-case letters of wider proportions than fonts like *Teutonia*, *Germania*, and *Hamburger Druckschrift*, all of which demonstrate “Gothic” proportions. Stripped of stroke weight variation, bifurcated serifs, and flourishes on the ‘b’ and ‘g’ *Gotische Antiqua* would be very much like *Futura*.

According to Renner, the form of characters is a development of technology and casual practice uninfluenced by artistic intent. The style in which the form is rendered is the province of the artist. He regarded form as something naturally occurring in the practice of writing, and style as a specifically chosen way of representing the form. For Renner, the task of the artist was to achieve artistic representation of form commensurate with the demands of the time of its creation.⁶⁰ The trauma of economic inflation made the separation between representation and authenticity evident. The end of inflation replaced the illusion of wealth with currency based on its real, not inflated, value. Renner said, “artistic, stylistic intent does not aim at compelling departure from the immediately comprehensible basic form.”⁶¹ Thus to effect an end to the inflation of historicism, he felt that the value of the type for his time must be based on the forms of the letter rather than on stylistic traces derived from obsolete technologies. Of course, the forms had to have proven value and for that he turned to the Roman capital and northern scriptal forms derived from the Carolingian minuscule.

Renner grappled with the implications of the theories of Gottfried Semper and Alois Riegl as they played out in the Arts and Crafts movement and German typography of his era.⁶² He resolved their ostensible conflict by deciding that functionality, raw

materials, and technology determine form, “a certain and purposeful artistic volition” produces style, and art results from the balanced interaction of the two.⁶³ The distinction is not Renner’s invention. His statement in *Typografie als Kunst* on the relationship between the theories of Semper and Riegl is a paraphrase of a published speech that Peter Behrens delivered prior to World War I.⁶⁴ Renner’s text is connected to Behrens’ earlier work by his repetition of Behrens’ phrase “coefficient of friction” to describe the role of Semperian functionality in the formation of art. Renner applied Behrens’ argument on the role of the artist in industry to the practice of typography and printing. Following Behrens’ lead, Renner rejected the Semperian principle of the interaction among functionality, raw material, and technology as the source of art while regarding it as a necessary and desirable restraint on “artistic volition.” Similarly, Renner understood that Riegl’s version of Schopenhauer’s *Wille* cannot create art without engaging with function, material, and technique.

Return to Primal Origins: Renner’s Survey of the Evolution of European scripts

In times of chaos and confusion ... the human mind seems to fall back on ancient, often atavistic dreams and memories, dreams of belonging, of returning home from alienation to a fully reconciled Creation. Something deeper than thought appears to thrust the mind inward and backward in search of a timeless center, of a still point unpolluted by the profane. Men claw their way back to origins, real or imagined, to presumed roots and fundamentals.⁶⁵

Renner was a thoughtful and intelligent practitioner of the applied arts of the book, and, according to Heinz Haushofer, a systematic student.⁶⁶ Renner credits Schroust’s *Monumenta Paleografica* and Steffens’ *Latinische* as the references for two

tables of letterforms that he drew for *Typografie als Kunst* to illustrate his understanding of the order and significance of the evolution of European scripts (figs. 12 and 13).⁶⁷ The first table shows the development of letterforms from pre-imperial Rome through the end of the Roman Empire. The second table shows the sequence of the development of letters from Merovingian script through humanist italic.⁶⁸ Concerned with the emergence of letterform rather than letter style, the second table excludes capitals, the form of which had been fixed in the first century. In his view, the development of European scripts proves the validity of the *Werkbund* view of the interaction between functionality and artistic intent. While Semperian functional factors—writing materials and the need for greater efficiency—produce new patterns, Renner believed that “artistic intent” creates letterforms that persist. In 1922 he stated:

Only function, raw material and technology determined the transformation of the earlier cursive into the later ... However, it was “certain and purposeful artistic volition” that developed the uncial from the older Roman cursive, and by which the later half-uncial, derived from Merovingian script, produced the Carolingian minuscule ... Since, even without historic and paleographic knowledge, artistic thought is always understood, *versal* [“capital”], uncial, half-uncial, and Carolingian minuscule are all scripts that have survived their time.⁶⁹

The contrast between functionality and formalism provided Paul Renner with principles by which he analyzed typographic historicism. Historicism could never achieve any era’s “specific, and purposeful artistic volition.” He observed that, “[i]t is modern when the contemporary era appears to think absolutely differently from other periods about perfection.”⁷⁰ Where obsolete techniques were used to make facsimiles of

historic styles, as in the case of the few Arts and Crafts type designers skilled both in scriptal arts and punch cutting, the result was a beautiful but curious relic of a time past. Although he had hand-lettered titles that were mechanically reproduced for books he had designed, Renner was less kind about designers who drew old forms with an art letter's sensibility and then had them rendered into type or reproduced through mechanized processes.⁷¹ He was equally dismissive of experiments, such as those of Bauhaus typography instructor Joost Schmidt where older styles were drawn with a contemporary aesthetic sensibility (fig. 14).⁷²

In that historicism is a development of art that only feeds on art, it is caught in a death spiral. How can we get out of this dangerous cycle? ... By renunciation of all forms, whose technical meaning is no longer immediately clear ... Art must make a new break from technical form, that product of function, raw material and technology.⁷³

English typographic historian Nicolette Gray invokes the Roman capital as an ideal to which different ages return:

The history of lettering can be seen as the repeated revival of the Roman letter. One may see this as a repeated return to right understanding, that is to the idea that the only right understanding of lettering is acceptance of the Roman letter; or one can see it as the constant inspiration of classical antiquity; or as the natural human alternation between stability and experiment, which can also be seen as the alternation between classical and romantic.⁷⁴

Instead of perceiving the Roman capital as the inspiration for later European scripts, Renner saw it instead as one particular era's expression of ideal form. Roman

inscriptional capitals were not the product of a process of abstraction seeking legibility. Roman “artistic intention” had rearranged forms developed during “a thousand year Eastern history from the angular forms of ancient Greek.” Renner felt that the letters stand supreme in their expression of “the timeless, unchangeable artistic-intent found in the script of an age,” and provide a key to understanding “the dissemination through history of a fundamental shape.”⁷⁵ The Roman capital of the first century was the first and most significant manifestation of an ideal European script, but it was not the only one. Renner identifies the Roman capital, uncial (a rounded majuscule developed during the fourth century) and half-uncial (a transitional script between majuscule and minuscule also developed during the fourth century), and Carolingian minuscule as expressions of the “perpetual, unchanging artistic volition [*Kunstwollen*], which sought in ever tighter order the paramount goal of simplicity of shape, and expression particular to the time of its creation.”⁷⁶

His concept was informed by the evolutionary theory of Munich paleontologist Edgar Dacqué.⁷⁷ Glimmers of the primalist ideas espoused by Dacqué in the 1920s can be seen in the section of *Typografie als Kunst* cited above where Renner describes the Roman capitals that “emerge...from the angular forms of ancient Greek” or in the same paragraph where he describes the Roman capital as “demonstrating the timeless, unchangeable artistic-intent found in the script.”⁷⁸ In *Mechanisierte Grafik* he mentions Dacqué by name and explains his theory. Dacqué expressed the idea of unbroken unity with the metaphor of the tree, a frequent German primalist image.⁷⁹ According to Renner, Dacqué held that “man himself has gone through the development from the most primitive creature up to his present nature” and that at specific “geologic periods” the

main-trunk of life—a superhuman potentiality—has sent out adaptations to the prevalent environmental conditions.⁸⁰ Limited by their physical specialization, these lesser forms proved to be evolutionary dead-ends. Mankind, as the source of all branching, continues sending out shoots, testing the waters, and striving toward expression of its perfect form.⁸¹ Applied to type, this would mean that Renner thought there was an essential European script that, under different cultural and technical conditions, had sent out evolutionary branches: Gothic and italic scripts among them. By Dacquè’s definition, all branches from the trunk are evolutionary dead-ends that having run their course are replaced by new shoots whose form is moderated by the environments into which they emerge. The *Aufgabe unserer Zeit* was to achieve the ideal expression of the ideal form in the current “environment” of the *mechanisierten Welt* (“mechanized world”).

Because Gothic capitals were based on enlarged, and elaborated, uncial or minuscule forms, *Bruchschrift* did not use Roman capitals and these “German” letter types were thus removed from the essential *Werkbestand* (“enduring art”) that makes the essence of the trunk of the tree of European scripts manifest. If Renner had followed the linear Darwinian evolutionary model popular at that time, the fact that fraktur was a later development than humanist script would have posed something of a problem in arguing for the inferiority of *Bruchschrift*. Renner’s argument against blackletter type was not actually about the development of European scripts. It was, instead, an argument that drew on the appeal of the return to primal origins. Dacquè’s primalist evolutionary theory provided him with a model that fit both his argument and need to establish an authoritative basis for a new German typeface. By basing the design of Futura on the form of the characters that marked the origin of European scripts and rejecting the

stylistic artifacts of obsolete technologies, Renner felt he would elude historicism and provide an alternative to the typographic inflation that debased the popular and book presses. Thus it was important for Renner to establish the priority of the letterforms on which Futura is based.

The chronological priority of Roman capitals was an established historical fact. To establish the Roman capital as the authentic heart of European scripts, Renner argued that it made spirit manifest as well. He wrote that the Roman capital was the result of a thousand-year process of evolution rooted in “the magic symbols of the primeval time” and all European scripts descend from it.⁸² He held that the Roman capital had a spiritual authority that could illuminate his, or any other, era. It was not an “abstract simplification” developed out of a concern for functionality, but was a manifestation of the “unchangeable artistic-intent” that defines the highest art of an epoch.⁸³

Establishing the source for lower case letters required a more complex argument. The problem, as he acknowledged, was how the Roman capital, being perfect and of “ageless duration”, introduced new letterforms that were less perfect. Renner’s answer was that Semperian functionality, material, and technique and Rieglean “artistic volition” acted on the development of letterforms. There were times during which the two united to bring forth ideal results: Roman capitals, uncials, and Carolingian minuscules. Less than ideal scripts were the artifacts of eras in which the forces were out of balance. Because the “function, to which script owes its existence, is not to be written but to be read,”⁸⁴ scripts like Gothic and italic that compromise legibility for ease or speed of writing fail to fulfill Renner’s primary criterion for functionality and thus, regardless of the excellence with which they represent their epochs’ artistic-volition, are developmental dead-ends.

Dacquè's ideas also provide an argument that if less perfect forms can descend from the Roman it is possible to realize a new ideal of the primal form even more pure than Roman inscriptional capitals. In this light, Renner's various criticisms of typography from the end of the nineteenth century up to Futura become more understandable. Renner welcomed and applauded Morris and the private press movement because they restored legibility to its proper place as the true function of type. While their aesthetic was derived from another era, at least their means of production was equally antique. However, since both the technique and artistic will were borrowed from another time they contributed to neither the improvement of mechanized printing nor the development of a script that expressed the spirit of the era. Far worse, the typographic historicism initiated by Morris and pursued those who followed him ultimately contributed to the plundering of the history of typography and the commensurate devaluation of legitimate scripts. The invention of mechanical means of engraving type matrices solved problems inherent in mechanized printing, but the fonts, without the contributing force of a coherent aesthetic, were "pale" and "characterless." When the private press movement brought the "older forms of the roman back into fashion ... The mechanical smoothness in these copies of the old, powerful cutting shows what happens when technology deserts spirit."⁸⁵

Renner devoted a dozen pages of text and four pages of tables of letterforms in *Typografie als Kunst* (figs. 12 and 13) and an equal number of pages supported by five samples of scripts in *Mechanisierte Grafik* to the demonstration that there were a limited number of ideal models for modern lowercase letters. He concluded that Carolingian minuscule letters are the historic point at which the felicitous combination of legibility and expression of timelessness was most fully achieved. By his own criteria Italian

humanist minuscules, which are very difficult to write and provide a very clear rendition of form, would seem to have been a valid model for Futura. However, as a means of reducing the inflationary proliferation of historicized typefaces they were suspect because they were copied. “The renaissance (literally rebirth) only repeats . . . humanist minuscule is adapted by renaissance artistic intent from the forms of the Carolingian.”⁸⁶ For Renner, Carolingian minuscule letters had an additional advantage critical to establishing an authoritative foundation for a new German norm. They were German. Thus, it was from Carolingian minuscules and the scripts directly descended from them that he extracted the forms for Futura’s lower-case characters.

Although Renner would seem to concur with Gray that classical antiquity provided inspiration to all succeeding eras, there was a difference. While he clearly looked to Roman capitals in the creation of Futura, his idea was that Roman capitals were not just an inspiring artifact of antiquity, they were a demonstration of “the timeless, unchangeable artistic-intent.”⁸⁷ They were an embodiment of a primal essence, and it was on these essential forms that he based Futura. The proportions of Futura’s capitals are virtually identical to those of letters whose design was taken directly from Roman inscriptions (fig. 15).

Classic inscriptions provided more than the proportions that Renner used to shape his capitals and that he applied to the design of Futura’s lower-case letters. He expressed emotional ties to the lettering of classical antiquity. He and his wife spent a honeymoon year in Italy where they wandered through the streets, churches, and monuments without guide books, stopping where and when they wanted, inspecting what caught their attention, including classical inscriptions.⁸⁸ To illustrate the importance of capitals to

children learning the alphabet, he invoked the memory of his first acquaintance with writing in the form of capitals on calling cards left by his father's visitors. Renner recalled that the cards were left in a bronze bowl on a table in the vestibule of his father's office. There is something profound in the image of the young boy extracting his first experience of the alphabet from a vessel that served social ritual.⁸⁹

Because Futura is so clearly related to the Roman capital, it is surprising to realize that it was a manifestation of experiment, not stability. Today, it is hard to realize that the Roman capital did not appear in the majority of typography in Weimar Germany. Roman types were used for scientific publications and non-German literature, but non-roman types defined the stable center of German book typography. As late as 1930, Renner was still stating the formula whereby fraktur was used "for everything German bourgeois," Gothic type⁹⁰ "for the religious," and schwabacher, which was derived from Gothic cursive scripts, "for the common and popular."⁹¹ None of these scripts used Roman capitals. The majuscule letters of these styles, derived from enlarged elaborated minuscules and uncials, were evolutionary dead-ends that had departed from the essential form.⁹²

Expressionism, Constructivism, and *Die Neue Sachlichkeit*

Futura was not an evocation of the past, it was a projection of the future. As released in 1927, it is much more a product of *Die Neue Sachlichkeit* ("the new objectivity") than its Expressionist beginnings outlined in *Typografie als Kunst*. Futura's inception as a new script expressive of German culture, execution as a solution to the problem of typographic historicism, and emergence as an icon of the international style corresponds to the chronology of the Weimar period. Weimar Germany was a milieu as

multivalent as the art movements it propagated. The Weimar Republic passed through three phases. The first was a period of political, social, and economic tumult that lasted from the November 1918 revolution to the currency revision that ended Germany's hyperinflation in November 1923. Relative stability marked the second period that began in early 1924 and continued until the worldwide economic collapse in late 1929. During the final period, Germany's financial problems precipitated a series of political crises that paved the way for the 1933 electoral success of the National Socialist party.⁹³

Constructivism and *Neue Sachlichkeit* respectively correspond with the first two of these periods.

The Expressionist belief that art and culture could be redeemed by a return to the primal sources of culture dissipated in the all too real primalism of World War I. Its demise was announced by the Constructivist manifesto "*Aufruf zur Elementaren Kunst*" ("A Call to Elementarist Art") written by Lazlo Moholy-Nagy, Raoul Hausmann, Hans Arp, and Ivan Puni and published by Theo van Doesburg in 1921.⁹⁴ Expressionism's representation of the primal sources of culture gave way to works of art stripped down to formal elements that expressed an inner universal spiritual feeling related to Riegl's "*eine bestimmen und zweckberwußten Kunstwollen.*"

Constructivism flourished in the recurring crises of the first period of the Weimar Republic. Increasingly abstract constructions reflected the conflicts between culture and civilization, the working classes and the elite, socialist and republican governments, handwork and manufacture. The political tumult of this period and a German art market depressed by the devaluation of Germany's currency created a climate where discourse about the role of art and artist in the modern era—and squabbles about which artists

should receive the diminished resources allocated to art—became more significant than the art itself. *Die Neue Sachlichkeit* is chronologically and thematically linked with the more stable years of the second period, when discourse about art moved to the political arena and the formal vocabulary developed by Expressionism and Constructivism synthesized into a new expression of restrained surfaces and pragmatic vision emphasizing rationality and physical objects but rejecting the inner life central to the earlier movements.⁹⁵

Concern with surface rather than inner reality can be read as a sign that social, political, and economic tensions that had erupted in Weimar Germany during its first phase were repressed during its second. Siegfried Kracauer's observation that the "position that an epoch occupies in the historical process can be determined more strikingly from an analysis of its inconspicuous surface-level expressions than from that epoch's judgments about itself"⁹⁶ supports the view that "the new objectivity" was that of surfaces, rather than realities. Renner wrote that the place a period occupies in the history of the continuity of artistic-intent is found in the artistic actions of that era. He held that an era's ideal can be determined by recognizing those achievements of the past that are most highly valued in a given historical moment and that new contributions to the art continuum only occur when the art it produces is different from all other preceding periods.⁹⁷

Although Renner did not draw Futura until 1924, the original outlines for the typeface were traced in the words of *Typografie als Kunst* in 1922. The book's first chapters focus on two issues that were of paramount concern to the expressionists: the role of the artist in society and the origin of art in the spiritual. Renner's solution is

similar to that of Theo van Doesburg. The title of Doesburg's 1921 lecture, "The Will to Style," infers its connection to Riegl's concept. The lecture outlined his criteria for contemporary art: certainty instead of uncertainty, religious energy instead of faith and religious authority, truth instead of beauty, simplicity instead of complexity, relation instead of form, synthesis instead of analysis, logical construction instead of lyrical representation, machine production instead of crafts, creative design instead of imitation and decorative ornamentation, collectivism instead of individualism.⁹⁸ Van Doesburg's new *Weltanschauung* ("world-view") signaled the shift from Expressionism to *Die Neue Sachlichkeit*. The teleological "specific and purposeful artistic volition" was posited as objective fact in the service of a cultural unity based on rationality and physical objects rather than Expressionism's irrational private exploration of the spiritual.

Renner, writing *Typografie als Kunst* in the same time frame as van Doesburg's lectures and articles, made a similar transition from Expressionism to the more objective aesthetics of mid-1920s Germany. In the chapter entitled "Vom 'bestimmten und zweckberwußten Kunstwollen'" ("About 'the specific and purposeful artistic volition'") in which he explained his concept of aesthetic vision, he rhapsodized about the purity of vision of children and "primitive peoples," but argued that art does not exist in nature. While the simplest forms of nature may well be "spheres, cylinders, cones, cubes, spindles and such" their abstraction into squares, circles, and triangles, and their composition within reasoned relationships do not occur in nature but are forms essential to the expression of the "specific and purposeful artistic volition."⁹⁹ He further reasoned that "the expression of feeling is neither a privilege of fine art, nor a prerogative of art at all,"¹⁰⁰ because emotional force can be experienced in life removed from art. Art is

defined by the ability to establish “inner clarity, mental lucidity. It is what we can call, according to Konrad Fiedler, ‘Visibility.’”¹⁰¹ He ends the chapter with:

...art is never portraying, it is always formative. Even when it depicts representationally, art is in the abstract. Style is consistency of descriptive thought and not stylization of existing forms ... From the point of view of the fine artist, there is no qualitative difference between works of fine and applied art; it is the task of both to give form to heightened visibility. That is also the task of typography, whenever it desires to create works of art.¹⁰²

Futura hides its spiritual heart behind constructivist geometry and *Neue Sachlichkeit* pragmatism. The characters of Futura’s first developmental stage that interrupted the surface of the type column with their abrupt geometric form gave way to smooth, machined letters corresponding to the Bauer foundry’s search for a typeface for the international market. Finally, Futura’s German fortunes declined, like the Weimar Republic, with Germany’s slide into economic depression and the triumph of bombastic nationalistic fervor that marked the end of the period. How a completely new kind of typographic script emerged from the interaction of Renner’s *Aufgabe unserer Zeit* and the process of its mechanical production are the subjects of the next two chapters.

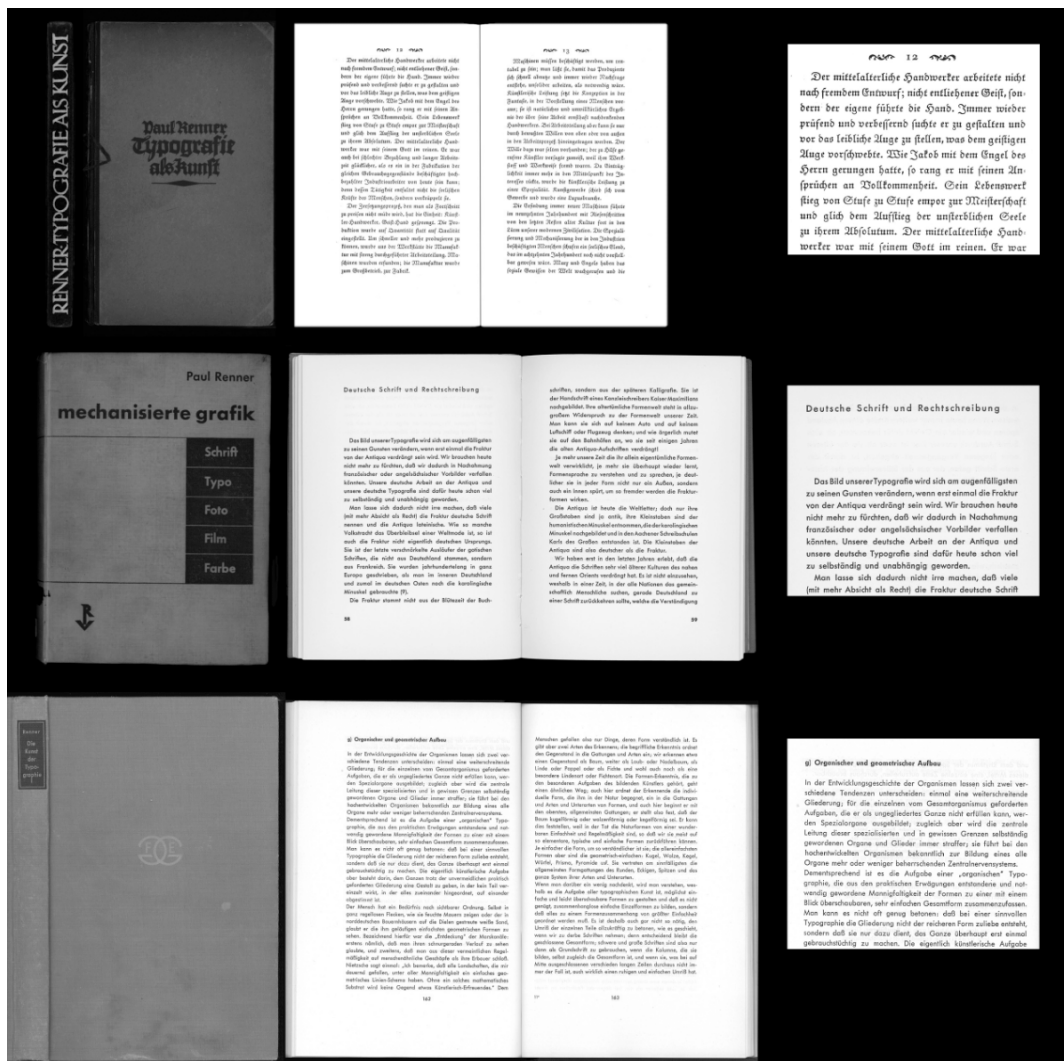


Figure 7. Covers, page spreads, and text sample from *Typografie als Kunst* (top) and *Mechanisierte Grafik* (middle), and *Die Kunst der Typographie*. *Typografie als Kunst*: green board cover imprinted with black ink, spine dark brown leather stamped with yellow; single page, 130 x 210 mm, Unger Fraktur, black letterpress on white cotton rag paper. *Mechanisierte Grafik*: orange cloth binding imprinted in black ink; single page 148 x 210 mm (ISO A5 format), Futura Medium, black letterpress on cartridge paper. *Die Kunst der Typographie*: brown cloth binding with foil stamped publishers signet on cover, spine brown cloth binding with gold stamped type on blue field; single page, 152 x 239 mm, Futura Book, black letterpress on smooth book paper (pulp). Illustration prepared by the author from books in his collection.

So möcht' Ir daraus schiessen wol
 Ein Jeger mit Luch ziehen sol
 Der weyhet Luch die rechten strafs
 Lewdannich sprach so beütsche Im das
 Er sich von stundan mach gerechte
 Onfals vordert einen knechte
 Vnd nam den an ein heimlich ort
 Sprach gefell merckß auf meine wort
 Vnter hün auf das gepirg lauff
 Vnd schaw mit allem steyß darauf
 Wann der Held Lewdannich wir reyen
 Vnden für andes perge leyen
 So mach von schnee einen pallen
 Vnd las den gmach herab fallen
 Das daraus werd ein feenen gros
 Dieselben Helden hütode stofs
 Ist sach das du darinn steyßig
 Bist bey glauben Ich dir versprich
 Dich reich vnd selig hümachen
 Derselb knechte begunde hülachen
 Sprach her: Ich steyß will Ich darinn sparn
 Das solt Ir durch die cat erfarn
 Lewdannich der reyt mit dem Jeger
 Süchend das wil pret in leger

Graue fatica non ti fia ad imparar fare le
 lettere Mauscule, quando nelle pic-
 cole harai firmato bene
 la mano, et
 eo maxime ch'io ti ho
 ditto che li dui principij delle
 Piccole sonno anchora quelli delle grandi
 come continuando il scriuere, da te
 medesimo uenerai
 cognoscendo
 Non ti dirò adunque altro, Saluo che te
 sforzi imparar fare le tue Mauscule
 Come qui apresso ri-
 trouerai per esse-
 pio designato

Figure 8. German and Italian chancery scripts. Left, detail of a page from *Teuerdank*, 1517. Right, page from *La Operina da imparare di scrivere littera cancelleresca*, 1522. Commissioned by Emperor Maximilian, the *Teuerdank* was printed by Johann Schoensperger with type designed by court calligrapher Vincenz Rockner. *La Operina da imparare di scrivere littera cancelleresca* was a course of calligraphic instruction by Ludovico Arrighi, a scribe in the secretariat for papal briefs. The booklet was printed from engraved woodblocks. Both demonstrate the elaborated letterforms that were employed in royal and papal courts following the invention of printing. Figure adapted from illustrations in Phillip Meggs, *A History of Graphic Design*, Second edition (New York: Van Nostrand, 1992) 83 and 97.



Figure 9. “The impoverished middle class have to sell its cherished possessions.” Photo by Sennecke, Berlin. Reproduced in Bernd Wedig, *Culture and Inflation in Weimar Germany*, Weimar and Now: German Cultural Criticism, Eds. Edward Dimendberg, Martin Jay, and Anton Kaes, (Berkeley: University of California Press, 2001) 73.



Figure 10. “Gutenberg and the billion- [mark] printing press: ‘I didn’t intend this.’” This illustration by E. Schilling appeared in *Simplicissimus* 27 (November 15, 1922). Reproduced in Widdig, *Culture and Inflation in Weimar Germany*, 192.

1 Hamburg 5 Hamburg
 2 Hamburg 6 Hamburg
 3 Hamburg 7 Hamburg
 4 Hamburg 8 Hamburg

Figure 11. Six pre-war “hybrid” typefaces compared with two versions of Futura. They are: 1. Teutonia 2. Germanische Antiqua 3. Gotische Antiqua 4. Futura (with the alternate characters of 1927) 5. Germania 6. König-Schwabacher 7. Hamburger Druckschrift 8. Futura. Illustration adapted from images included in Burke “German Hybrid Typefaces 1900–1914,” *Blackletter: Type and National Identity*, ed. Peter Bain and Paul Shaw (New York: Cooper Union, 1998) 38–39.

1	2	3	4	5	6	7
A AA	A	Λ	λ	Λ	u	a
BB	B	B	à	B	6	b
CC	C	C	cc	C	ç	c
D	D	D	d	D	d	d
E	E	E	e	E	ee	e
F	F	F	f	F	f	f
GG	G	G	g	G	g	z
H	H	H	h	H	h	h
I	I	I	i	I	i	i
K	K	K	k	K	k	k
L	L	L	l	L	l	l

Tafel I

1	2	3	4	5	6	7
M	MM	M	m	M	m	m
N	NN	N	n	N	n	n
O	OO	O	o	O	o	o
PP	P	P	p	P	p	p
Q	QQ	Q	q	Q	q	q
PR	R	R	r	R	r	r
S	S	S	s	S	s	f
T	T	T	t	T	t	t
Y	V	U	u	Y	y	u
X	X	X	x	X	x	x
Z	Z	Z	z	Z	z	z

Tafel I

Figure 12. “Table 1,” Paul Renner, *Typografie als Kunst*, 42–43. In this table, Renner included: pre-imperial Roman script, 1; quadratic capitals, 2; rustic capitals, 3; Roman cursive, 4; uncial, 5; later Roman cursive, 6; and half-uncial, 7.

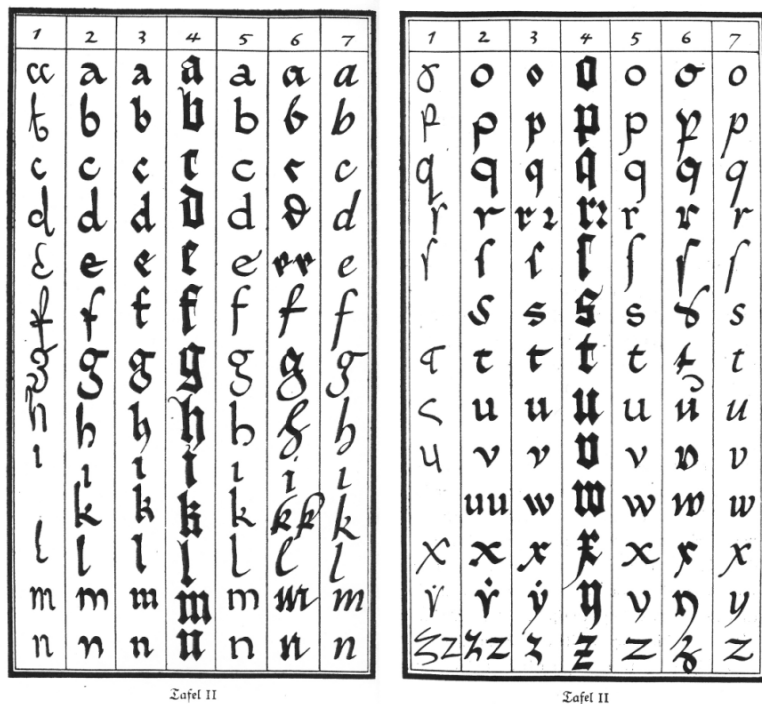


Figure 13. “Table 2,” Renner, *Typografie als Kunst*, 44–45. In this table, Renner included: Merovingian script, 1; Carolingian minuscule script, 2; Gothic script, 3; textura, 4; humanist minuscule, 5; Gothic cursive, 6; and humanist italic, 7.

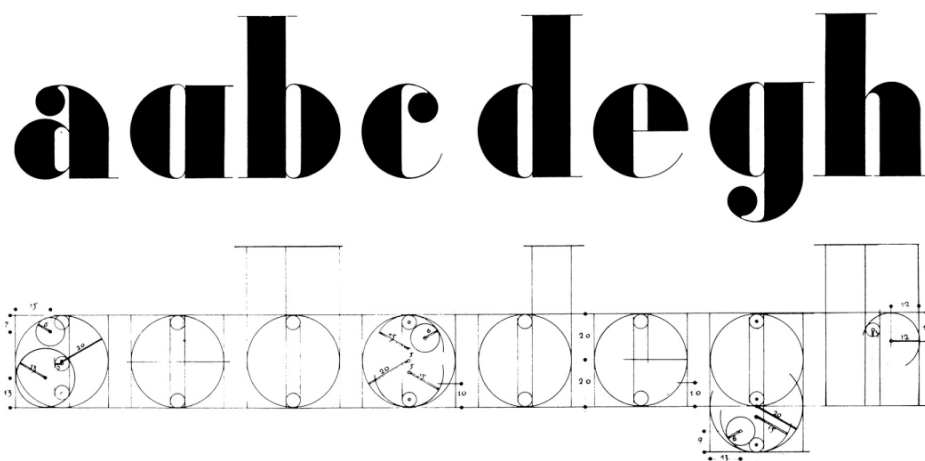


Figure 14. Joost Schmidt, “Classic antique” letters, c. 1926. Prepared by the author from images reproduced in Willberg *Monographien und Materialien zur Buchkunst: Schrift im Bauhaus/Die Futura von Paul Renner*.

A B C D E F G H I
A B C D E F G H I
J K L M N O P Q
J K L M N O P Q
R S T U V W X Y Z
R S T U V W X Y Z

Figure 15. Capital characters, Trajan (first, third, and fifth rows) compared with Futura Medium. Figure prepared by the author.

Notes to Chapter 2

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- ¹ Renner begins *Typografie als Kunst* with this quotation from Heinrich von Kleist.
- ² Gaur 16.
- ³ Gray 175.
- ⁴ Between 1907 and 1917 Renner worked with several German book publishers. The preponderance of his work was with Georg Müller for whom he designed as many as 287 editions in 1913 alone (Burke, *Paul Renner* 29).
- ⁵ Renner, *Mechanisierte Grafik* 14.
- ⁶ Gaur 14–15.
- ⁷ This is a brief explanation of one aspect of the theory of punctuated equilibria. Most recently the theory, which has appeared episodically in various guises since the nineteenth century, was developed by Niles Eldredge and Steven Jay Gould and published in the article. "Punctuated equilibria: an alternative to phyletic gradualism," in *Models in Paleobiology*, ed. Thomas J.M. Schopf (San Francisco: Freeman, Cooper & Co, 1972) 82-115. Renner subscribed to a punctuated timeline for the evolution of European scripts that he derived from the writing of Edmond Dacquè.
- ⁸ Latin typographic practice refers to printing that employs the roman alphabet—upper- and lower-case—and commonly employs italic for in-line emphasis.
- ⁹ Gerald Newton, "Deutsche Schrift: The Demise and Rise of German Black Letter," *German Life and Letters*, 65.2 (2003) 184.
- ¹⁰ Bernd Widdig, *Culture and Inflation in Weimar Germany*, Weimar and Now: German Cultural Criticism, 26 (Berkeley: University of California Press, 2001) 178.
- ¹¹ Denise Schmandt-Besserat, *How Writing Came About* (Austin: University of Texas Press, 1996) 7.
- ¹² Schmandt-Bessarar 98–99.
- ¹³ Henri-Jean Martin, *The History and Power of Writing*, trans, Lydia G. Cochrane, (Chicago: The University of Chicago Press, 1994) 137–38.
- ¹⁴ Martin 226.

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- ¹⁵ Renner, *Typografie als Kunst* 52.
- ¹⁶ This is the essential premise of Bernd Widdig's book *Culture and Inflation in Weimar Germany*, and he uses it to parse quintessential Weimar cultural icons as expressions of inflation's impact on society.
- ¹⁷ Renner, *Typografie als Kunst* 29.
- ¹⁸ Martin pioneered the use of figures of paper production as a statistical means of gauging the impact of printing.
- ¹⁹ Martin 400–01.
- ²⁰ Martin 403–04.
- ²¹ Martin 398.
- ²² Martin 397–414.
- ²³ Martin 453.
- ²⁴ Shelter accounted for nearly 75% of a family's expenditures in 1922–1923, and food for nearly 20%, leaving only 5% for all other expenses (Widdig 46–47).
- ²⁵ Wolfgang Pehnt, "Distant Goals, Great Hopes: The Deutscher Werkbund 1918–1924," *The Werkbund: History and Ideology 1907–1933* ed. Lucius Burkhardt (Woodbury, NY: Baron's Educational Series, 1977) 74–75.
- ²⁶ "Hidden Gems," *Monotype*, 30 January 2005
<<http://www.agfamonotype.co.uk/Library/HiddenGems.asp?show=gillsans>>
- ²⁷ Widdig 179–80.
- ²⁸ Paul Renner, "Vom Georg-Müller-Buch ..." 1–2.
- ²⁹ Burke, *Paul Renner* 217.
- ³⁰ Because Renner made this comment in writing several times including as a footnote to his typographic rules in *Typografie als Kunst* and in "Vom Georg-Müller-Buch" it suggests that he thought that the reaction from members of the typesetting trade might have been less vehement if he had provided an adequate introduction.
- ³¹ Burke, *Paul Renner* 207.
- ³² Renner, "Vom Georg-Müller-Buch" 7.
- ³³ Renner, "Vom Georg-Müller-Buch" 3.

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- 34 It appeared in a Munich-based satirical magazine to which Renner had contributed landscape vignettes (Burke, *Paul Renner* 27), so it is possible that Renner saw this particular cartoon.
- 35 Paul Renner, “Vom Georg-Müller-Buch” 2
- 36 Widdig 62
- 37 Widdig 65.
- 38 I would like to think that Mann named the story’s protagonist, Abel Cornelius, after Renner’s teaching colleague Hans Cornelius, a positivist, neo-Kantian philosopher who as a professor of philosophy at the University of Frankfurt taught both Horkheimer and Adorno.
- 39 Widdig 177.
- 40 Renner, *Mechanisierte Grafik* 21.
- 41 Renner, “Vom Georg-Müller-Buch” 8
- 42 Renner, “Vom Georg-Müller-Buch” 9–10.
- 43 “We Have Met the Enemy and He is US,” *I Go Pogo*, 2 July 2005
<http://www.igopogo.com/final_authority.htm>
- 44 Widdig 192.
- 45 Renner, *Typografie als Kunst* 13.
- 46 Renner, *Typografie als Kunst* 13.
- 47 This role of the artist in improving books is the reason behind *Typografie als Kunst* and is the point of the introduction to *Mechanisierte Grafik*. As Renner notes in “Vom Georg-Müller-Buch,” this introduction first appeared in 1925, while he was working on Futura.
- 48 Renner, *Typografie als Kunst* 28.
- 49 Widdig 187. Weber’s *Arbeitsintellektuelle* was the new social group to replace the *Rentenintellektuelle*, nineteenth-century persons, like Marx and Engels, who derived income from property and directed their minds to the understanding and improvement of society. Inflation had seriously eroded the income generation by property by 1922, and a new source of economically disinterested individual was needed to fill the void.

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- ⁵⁰ Victor Margolin, *The Struggle for Utopia, Rodchenko, Lissitzky, Mohology-Nagy 1917–1946* (Chicago: University of Chicago Press, 1997) 3.
- ⁵¹ Heinz Haushofer, “Ein Eindruck,” *Paul Renner, eine Jahresgabe der Typographischen Gesellschaft München*, zusammengestellt und hrsg. von Philipp Luidl, unter Mitarbeit von Günter Gerhard Lange, TGM-Bibliothek (Munich: Die Gesellschaft, 1978) 15.
- ⁵² Knud Ahlborn, “Freideutsche Jugend un Menschheitsgedanke” (qtd. in Wiedmann 58).
- ⁵³ Renner, *Typografie als Kunst* 55.
- ⁵⁴ Haushofer 15.
- ⁵⁵ Ehmcke continued on good terms with Renner, but the romantic nationalism he shared with Rudolph Koch only fueled the political conservatives attacks on those who insisted that Germany had to abandon Gothic script.
- ⁵⁶ Renner, *Typografie als Kunst* 24.
- ⁵⁷ Burke, *Paul Renner* 105.
- ⁵⁸ Renner, *Typografie als Kunst* 54.
- ⁵⁹ This “call to arms” appeared in the introduction to Renner’s *Mechanisierte Grafik* (10). The book was published in 1930, but according to Renner this phrase was part of an article he wrote in 1925 and later adapted as the introduction to the book (Renner, “Vom Georg-Müller-Buch” 11).
- ⁶⁰ Renner, *Typografie als Kunst* 54.
- ⁶¹ Renner, *Typografie als Kunst* 33.
- ⁶² Burke, *Paul Renner* 68.
- ⁶³ Renner, *Typografie als Kunst* 17.
- ⁶⁴ Peter Behrens, “Art and Technology,” *Industriekulture: Peter Behrens and the AEG, 1907–1914*, trans. Iain Boyde Whyte (Cambridge: MIT Press, 1984) 214.
- ⁶⁵ August K. Wiedmann, *The German Quest for Primal Origins in Art, Culture, and Politics 1900–1933, Die “Flucht in Urzustände,”* Studies in German Thought and History, V. 16. (Lewiston: The Edwin Mellen Press, 1995) 357.
- ⁶⁶ Haushofer 15.

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- ⁶⁷ Renner, *Typografie als Kunst* 173.
- ⁶⁸ The points made by Renner in *Typografie als Kunst* are repeated in *Mechanisierte Grafik*, the appendix of which includes 39 photographic illustrations of epigraphic, manuscript, and printed letters that document his survey of the history of European public scripts between the first and fifteenth centuries.
- ⁶⁹ Renner, *Typografie als Kunst* 48–50.
- ⁷⁰ Renner, *Typografie als Kunst* 55.
- ⁷¹ As a book designer, he had engaged in the practice himself. Renner created hand lettering that was reproduced as title pages and covers for books he designed, including the cover and spine for *Typografie als Kunst*.
- ⁷² In a footnote on page 84 of *Paul Renner*, Burke mentions that Renner “...does not seem to have been in touch with the people at the Bauhaus during the 1920s.” However, Walter Gropius spoke at the *Meisterschule für Deutschelands Buchdrucker* in 1926 and correspondence exists between Mies van der Rohe and Renner concerning Jan Tschichold’s application to teach at the Bauhaus in 1930.
- ⁷³ Renner, *Mechanisierte Grafik* 53.
- ⁷⁴ Gray 122.
- ⁷⁵ Renner, *Typografie als Kunst* 40–41.
- ⁷⁶ Renner, *Typografie als Kunst* 48.
- ⁷⁷ Dacquè was a renowned Munich paleontologist who during the 1920s became absorbed in the pursuit of primal origins. His ideas had been in circulation since the early 1920s, but his best-known statement of his mystical evolutionary theory appeared in *Urwelt, Sage und Menschheit* published in 1926 (Wiedmann 113), when Renner was working on *Futura*.
- ⁷⁸ Renner, *Typografie als Kunst* 48
- ⁷⁹ Wiedmann 48–49.
- ⁸⁰ Renner, *Mechanisierte Grafik* 37–38
- ⁸¹ Renner, *Mechanisierte Grafik* 38–39.
- ⁸² Renner, *Mechanisierte Grafik* 37.
- ⁸³ Renner, *Typografie als Kunst* 38–41.

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- 84 Renner, *Mechanisierte Grafik* 40.
- 85 Renner, *Mechanisierte Grafik* 51–52.
- 86 Renner, *Typografie als Kunst* 49–50.
- 87 Renner, *Typografie als Kunst* 42.
- 88 Renner, “Vom Georg-Müller-Buch” 5.
- 89 Renner, *Mechanisierte Grafik* 68.
- 90 Here Gothic can safely be assumed to refer to type along the model of the type used by Peter Schoeffer to print his 1462 Bible (Fig. 3).
- 91 Renner, *Mechanisierte Grafik* 20.
- 92 Renner, *Typografie als Kunst* 49.
- 93 Shearer West, *The Visual Arts in Germany, 1890-1937, Utopia and Despair* (New Brunswick, New Jersey: Rutgers University Press, 2001) 159–60.
- 94 Margolin 52.
- 95 West 159.
- 96 West 162.
- 97 Renner, *Typografie als Kunst* 53–54.
- 98 Margolin 49.
- 99 Renner, *Typografie als Kunst* 33.
- 100 Renner, *Typografie als Kunst* 34.
- 101 Konrad Fiedler was a neo-Kantian philosopher and a founder of the school of *Kunstwissenschaft* (“the science of art”). *Sichtbarkeit* (“visibility”) was an essential concept that expressed the recognition of fundamental aesthetic forms. Through the work of Hans Cornelius—to whom *Typografie als Kunst* is dedicated, Karl Buehler, and others, *Sichtarbeit* became a starting point for the development of the concept of *Gestalt*. (Crétien van Campen, “Early Abstract Art and Experimental Gestalt Psychology,” *Leonardo* 30.2 1997: 135.)
- 102 Renner, *Typografie als Kunst* 30–36.

Chapter 3

Evidence of the Visual Materials

Without surviving written documentation concurrent with Futura's development, the limited amount of visual material available must provide glimpses of the path that development took. Two drawings, three printed samples, some intaglio proofs—taken from plates engraved to provide patterns for matrix production, and several proof paste-ups are all that remain to trace the path of the development of the typeface. All of the material is known only through reproductions. The actual drawings, the matrix mastering templates, and the type itself are all long gone. The drawings and the engraving templates were lost during World War II, along with all of the written documentation. Given the nature of typographic arts, the type used to print the samples was certainly melted down and re-cast in the form that evolved from the foundry design and production process. However, enough material remains to reveal a process in which the font progressively became more refined, the minuscule letters less obviously geometric, the majuscule letters more geometric—and similar to Roman inscriptional capitals, characters that began as expressions of German script became “romanized,” and the number of characters in the font reduced to a set closer to a standard roman font.

Critics noting the obvious differences between the letters drawn in 1924 and the characters released in 1927 have maintained—erroneously, I believe—that the unconventional characters were part of a misdirected effort to create geometric abstractions of classic minuscule letters. In their view, the foundry design process

mitigated the “unconventional” letters resulting in a more conventional rendering of traditional letterforms. In this general critique, the word classic indicates a belief that Renner began by applying geometric construction to “classic minuscule” letters. Minuscule letters did not exist in the classical world, as Renner notes in *Typografie als Kunst*, so here classic must mean “traditional” letters of the roman alphabet used in Latin typographic practice.¹ Significantly for Renner, Carolingian minuscule letters were a ninth-century German development adapted by fifteenth-century Italian humanists into the roman type that forms the basis of Latin typographic practice. Renner’s original lowercase characters were derived from the traditions of northern European—German—scripts that were lineal descendents of Carolingian minuscules. The letters Renner drew in 1924 are not based on the Italian humanist script that was the point of reference for English and American type designers. They are a rendering of northern European scripts.

It was over the three-year-long development period that the German forms were superseded by letters more like those copied from Carolingian minuscules during the Italian renaissance. This process took place under the supervision of Heinrich Jost. How much impact his input had on Renner is hinted at in slight differences between the two reproductions of drawings purportedly by Renner. Renner claimed that he drafted the font.² Statements made years later by foundry employees indicate that Renner provided the master drawings, but that detailed drawings were made and the re-mastering required for different point sizes was conducted by the foundry staff.

There are only two known images of Futura that were drawn before the typeface first appeared in test samples during the winter of 1924–25. One of the images (fig. 16) is characterized as the original drawing of Futura that Paul Renner submitted to the Bauer

foundry in 1924. The other (fig. 17) is a drawing of capital letters probably done by Renner during the summer of 1925 that served as models for a public signage project for Frankfurt. While the attribution of the second to Renner has been questioned—Willberg attributed the drawing to the Frankfurt architect Ferdinand Kramer—virtually no one has thoroughly investigated the authenticity of the 1924 drawing, even though it presents several problems.

Purported to be the drawing that Renner submitted to Bauer in 1924, the image of the “original” Futura (fig. 16) was not published until 1938 by Denis Megaw as an illustration for an article about twentieth-century sans-serif type in the trade journal *Typography*.³ This same image, or more correctly components of the image, subsequently appeared accompanying articles by Gruber,⁴ Middleton,⁵ Nesbitt,⁶ and Ettenberg.⁷ Christopher Burke has also published it in his article for *baseline* and his biography of Paul Renner. He attributes first publication of the image to Megaw.⁸ Four character sets arranged in three groupings were published with Megaw’s article. Two of these groups are reproduced here as figure 16. The left hand group is composed of five rows of minuscule letters with a sixth row of ligatured letters at the bottom. The right hand group displays four rows of majuscule letters with a fifth row of non-lining numerals and below that a row containing an ampersand and various punctuation marks. Both of these sets are arranged with nearly even left and right vertical margins except for the final line of each set that is centered beneath the preceding rows. Beneath the image of the “original” design, Megaw’s article included what he described as a 48-point sample of Futura “as released.”⁹ That final group is composed of four rows of majuscule and minuscule letters,

ranging numerals, two ligatures, and various symbols and punctuation all arranged to span the width of the upper groups

It is probable that Megaw was not working from the original drawing but from photographic reproductions provided by the Bauer foundry as part of publicity efforts surrounding the 100th anniversary of the firm.¹⁰ It seems likely that the foundry provided Megaw with two reproductions of Renner's original letters—one of the capitals and the other of the lowercase—and a printed specimen of 48-point Futura. Because the arrangement of these elements varies in some of the articles cited, the final page dispositions were at the discretion of the authors and journals that published the articles.

Renner's narrative about the first drawings for Futura, in "Vom Georg-Müller-Buch bis zur Futura und Meisterschule," indicates that none of the authors cited above were working from the original drawings. In that article, he described the initial drawings for Futura as being made on "a sheet of blue-ruled cross-section paper." It was this sheet, or sheets, that he sent to Heinrich Jost at the Bauer type foundry in 1924 and that was approved for development by Georg Hartmann, president of the firm.¹¹ As mentioned earlier, most of the Bauer archive was destroyed during World War II. Except for a reproduction of a drawing of the capitals done on what appears to be blue-lined graph paper, no other drawing described by Renner, nor the compositions that appeared in magazines from Megaw onward survived.¹²

Careful inspection of the image as reproduced by Megaw and subsequent authors supports the conclusion that it is not just a simple photographic copy of an original drawing by Renner. Orthochromatic photography would account for the absence of the blue grid lines that he described in "Vom Georg-Müller-Buch." However, slight

misalignment of the baselines of the capital and minuscule characters indicates that this was not just a copy of a single drawing by Renner.¹³

The second drawing (fig. 17), done in 1925 and most probably by Paul Renner, survives in the form of an image from a Bauer promotional brochure entitled “*Wie eine Buchdruckschrift entsteht*” (“How a printing type is made”) first printed in 1930 and reproduced around 1958.¹⁴ Because the blue-lined paper Renner described in “Vom Georg-Müller-Buch” can clearly be seen in this image—it was probably reproduced from a panchromatic negative and thus retains the quarter-lined grid—something of Renner’s working methods can be deduced.

The height of the letters is determined by the quarter-lined grid on which they are drawn. The letters with vertical strokes, such as ‘H,’ are seven grid units high. The width of the letters is more variable, but generally the widths correspond to either major or minor axes of the grid.¹⁵ The locations of the crossbar in the ‘H,’ the middle arm of the ‘E,’ the horizontal stroke of the ‘G,’ and the size of the bowls of the ‘D,’ the ‘P,’ and the ‘R’ all further demonstrate that the proportions of the letters were not arbitrary, but worked out on the same grid.

The 1925 drawing of the capitals shown in figure 17 can be enlisted to answer some questions about the 1924 “original drawings” shown in figure 16. The overall proportions of all three images suggest that they were drawn on similar sheets of paper. By carefully scaling the two reproductions so that their respective capital heights are equal and then transposing the grid of the 1925 drawing onto the reputedly earlier image, it is possible to get an inkling of whether or not the “original drawing” was once on grid-ruled paper (fig. 18). Obviously, this method will make the capitals fit the same seven

unit height, but also reveals that the majuscule letters of both images share a similar pattern of widths. The x-height of the minuscules of the 1924 image is four and one-half units and the widths of the minuscule letters are consistently three, three and one-half, four, four and one-half, and five units wide, all of which suggests that they too were drawn on grid paper similar to the image dated to 1925.

The spacing between the lines of letters in the two images tells a similar story. In the 1925 image, the lines are separated by one, two, and three grid units. In the “original drawing” from 1924, however, there is less consistency. The baselines among the lines of minuscule letters appear to be separated by nine units, but the last line of ligatured characters appears to be nine and one-half units below the line above. The lateral space separating the letters further confirms the notion that the 1924 drawing was done on quarter-ruled graph paper. The distances between letter pairs are visually uneven but correspond to the grid too frequently for their placement to have been determined arbitrarily.

All of the foregoing indicates that the images reproduced by Megaw and others as the “original design for Futura are an orthochromatic photographic reproduction of drawings done on blue-lined paper like that shown in the drawing dated to 1925 and attributed to Renner. Aside from the slight discrepancy in the alignment of the baselines of the majuscule and minuscule letters, which strongly suggests that at one time these were two separate drawings later composited by either the Bauer foundry or *Typography* magazine, it seems safe to refer to both images as reproductions of drawings by Paul Renner.

Comparison of the images also indicates that they were not done at the same time. There are obvious differences between the forms represented in the two sets of majuscule letters, and the strokes of the 1925 drawing are slightly heavier. Except for the fact that the 1925 drawing shown in figure 17 more closely resembles Futura as it was finally released and the weight of the strokes is closer to the weight of strokes seen in production proofs (which will be discussed later), there is nothing in the form or weight to determine with certainty which came first. Fortunately, there is an additional critical difference between the two sets of letters that can be used to demonstrate that they were most probably not done at the same time, that the sequence in which they were done probably corresponds to the sequence of dates that have been assigned to them, and finally that the 1925 image indicates the presence of a hand with a more sure grasp of the subtleties of letter design than evinced in the earlier drawing.

The primary critical difference in the two images is that the apexes and vertices of the round and pointed majuscule letters in the earlier (1924) image equal the height of “square” letters like ‘H,’ whereas in the later (1925) image round letters like ‘O’ and pointed letters like ‘M’ have been optically adjusted; their apexes and vertices cross both the “cap-line” and the baseline. The requirement for this optical adjustment is one that Renner details in his book *Die Kunst der Typographie*¹⁶ and that he would have been familiar with from discussions on the relationship of optical phenomenon to *Kunstwissenschaft* (“science of art”) that he in all likelihood held with his colleague Hans Cornelius.¹⁷ Putting that knowledge into practice was perhaps another matter, but it is the kind of thing to which he would have become more sensitive as he prepared his course in typography for the *Frankfurter Kunstschule* during the spring of 1925, and as he worked

with the typographic artisans of the Bauer foundry as they prepared the production drawings for Futura. Thus, the absence of optically corrected letters in the drawing attributed to 1924 argues for its priority and recommends the idea that it was Renner who executed the 1925 drawing that has occasionally been credited to the architect Ferdinand Kramer.¹⁸

There are two images that show what Futura looked like by mid-1925. The first is a sample of the type that appeared in *Schrift: ihre Gestaltung und Entwicklung in neuerer Zeit* (*Type: Its Formation and Development in Recent Time*) by Renner's Munich colleague F. H. Ehmcke and published in the first half of 1925 (fig. 19). The second is an invitation to a lecture by Renner on July 3rd in Munich (fig. 20). The similarity of the letters in the two samples and comments by Renner in "Vom Georg-Müller-Buch" indicate that the lecture was one of a series that Renner gave during the summer and fall of 1925. The text and format of the sample from Ehmcke's book combine to evoke an understanding of what Renner intended for the typeface and a precise statement of what he thought he had accomplished.

The capital letters in the Ehmcke sample and on the 1925 invitation are very similar to those in the reproduction of the 1925 drawing (fig. 17). The pointed apex of the 'A' and the form of 'K' and 'R' indicate that by this point in time the design of the upper-case characters had moved from the geometric grotesques of the 1924 drawings toward forms closer in proportion and pattern to Roman inscriptional capitals.

The lower-case characters, on the other hand, still reflect the designs seen in the 1924 proposal drawing and are a long way from the Futura that was eventually released by the foundry. One change from the 1924 drawing is apparent, the lower-case characters

are all of optically uniform x-height. The irregularly sized letters with small bowls placed at different locations on the letter stems—such as ‘b,’ ‘d,’ ‘p,’ and ‘q’—that are seen in the 1924 drawing are absent from both the sample reproduced in *Schrift* and the lecture invitation.

Although the 1924 characters with distinctive bowl placement do not appear on any of the surviving intaglio proofs published by Burke in *Paul Renner*, it is not safe to assume that they were eliminated from the program early in the process and never committed to type. The forms of some of the letters in the printed samples, ‘a’ and ‘e,’ do not appear on any of the mastering proofs either. The most distinctive characters carried over from the 1924 drawing are the ‘a’ with its disengaged bowl and right angle stem, the Greek or uncial ‘e’ with a mid-line arm, the circle-line-and-chevron ‘g,’ the rectilinear ‘m’ and ‘n,’ the ball-and-post ‘r,’ and the “horse-shoe magnet” ligature of the ‘s’ and ‘t.’ Letters composed of stem and bowl have counter spaces within the bowls that are less ovate and bear heavier intersection of arc and stem than appear in the final version of the typeface, but their form shows some tempering of their rigid geometric origin. The most telling aspect of this sample is the text itself:

ABOUT ART-SCRIPT AND PRINTING TYPE

At the top of European writing stands
the Roman capital letters, constructed from triangle,
circle and square, the most elementary and
clearly contrasting shapes possible.¹⁹

The all-capital first line is the title of the third chapter of *Typografie als Kunst*, and the text used in the sample is the concluding sentence of the first paragraph of that chapter.

The words must have been of utmost significance to Renner. In addition to their appearance in *Typografie als Kunst* and the sample under discussion, they also appeared in a test proof from 1927, they are paraphrased in *Mechanisierte Grafik*,²⁰ and in “Vom Georg-Müller-Buch” Renner quotes the entire passage and states the quote was in his mind as he began the design of Futura in 1924.²¹

The quote used in the 1925 specimen reproduced by Ehmke was not just something that occurred to Renner after the typeface was test cut. In *Typografie als Kunst*, the sentence is elucidated by two long footnotes, underlining the importance of this summative idea to Renner.²² The continuing importance of the idea expressed in the quote is made manifest by its use in another sample, dated December 1927, just after Futura had come onto the market (fig. 21).²³ In this sample, the words are restored to their original order and the first five words replace the chapter title as the all-capital first line. Added at the end are the words “*Seltsam strahlt die vornehme und edle Schlichtheit dieser Schrift in unsere Zeit*” (“Strangely, the noble simplicity of this writing shines into our own time”) taken from the beginning of the sentence that follows the original quote.²⁴

The second specimen of Futura from 1925 is the invitation to a lecture by Renner. It is printed in two colors, red and black, on paper that is either yellowed by age or was originally a buff-colored tag stock. The words set in all capitals are red, and their weight and form appear to be identical to the capitals in the *Schrift* sample. The remainder of the characters, upper-case, lower-case, and numerals, is printed with black ink and is heavier in weight—more bold—than the capitals printed in red. In addition to their slightly heavier weight, the lower-case characters exhibit slight differences from the characters in the *Schrift* sample. In the *Schrift* sample, the arm of the ‘a’ has a vertical termination but

on the invitation it is oblique. The arm of the ‘e’ on the invitation is located higher than as seen in the sample from *Schrift*. Numerals, which were not used in the *Schrift* sample, are similar to the non-lining numerals from the 1924 drawing. The clearest impression is that by the time of the invitation Renner and the Bauer foundry were developing a demi-bold version of the font, and the persistence of forms from the earlier drawings indicates that the lower-case characters were not alternative characters, but were essential to Renner’s original conception for the font.

The letters used in this sample are lighter in weight than in both samples from 1925. The capitals are, except for their weight, unchanged from the earlier samples, and all the letters except for a few letters in the fifth and sixth line are printed with conventional lower-case characters. The ligatured characters ‘ft’ and ‘ck’ from the character set released earlier in 1927 appear in the second, third, and seventh lines. The ‘a’ and ‘g’ that were released as alternate characters are used for all occurrences of those letters in the fifth line, and both the alternate and conventional ‘a’ are used in line six. This sample is, as Burke observed, some kind of test of the viability of, or more probably the necessity for the alternate characters.²⁵

All three of the specimens share a similarity of arrangement: openly spaced capitals above with rows of minuscules beneath. This pattern is reminiscent of Carolingian manuscripts that apparently held some attraction for Renner. A manuscript sheet executed in this style by Anna Simons was given pride of place in an article Renner contributed to the 1931 Werkbund yearbook (fig. 22). In that article he expressed his view that positive models from the Arts and Crafts revival of hand lettering provided much of the stimulation for the revitalization of the book arts in the twentieth-century.²⁶

The 1925 and 1927 specimens declare Renner's intent for his typeface. Read literally, the Roman capital "stands at the top" of European scripts. Thus Futura's capitals are the modern mechanical form of the Roman inscriptional capitals and "the noble simplicity of this writing illuminates our own time." The minuscules, therefore, *are* the European writing that descended from the prime source of all European scripts. It was not a passing fancy: he said so in *Typografie als Kunst* in 1922, Futura specimens in 1925 and 1927, *Mechanisierte Grafik* in 1931, and his reminiscences published in 1938.

A similar line of thought that appears in *Mechanisierte Grafik* occurs in the same place in that text as it did in *Typografie als Kunst* in the first paragraph on the history of European scripts:

All our scripts descend from the Roman capital letter, that we still use as the mainstay of Latin printing today. The Roman capital letter defines a one millennia old writing-development that begins with the magic symbols of the primeval time, and opens a new era.²⁷

The exposition on the nature of the evolutionary development that follows this statement has two parts. As mentioned earlier, Renner was intrigued with the typographic implications of a mystically laden concept of evolution proposed by Edgar Dacquè. Dacquè held that natural forces sought expression of an ultimate, ideal life form and that this germ had been inherent in all preceding species in a chain of development that led to its most recent (and most ideal) realization as *Homo sapiens*. In Dacquè's conception, this potentiality was the trunk of the "tree of life" and acted as the generative force for all species. However, the environments of each developmental epoch had forced the emergence of primitive forms that enabled survival under then existing conditions. As

conditions became less hostile to realization of the ideal realization of nature's generative force, the species that emerged shed more primitive, adaptive forms as they progressed toward the full realization of nature's goal, which in Daqué's view was man. The forms left behind became dead-ends, lower order beings without the possibility of further development.²⁸

Renner's typographic exegesis of Daqué's theory positioned "antiqua" letters as the closest to the main trunk: letterforms that had emerged during a favorable developmental epoch and thus closest to the ideal realization of European script.²⁹ For Renner, Futura was that ideal realization of letterform rooted in the Roman inscriptional capital that, by abandoning the visual artifacts of earlier technologies, revealed the true heart of European scripts. His second point about the evolution of type is that it is not gradual and changing at a constant rate, but is episodic.³⁰

In each evolution, a temporary or permanent halt occurs if a certain goal, the complete adaptation to given conditions, is reached. That which is at the goal, remains standing, becomes standardized, categorized. More and more, undisturbed free competition decreases the range of the differences through ever more perfect solutions of given tasks without rash standardization, so that, for example, today bicycles are as alike as eggs.

Each evolution has a specific rhythm, stormily incipient until the speed of the adaptation comes to a standstill at the new conditions, which however recurs whenever the conditions change.³¹

It is easy to see how Daqué's ideas would have been attractive to Renner. The new cultural, social, political, economic, and aesthetic environment of Weimar Germany

provided a moment of change, a favorable “evolutionary” epoch in which European script could shed the blackletter forms it had adopted in another era, an opportunity for the type of its time to shed the burdensome appendages of earlier materials and techniques and reveal, at last, the pure form that had lain at the heart of European writing for nearly two millennia. Although Renner did not express these developmental notions until after Futura had been released, Dacquè wrote *Urwelt, Sage und Menschheit* in Munich during the same period that Renner was working on Futura. Both men were, in their respective fields, giving voice to the idea that their era was an extraordinary one in German history.

The only surviving documents of Futura’s developmental process are some undated intaglio proof sheets used in the production of the copper masters that guided the engraving of the casting matrices. The proofs provide an incomplete but telling picture of Futura’s production process. A display prepared by Christopher Burke for his biography of Renner provides a complete visual catalog of the characters to be found on the proof plates used to master the twenty-point size of Futura’s regular weight version (fig. 23). Not all the characters used in the three print samples cited above appear on the surviving proofs, and some characters appear on the proofs that are not represented in any other drawing or printing specimen.

The lowercase characters of the 1925 invitation appear in the *halb fette* (“semi-bold”) version of the font, so some forms that stand out in the sample are not in evidence on the proofs. The uncial ‘e’ on the proof plates is similar to the character on the sample prepared for *Schrift*, but it is impossible to determine whether the high middle arm in the semi-bold ‘e’ on the invitation was an optional form or due to the heavier weight of the

character. The oblique arm-end on the invitation's 'a' does not appear on the proof sheets, and again it impossible to know with any certainty whether this was a function of weight or an alternate form that appeared on a missing proof sheet for the regular characters. Like paleological reconstructions, Futura's incomplete "fossil record" makes it impossible to prove the specific progress of its development, but does not foreclose the possibility of determining the drift of the change from a font with particular German characteristics to one more like those of Anglo-Saxon and Latin typographic practice.

As Burke notes, the multiple versions of particular characters and the cross marks on characters that indicate either nullification or, as seems likely in the case of the third uncial 'a' with the shorter marking lines, where adjustments to the character were needed reveal a long and detailed developmental process.³² Renner remarked on the length of the process and the care with which the foundry carried it out.³³ There are also several characters on the proof sheets that do not appear in either of the drawings but are included in the complete font released in 1927 (fig. 24). In particular, note the multiple forms of 'M' and the conventional sans-serif 'a,' the "club" finial 'r,' and with different length descending strokes: 'g,' 'j,' 'p,' 'q,' and 'y.'

The multiple versions of particular letters that do not have editing cross-strokes may well have less to do with testing visual alternatives for the font than with foundry practice. Providing more than one form of a letter in a font appears to have been a strategy pursued by foundries to make a font more marketable in a variety of cultural environments. The 'M's are perhaps a concession to differing tastes among Futura's potential audiences, and the conventional armed 'a' and "club" finial 'r' were probably added to make the font acceptable to those who wanted a modern font, but with what

were clearly more Latin characters. A similar range of various forms of letters appears in the complete character set for Gill Sans, Futura's English "rival" (fig. 25). Descenders of two lengths appear for versions of 'g,' 'j,' 'p,' 'q,' and 'y.' The different descender lengths shown in figure 26 are most probably a technical adjustment required by the distinct German and American baseline standards (fig. 27).³⁴ While the adjustment of the baseline was necessary to make the type functional in a given market, there was no requirement that the character had to be adjusted as well, and any such adjustment shows particular concern for the proportional relationships of the typeface. Renner thought the German standard baseline was too low and that modern type without descenders of sufficient length were "somewhat rootless," a quality that undermined their visual authority.³⁵

The final documents in the Futura production sequence are specimens of the font itself. The specimen page from Bauer promotional materials shows that at the time of Futura's release the "unconventional" characters had been demoted to the status of alternate characters for 'a,' 'g,' 'm,' and 'n' (fig. 28). The ascending 's' is listed as a standard character, as is appropriate for a font for the German market, and the "ball and post" form of the 'r,' derived from Gothic scripts, appears instead of the more calligraphic version that replaced it within a year. Aside from the German caption, the short descenders make it clear that this was the version of the font released for the German market.

The greater complexity of the font set can be seen in the figure of the complete character set for ten-point Futura, which also dates from 1927/8 (fig. 24) Aside from the extensive range of characters with diacriticals and the presence of both upper- and lower-

case letters, the font has several letters with multiple forms. The ‘a’ has three different forms, none of which match characters in either of the printed samples from 1925. The ‘g’ has two forms plus two forms of gamma. There are also two versions each of ‘J,’ ‘j,’ ‘m,’ ‘n,’ ‘r,’ and as mentioned above ‘s.’ However, as the samples of both Gill Sans and Futura attest, the presence of multiple forms of the same letter might not have been that unusual among foundries selling their fonts in the international marketplace.

It is of interest that some of the lower-case characters with which Renner began have been demoted to the status of alternate characters or altogether replaced. There seem to be two primary reasons for this. In the first case, as mentioned previously, Georg Hartmann’ desire to repeat the success of Venus inclined the foundry to adjust Renner’s original design so that it would be more successful in markets outside Germany. The different descender lengths present on the pattern proofs and extensive number of letters modified with diacriticals—particularly the slashed ‘L’ and ‘O’—demonstrate that Futura was developed for both German and international markets. The alternate versions of ‘M’ and ‘a’ suggest that the foundry was of the opinion that the uncial ‘a’ and the splayed ‘M’—related to versions of that character common in titling fonts—that later became Futura’s standard forms for those characters might have been too extreme and alternates closer to grotesque models were provided.

The other reason underlying the changes to the font was that Renner’s perception of the needs for and uses of the font also changed during the three years Futura was being developed. Over that period Futura became less “Gothic” and more like the roman fonts used in Latin typographic practice (figure 29). The best summation of this change is offered in the difference between the list of fonts needed by a German print shop that

appeared in *Typografie als Kunst* and a similar list Renner offered in 1947. In 1922, Renner wrote that a German printer needed an Antiqua-roman (Garalde) and a French-roman (Didone), both with matching italics. A good fraktur, a gothic, and a schwabacher were also required if a German printer was to “fulfill all artistic tasks.”³⁶ Nowhere in *Typografie als Kunst* does he mention a sans-serif. In a 1947 interview, he revised his list of necessary fonts:

German printers ... in order to do good typography ... do not need many typefaces, only a single one, but in all sizes and also with italic and small capitals. Instead of original artist-typefaces, a clear, impersonal, but thoroughly legible old-face roman. Plus perhaps an unfussy modern-face roman. Then, as a third typeface, particularly for jobbing setting, Futura.³⁷

The 1947 list omits the “traditional” German styles. He made a similar, if more oblique, statement in 1930 in *Mechanisierte Grafik*, when he said that the requirement for typography to express the character of the communication through a chosen font was still valid, but could “be fulfilled as usual, but within narrower limits ... that it receives an appropriate dress in the style of OUR time, because we want typographic life, not typographic theater or costume balls.”³⁸

In the five years between *Typografie als Kunst* and the issuance of Futura, serif and sans-serif roman type had made sufficient inroads in German printing that Renner had come to believe that blackletter fonts could be retired from their text-setting role. In order to express its national “voice,” German typography no longer needed to rely on a style of script that belonged to a bygone “evolutionary” epoch.

In *Mechanisierte Grafik* and after the release of Futura, Renner makes the claim that the first printed European minuscule type faces were the product of German printers. He pointed out that Sweinheim, Pannartz, and Nicolaus Jenson were all Germans working in Italy, and he includes a reproduction of a page printed by Adolf Rusch in Strasburg circa 1470 (fig. 30). According to the caption accompanying the image, Konrad Haebler, a German epigrapher, dated the font to 1464 making it the oldest known example of *Antiqua* type.³⁹ This revisionist view that humanist minuscule *type* was a “German”, or at least pan-European, development seems to me to be an apology for the compromises that replaced the German features of the early versions of Futura with letters closer in style to those used in Latin practice. However, Futura, which in his mind were a modern manifestation of the most venerable of German letterforms, expressed the aesthetics of the current era, and reconciled the visual incongruities between capitals and minuscule letters, making the font a viable substitute for blackletter fonts.

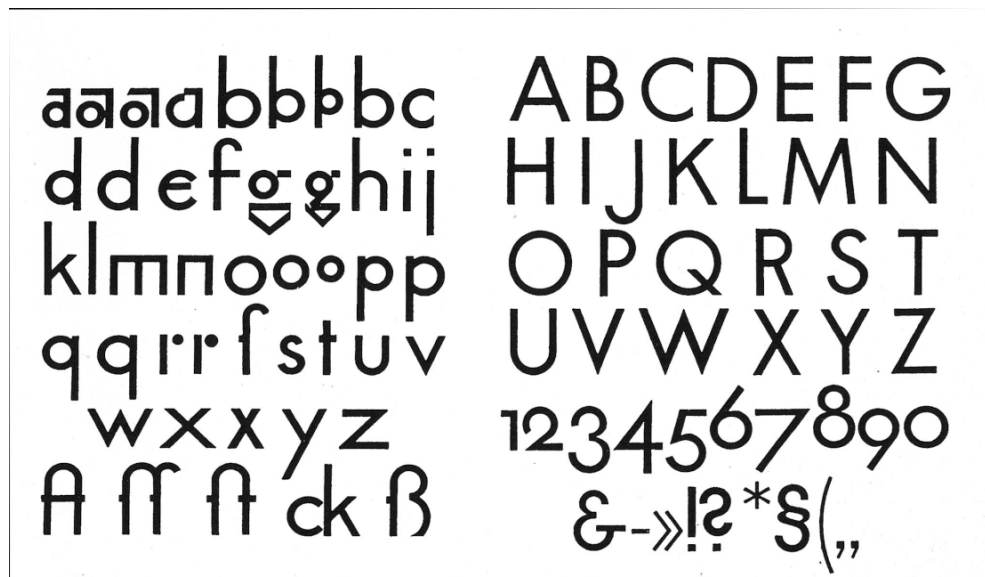


Figure 16. ‘Paul Renner’s first designs for Futura’ (1924) as illustrated in *Typography* No. 7, 1938.



Figure 17. Design for geometric capitals, 1925, variously attributed to Paul Renner or Ferdinand Kramer. The image appeared in a Bauer promotional brochure entitled “*Wie eine Buchdruckschrift entsteht*” (“How a printing type is made”) first printed in 1930 and reproduced around 1958, as illustrated in *baseline* No. 23, 1997.

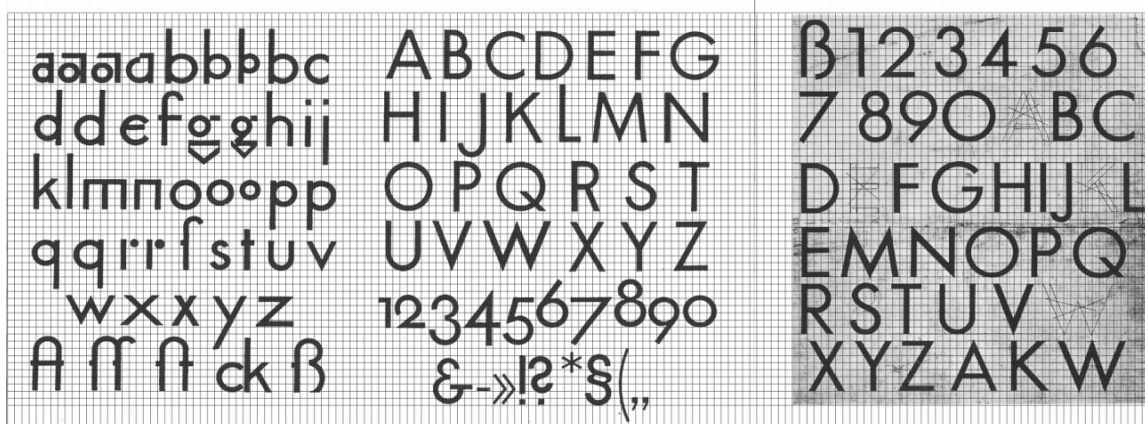


Figure 18. 1924 and 1925 drawings of Futura scaled to the same grid. Figure prepared by the author from images reproduced in Christopher Burke, “The Authorship of Futura,” *baseline International Typographics Journal* 23 (1997): 34–35.

VON SCHREIBKUNST UND DRUCKSCHRIFT
 An der Spitze der europäischen Schriften stehen
 die römischen Versalien, aufgebaut aus Dreieck,
 Kreis und Geviert, den denkbar einfachsten und
 denkbar gegensätzlichsten Formen.

Figure 19. Trial cut of Futura as shown in F.H. Ehmecke's *Schrift: ihre Gestaltung und Entwicklung in neuerer Zeit*. As reproduced in Burke, "The Authorship of Futura," *baseline* No. 23 1997.

EINLADUNG zum Vortrag
 des Herrn Paul Renner aus München:
 TOTE ODER LEBENDE SCHRIFT?
 am Freitag, den 3. Juli abends 8 Uhr
 im großen Saale des Löwenbräu
 Große Gallusstraße 17
 Bildungsverband der deutschen
 Buchdrucker Ortsgruppe Frankfurt

Figure 20. Invitation card to a lecture by Paul Renner in July 1925. As reproduced in Burke, "The Authorship of Futura," *baseline* No. 23 1997.

AN DER SPITZE DER EUROPÄISCHEN
 Schriften stehen die römischen Versa-
 lien, aufgebaut aus Kreis, Dreieck und
 Geviert, den denkbar einfachsten und
 den denkbar gegensätzlichsten Formen.
 Seltsam strahlt die vornehme und edle
 Schlichtheit dieser Schrift in unsere Zeit,
 RENNER 2189427 MÜNCHEN
 8416510 Baron & Ullrich 1808652

Figure 21. Proof print of Futura Light, 24 point type (67% of original size). Bauer typefoundry. Dated December 1927, as reproduced in Burke, *Paul Renner: The Art of Typography*.



Figure 22. Geschrieben Urkunde (“Written Document”), Anna Simons, Munich as reproduced in *Das Ewige Handwerk*, 1930. This modern manuscript page shows the characteristics of many formal Carolingian documents: openly spaced capitals above justified lines of minuscules with marginal uncial characters slightly larger than the minuscules.



Figure 23. Character outlines incised in copper plates used as patterns for engraving the matrices of 20-point regular weight Futura. Extracted from Bauer foundry intaglio proofs, as reproduced in Burke, *Paul Renner: The Art of Typography*, 92–93.

Versalien

A Á À Â Ã Ä Å Æ Æ Ā B C Č Ć
 Ć Ç Ç D Đ Ď Ď E É È Ê Ë Ē Ĕ Ė Ę
 F G Ğ Ğ Ğ H Ĥ I Í Ì Î Ï Ī Ĭ Ļ Ľ
 J Ĵ J J K K L Ł Ł Ľ Ļ Ľ Ļ Ļ Ļ
 M N Ń Ń Ń Ń Ń Ń Ń Ń Ń Ń Ń Ń Ń Ń Ń
 P Q R Ř Ŕ Ŕ S Ś Ś Š Š Š Š Š Š Š
 T U Ú Û Ü Ů Ů Ů Ů Ů Ů Ů Ů Ů Ů Ů Ů
 Ÿ Z Ž Ž Ž Ž Æ Œ Þ

Gemeine

a á à â ä å Æ Æ ā a á à â ä å
 a á à â ä å Æ Æ a b ß c ć ç ç
 d đ đ đ đ ð e é è ê ë ě ē è e ě ě
 ε f g ĝ ğ ğ g g ğ h ĥ i í ì î ï
 ĩ ĩ ĩ ĩ ĩ ĩ ĩ ĩ ĩ ĩ ĩ ĩ ĩ ĩ ĩ ĩ
 l m m n Ń Ń Ń Ń Ń Ń Ń Ń Ń Ń Ń Ń Ń Ń
 ö ó ø p q r ř ŕ r s ś š š š š š š
 ſ ſ s t ť ť ť ť ť ť ť ť ť ť ť ť ť ť
 ū ū ū v w x y ý ŷ ŷ z ź ž ž ž æ œ þ
 ch ck ff fi fl ft ij fi ff ft ß & &

Hochstehende Gemeine

a d e g i l m n o r s t v

Normalziffern (auf Halbgeviert)

1 2 3 4 5 6 7 8 9 0

Versalziffern

1 2 3 4 5 6 7 8 9 0

Gemeine Ziffern (mit Ober- und Unterlängen)

1 2 3 4 5 6 7 8 9 0

Bruchziffern, zusammengesetzt

% ½ ⅓ ⅔ ¼ ¾ ⅛ ⅜ ⅝ ⅞ ⅜

Bruchziffern, zusammensetzbar

1 2 3 4 5 6 7 8 9 0 / 1 2 3 4 5 6 7 8 9 0

Zeichen

£ \$ ¢ . , - : ; ! ? ([§ † * '

" " » « — — — / .

Figure 24. All characters available in 10 point Futura regular weight. Originally appeared in Bauer, *Wie eine Buchschrift entsteht*. As reproduced in Burke, *Paul Renner: The Art of Typography*, 106.

ABCDEFGHIJKLMNOP
 OPQRSTUVWXYZ Ç Ø
 aabcdefghijklmnopqr
 stuvwxyz ä ö ü ß & § †
 1234567890
*ABCDEFGHIJKLMNOPQ
 RSTUVWXYZ Æ Æ Ç abc
 deffgghijklmnoppprstuu
 vwxyz ä ö ü 1234567890*

Figure 25. Gill Sans and Gill Sans italic as reproduced in Kapr, *The Art of Lettering, The history, anatomy, and aesthetics of the Roman letter forms*.

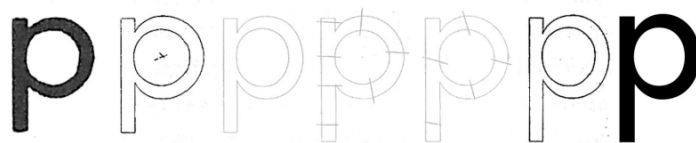


Figure 26. Lengths of lower case descenders. The solid character on the left is from the 1927 version of Futura. The solid character on the right is Futura regular as in current use in the United States. The outline characters are from the intaglio character outlines reproduced in Fig. 7.

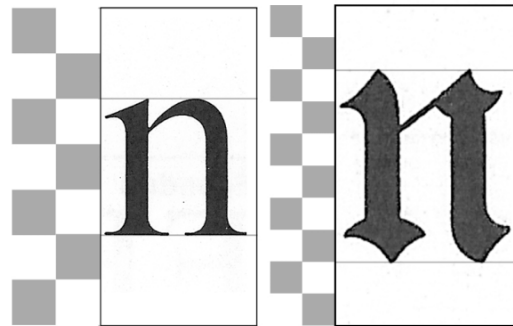


Figure 27. The American Standard Baseline (left) compared to the German Standard Baseline (right). The American system used a seven unit system with 3 units allocated for the ‘x-height’ and two units below the baseline and above the mean-line. The ten unit German system allowed for a proportionally larger ‘x-height’ and less space below the baseline and above the mean-line.

A B C D E F G H I J K L M N O P
 Q R S T U V W X Y Z Ä Ö Ü Æ Œ Ç
 a b c d e f g h i j k l m n o p q r s t u v w
 x y z ä ö ü ç k k f f i f l f f i f l ß æ œ ç
 1 2 3 4 5 6 7 8 9 0 & . , - : ; · ! ? (' « » § † *
 Auf besonderen Wunsch liefern wir auch nachstehende Figuren
 a g m n ä & 1 2 3 4 5 6 7 8 9 0

Figure 28. Futura character set shown in 1927 specimen sheet. Bauer foundry. As reproduced in Burke, “The Authorship of Futura,” *baseline* No. 23 1997, 40.

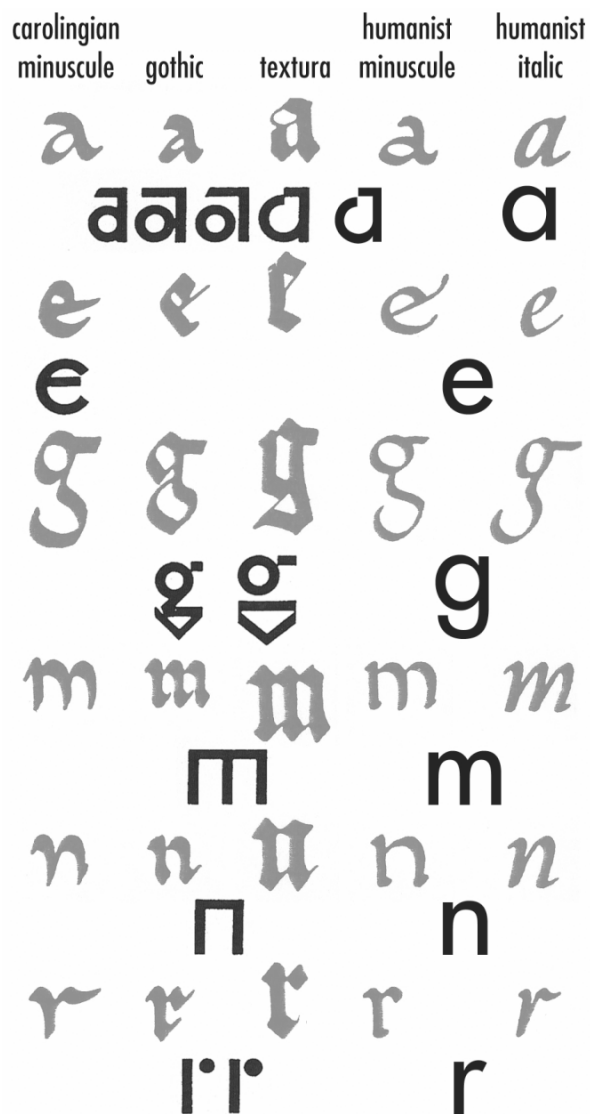


Figure 29. Futura characters compared to letters extracted from Table 2 of *Typografie als Kunst*. The various versions of Futura characters placed in proximity to the letter forms from Table 2 of *Typografie als Kunst* that they most closely resemble. When the resulting lines of Futura are read from left to right they occur in what is approximately the chronological order of their appearance indicating the shift from a “German” origin toward a “Latin” conclusion.

appaët igitur q̄ fabulaz̄ genus quoddam est vtile &
 in sacris eloquiis quandoq̄ honestum. Sed qd̄ dicem⁹
 ad ea que in contrarium dicebant̄. Dicebat enī Agel.
 q̄ poetria meretricula ē. Et rome Plato poetas expu-
 lit de ciuitate vt refert TuP. dicemus ergo q̄ poetria
 ideo meretricula dicit̄. quia ex principalibus scientiis
 nō ē vna: sed iter minus principales numeratur. Alias
 enī sapientie non astitisset: cui tamen assistebat etiam
 vt inquit preallegatus expositor Boe. Rursus ad Pla-
 tonem dicemus q̄ illos reprobat poetas quib⁹ mentiri
 vsus est: & quorum fictiones turpia sonant. Alios autē
 poetas repudiare non intendit: quorum fictiones veri-
 tatem pretendūt. Alias enim doctores sancti ipsos ex-
 ponendo: cristo non applicassent. Insuper & philosophos
 vti fabulis nouimus. Vnde Apuleius libro de deo So-
 cratis fabulam introducit de coruo tenēte carnē ī ore
 Cui cum vulpecula dixisset: q̄ cingn⁹ melius cātabat
 illo. Coruus probare volens contrariū: apperuit os &
 sic amisit carnem: & volens cantare potius crocitauit
 q̄m cātavit: suū q̄ defectum publicauit. Hec enim fa-
 bula hanc veritatē pretendit: quoniā scz̄ multi magni-
 ficare se volentes vltra modum ruinam paciuntur. In
 super Titulius li. ii. introducit fabulam de conspi-
 ratione mēbrorū cōtra stomachum. ex hoc q̄ omnia cō-
 sumabat: quibus laborant membra. Et cum fuisset ad
 iudicatum q̄ stomacho nihil dareēt: mēbra omīa lague-
 rūt. Vnde oportuit stomacho iterū dare intra qd̄ mē-
 bris distribueret. Hec siquidem fabula hāc pretendit
 veritatem: quia scz̄ mltis de alienis bonis derogat a q̄-
 bus tamen sustentātur & cū procurauerint eorum de-
 stitutionem. ipsi procurantes indigentiores fiunt: illi
 vsq̄ vel illorum postulant restitutionem: cui vel quib⁹
 subtrahendum suaserunt. Hanc etiam eandem fabulā
 introducit Polycratus libro sexto ca. xx. Ex q̄bus om-
 nibus clare patescit poemata nō esse repudiāda eo mō

Figure 30. Humanist roman type of Adolph Rusch, Strasburg, 1470. Renner, *Mechanisierte Grafik*, photo appendix xiii.

Notes to Chapter 3

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- 1 Renner, *Typografie als Kunst* 46–48.
 - 2 Burke, *Paul Renner* 91.
 - 3 Denis Megaw, “20th Century Sans-serif Types,” *Typography*, 7, Winter 1938: 27–35.
 - 4 Fritz Gruber, “Some German Types and Their Evolution,” *Art & Industry*, 25, August 1938: 74–77.
 - 5 R. Hunter Middleton, “Historical development of Sans-serif Type,” *Graphic Arts abc, Vol 2: Sans-serif*. (Chicago: Poole Brothers, Inc., 1949) 82–91.
 - 6 Alexander Nesbitt, “Futura,” *Print* December 1953: 25–32.
 - 7 Eugene M Ettenberg, “A Typeface for Our Times,” *American Artist* June 1954: 44–7.
 - 8 Christopher Burke, “The Authorship of Futura,” *baseline International Typographics Journal* 23 (1997): 35.
 - 9 Megaw 34.
 - 10 Burke, “The Authorship of Futura” 36.
 - 11 Renner, “Vom Georg-Müller-Buch” 5.
 - 12 Burke, “The Authorship of Futura” 38.
 - 13 I very much doubt that the Bauer foundry set out to deceive anyone with this image, rather the firm simply put together a piece of material for the trade press that would be easily reproduced and more likely to generate publicity for the firm.
 - 14 This image is Figure 50 in Burke’s *Paul Renner* and the attribution of the image to the Bauer brochure is his.
 - 15 The proportional relationships that are revealed by this inspection are commensurate with the “squaring the circle” relationships associated with classic Roman capitals. For example, the ‘H’ measures 5 units wide by seven units high. Measurements that approximate the 1: 1.4 ratio that expresses the relationship of a square to its diagonal. Another proportional variant common to the classic Roman relational series is also represented in the ‘F’—3.5:7 or 1:2.

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- 16 Renner outlines general principles of optical effects on pages 14–19 of *Die Kunst der Typographie*.
 - 17 Hans Cornelius was a student of Carl Stumpf and teacher of Max Horkheimer and Theodor Adorno. Prior to World War I, he taught the philosophy of art at Renner's school for book illustrators and at the Debschitz School into which Renner merged his own school in 1914 (Burke, *Paul Renner* 39). *Typografie als Kunst* is dedicated to Cornelius, and Renner expresses his gratitude to him in the acknowledgements of his two later books as well.
 - 18 See Burke's "The Authorship of Futura" for the best review of the question of Kramer's possible role in the design of Futura's capitals.
 - 19 There are two differences between the text in the sample and the words of *Typografie als Kunst*. In order to achieve a more even line spacing in the sample, the order of the words 'Kreis' (circle) and 'Dreieck' (triangle) is reversed from that of the book, and the book includes asterisks marking two footnotes.
 - 20 Renner, *Mechanisierte Grafik* 37.
 - 21 Renner, "Vom Georg-Müller-Buch" 5.
 - 22 The asterisks indicating footnotes are included as they appear in *Typografie als Kunst*. In Renner's text, the first footnote explains that the shapes that comprise the Roman capital 'H' and 'A' show slight adjustment of the location of their crossbars so that they better present an optical image of square and triangle. The second footnote takes note of French cubist "theories" that contrasting shapes work in compositions much the same way as contrasting, complimentary colors. Renner, *Typografie als Kunst* 39.
 - 23 Burke, *Paul Renner* 101.
 - 24 Renner, *Typografie als Kunst* 39.
 - 25 Burke, *Paul Renner* 101.
 - 26 Paul Renner, "Schrift und Druck," *Das ewige Handwerk im im Kunstgewerbe der Gegenwart: Biespeile modernen kunsthandwerklichen Gestaltens, Werkbund Buch*, ed. G.F. Hartlaub (Berlin: Rechenndorf, 1931) 82.
 - 27 Renner, *Mechanisierte Grafik* 37.
 - 28 Dacquè's popular *Urwelt, Sage und Menschheit* was published in 1926 (Wiedmann 113).
 - 29 Renner, *Mechanisierte Grafik* 54.

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- 30 Renner adopted Dacquè's punctuated timeline for his concept of typographic evolution. Dacquè's evolutionary concept was hokum, but his notion of episodic development instead of steady-state gradualism foreshadows the concept of punctuated equilibrium posited in the late 1970s by Niles Eldredge and Stephen Jay Gould. One of my personal disappointments is that I made this connection after the death of Dr. Gould and never got to pass this bit of information to one of my personal heroes, who, I like to think, would have relished being pre-empted by an artist. For the full explanation of the theory see: Niles Eldredge and S. J. Gould, "Punctuated equilibria: an alternative to phyletic gradualism," *Models in Paleobiology*, ed. Thomas J.M. Schopf (San Francisco: Freeman, Cooper & Co., 1972) 82-115.
 - 31 Renner, *Mechanisierte Grafik* 38.
 - 32 Burke, *Paul Renner* 91.
 - 33 Renner, "Vom Georg-Müller-Buch" 7.
 - 34 Phillip Luidl, "Comparison of Fraktur and Roman Type: A German Study" *Blackletter: Type and National Identity* (New York: Cooper Union, 1998) 20.
 - 35 Renner, *Die Kunst Der Typographie* 23–24.
 - 36 Renner, *Typografie als Kunst* 55.
 - 37 Renner, "Interview mit Paul Renner," *Der Druckspeigel* May 1947: 7.
 - 38 Renner, *Mechanisierte Grafik* 20–21.
 - 39 Renner, *Mechanisierte Grafik* photo appendix xiii.

Chapter 4

A New Category of Typeface

The way typefaces are categorized creates difficulties in understanding Renner's intentions for Futura and what was achieved by the typeface. Because Futura is without serifs, it has been grouped with other sans-serif typefaces from which it differs in particular critical details of style. Usually classified as a geometric sans-serif, Futura—along with several other typefaces developed in the decade following World War I—is better defined as a serif-less roman.¹ The word roman is used here only to differentiate these typefaces from letters based on non-roman patterns. In order to better grasp Paul Renner's intentions for Futura, it is important to consider the ways in which it differs from other sans-serif typefaces and to understand its specific relationship to roman type designs developed during the first century of the typographic arts. To make this relationship more clear this chapter will apply the Panose classification system to measure the difference between Futura, other serif-less roman types developed in the 1920s, grotesque typefaces, and serified roman fonts developed between 1890 and 1914 that were modeled on Italian humanist fonts.

Renner's distinction between form and style is critical to understanding his intent, to recognizing the specific qualities of Futura, and to comprehending how differences between German and Latin typographic practice produced diverse responses to Futura in different countries. Form is generally agreed to be the basic shape of the letter, for example the roundness of 'o,' the angularity of 'A,' and the rectangularity of 'H.' Form

as a design singularity is related to the concept of *Gestalt* and Konrad Fiedler's concept of *Sichtbarkeit* ("visibility"), through which Renner argued for the primal authority of the Roman capital and Carolingian minuscule.

Typographically, form defines legibility. The ability to discern differences among the shapes of letters—e.g. the vertical stem of a 'b' is on the left edge of the letter but on a 'd' it is on the right—provides the basis for the visual representation of language. Style is the manner in which the basic letterform is rendered. Because style provides consistency and cohesiveness to the disparate forms that make up the alphabet, it inherently diminishes the visual differences between particular letters and reduces legibility. However, style enhances the recognition of *Wortbilder* ["word images"] and provides written language with expressive voice.² Style also provided Renner with a motive for Futura: to reduce the contrast between capital and minuscule forms by applying the proportional relationships that exist within Roman capitals to the minuscules.

A careful reading of Renner indicates that he felt that capital, uncial, and minuscule were the only persistent manifestations of letterform. All European scripts are variations or combinations of these fundamental three. Roman and italic scripts use different combinations of capital and uncial forms with minuscule characters than does blackletter. However, differences within each broad category—roman, blackletter, and italic—are differences of style not form. A typeface is not classified by its date of creation. If this were so, all fonts in current use would date after the invention of mechanized punch cutting in the 1880s. Instead, type styles are sorted by features formed during particular periods of the development of the printed letter. The categories reflect

artifacts of history such as proportion, curve form, and stroke contrast. Due to the inertia of cultural continuity, these artifacts of past technologies and former cultures are signs of episodic typographic developments that may persist as part of the canon or prove developmental dead-ends.

Style Classifications

In chronological order, the terms with the broadest current use are: humanist/Venetian, prior to 1500; Garalde/oldstyle, 1500–1600; transitional, 1600–1750; Didone/modern 1750–1820; Egyptian/slab-serif after 1820; and sans-serif, after 1880.³ Thus, because William Morris’ Golden type (1880), Bruce Rogers’ Centaur (drawn prior to 1904, but not cut until 1914), and Ronald Arnholm’s Legacy Serif (1994) are all modeled on humanist typefaces created during the last half of the fifteenth century, they share the humanist designation.⁴

The general categories blur finer differences of more specialized sub-categories.⁵ The imprecision of terms used to describe sans-serif sub-categories does little to relieve the confusion among the more general category. Two sets of terms plague any discussion of style regarding sans-serif letters. The first pair of terms is “grotesque” (*grotesk* in German) and “gothic.” In modern usage, both terms refer to typefaces without serifs and are a geographic usage that does not make any distinction among different sans-serif styles.⁶ Unfortunately, “grotesque” and “gothic” have an unrelated earlier usage in European descriptions of the difference between fifteenth-century letters of the humanist roman model and letters that have their base in Gothic art. Renner repeats the often-told origin of meaning of the word gothic. He wrote, “It was the humanists, who first called the script ‘Gothic,’ in the sense of vandalism—the barbaric.”⁷ Naturally, Germans

rejected this pejorative word and used either the more acceptable grotesque or the descriptive terms *Bruchschrift* and “blackletter.” Renner used the German term *Grotesk* to refer to sans-serif fonts and the specific terms *Fraktur*, *Schwabacher*, *Gotisch* (textura), and *Kurrentschrift* (German running-hand) when referring to non-roman script and type. He consistently used the word “gothic” in its capitalized sense meaning script and art of late medieval Europe. He was insistent that the Gothic style was an international style that developed in France, not Germany. He also asserted that Gothic scripts were derived from the German Carolingian minuscule, and that the unadorned Carolingian script persisted longer in Germany than elsewhere in Europe.⁸

However ambivalent Renner may have been about the relationship of Gothic scripts to German culture, prior to Futura grotesque fonts were not in Renner’s typographic vocabulary. He clearly states that he did not set out to create a grotesque font.⁹ Nor is Futura only a geometric sans-serif. While Futura’s use of modified geometric form is clearly discernable, its proportions of comparative capital width, lower-case mean height, and length of ascenders and descenders are shared with humanist serif fonts.¹⁰

The second pair of terms used to distinguish among often-similar sans-serif styles is humanist sans-serif and geometric sans-serif. According to English type historian Ruari McLean, humanist sans-serif typefaces—he specifically refers to Gill Sans—are based on the proportions of inscriptional Roman capitals and humanist or Garalde lower case, and they may show contrast in the thickness of the “strokes” that define the letter. The strokes defining humanist sans-serif letters retain aspects of hand-drawn letters such as variation in stroke weight (thickness) and taper (the tendency of some strokes to have a gradual

altering of thickness along their length). Geometric sans-serif typefaces, by McLean's classification, "are 'theoretical' faces constructed on geometrical shapes, usually monoline [of single stroke thickness], and since the same curves and lines are deliberately used in as many letters as possible, there is the least differentiation between letters."¹¹ Geometric sans-serif letters are those in which the strokes discard any manifestation of creation by hand, and the form and proportion of the letters are derived from geometric shapes.

These terms are confusing when applied to Futura and its contemporaries. Futura, Gill Sans (Monotype, 1928), and Kabel (Klingspor, 1927) are the three best-known European sans-serif typefaces released during the 1920s. Despite similarity of proportion and x-height and the lack of distinct stroke contrast among the three typefaces, Futura is the only one consistently classified as a geometric sans-serif typeface. This is not just a case where a single, easily recognized attribute outweighs several other more subtle aspects of style. Placing Futura in a category defined in part as "theoretical" suggests that belongs with more experimental letterforms that were either never committed to type or executed as a display face not meant for continuous text setting. The "T-square and compass" school was a pejorative term that English and American writers coined during the 20's and 30's to describe experiments such as those of Bauhaus designer Joost Schmidt (fig. 31). In that the designs of Schmidt, Herbert Bayer, and others who pursued ideas of purely geometrical letters were never produced as type, they remained theoretical and fully comply with McLean's definition. Including Futura with this category, denies its very real and long-lasting commercial success.

Schmidt's experiments also break one of Renner's fundamental rules; they compromise the fundamental form of each character by calling attention to the rigid application of style. Renner's description of "Constructivist" as "that horrid word" indicates his frustration with Futura being grouped with a style of letter that contradicted some of his fundamental principles.¹² In the second chapter of *Typografie als Kunst*, Renner applies a standard Werkbund reading of Alois Riegl to typography, stating, "Style is consistency of descriptive thought and not stylization of existing forms or, said another way, nature needs no stylizing correction or beautification."¹³ Earlier in the same chapter he argues that style cannot call attention to itself:

... all more artistic stylistic intent aims at not compelling departure from the immediately comprehensible basic form. Thus one may conclude that it is not contentment with these elementary forms [square, circle, and triangle] from which we are able to deduce a fullness of observation—a living form-richness missing from the empty, stilted forms of cubism ...¹⁴

His experience with the creation of Futura did not change this conviction. It is expressed where he says: "The turning of the spirit to the spiritual, the forming to the formal, is never creative but vain and wicked. In fine art, it leads to frivolous arts-and-crafts, or to sterile historicism."¹⁵ From Renner's point of view, Futura was different. He thought it the only legitimate completely modern typeface to come out of this period. He was always piqued that other typefaces along Futura's model came out at the same time as Futura.¹⁶ These *Künstlert groteskschriften* ("artist-grotesque-fonts"), which I take to include Gill Sans and Kabel, were flawed by the persistence of artifacts of Arts and

Crafts calligraphy. He compares the artist-grotesque-fonts to mushrooms, both for their sudden profusion and the fact that they feed on the detritus of typographic history.¹⁷

Even within national schools, category is often a matter of taste rather than history. McLean cites Gill Sans as an example of a ‘humanist sans-serif’ and Futura as a ‘geometric sans-serif,’ but a specimen sheet issued by Monotype, the English firm that commissioned the typeface Gill Sans, states that the design of Gill Sans “followed, but was not in any sense an imitation of the more theoretical, geometric sans-serifs of German origin.”¹⁸ The indiscriminate use of the words “humanist” and “geometric” lies at the heart of the problem. Futura, Gill Sans, and Kabel characters all share the same proportional basis, which is derived from the geometry of inscriptional Roman capitals. Since Roman and Italian Humanist rules for the construction of letters were based on the geometric relationship between square and circle, a case can easily be made that all three are “geometric sans-serif” fonts. Thus the word humanist, when applied to typographic history, actually describes an aspect of form shared by the three aforementioned fonts. When used in the formula “humanist sans-serif,” the word humanist defines a style of rendering letterforms. Used to define style rather than form, the word “humanist” excludes Futura, and in the opinion of some writers, Kabel as well. It is this confusion of form and style that has produced ambiguity in the category.

McLean’s separation of Gill Sans and Futura into two different categories also reflects a tendency to insulate English typographic design from more radical continental typographic influence. British discussions of typographic design in the inter-war decades possess an insularity that regards German design of the period as a manifestation of an alien intrusion. Necessities and realities of orthography, cultural habit, and language that

affected German typographic practice have frequently been disregarded, or perhaps just overlooked, by writers in England and the United States.¹⁹

The truth of the matter is that Futura, Gill Sans, and Kabel are all descendants of Arts and Crafts lettering (figs.28, 25, and 32). Renner initiated the serif-less roman with Futura, but all three are ultimately result from competition between typographic foundries. Gill Sans and Kabel are products of well-known Arts and Crafts calligraphic practitioners and retain specific attributes inherited from Arts and Crafts calligraphic practice.²⁰ Gill Sans' descent from its ancestor, Edward Johnston's typeface for the London underground railway, is indicated in its slight variances of weight among strokes shaping lowercase characters such as 'a,' and its specifically calligraphic italic lowercase characters, particularly the 'p.' Kabel is more pronouncedly geometric. With a minimalist stroke contrast similar to Futura's, Kabel retains angular stroke ends inherited from pen-defined forms. Futura's unremitting rejection of any artifact of the scriptal hand obscures Renner's own Arts and Crafts background and the roots Futura shares with Gill Sans and Kabel in Arts and Crafts book arts.

Objective Classification

An objective classification system, based on measurements of specific details of Futura and several comparison fonts, can be used to demonstrate that Futura, Gill Sans, and Kabel define a new kind of typeface. Of the contemporary font classification systems available, the Panose system uses a convenient numeric shorthand for recording results determined by objective criteria. Ratios that result from comparative measurements taken from a typeface are converted into ten indexed numeric codes.²¹ Because this system is objective and includes the necessary criteria, it will be used to demonstrate how Futura

differs from other fonts without serifs and how it shares particular features of style with two roman serif-typefaces whose designers, like Renner, returned to an earlier era to find the models for their designs.

Renner carefully distinguished form from style, and mentioned how inadequate the German language is for discussing nuances of letter design.²² I will use his definition of *form*— the raw shape or pattern of the letter without regard to how it is drawn. It does not include attributes of line weight, proportion, or contrast, nor does it distinguish among different kinds of curves, or even their absence. Renner made it clear that these last-mentioned attributes are all aspects of style. By way of example, the form of an ‘o’ is a space evenly enclosed (fig.33). In severe Gothic letters, these sides are enclosed by vertical strokes and the upper and lower limits of the space enclosed with oblique strokes that may be straight or curved. Such letters are narrower than they are tall, a feature they share with many sans-serif grotesque typefaces. Their narrow proportions also reduce the degree of difference among the widths of capital letters.²³ An ‘o’ rendered in Carolingian or humanist style is circular, the enclosed space is an oval taller than wide, the axis of which slants to the left.

Using the Panose system to compare six typefaces reveals the stylistic difference between grotesque fonts and the serif-less roman fonts developed in the 1920s. The grotesque typefaces used in this comparison are Akzidenz Grotesk (Berthold, 1898), Franklin Gothic (American Typefounders, 1905), and Univers Roman 55 (Deberney et Peignot, 1957). Futura, Gill Sans, and Kabel are the serif-less roman typefaces used (fig. 34). The grotesques were chosen as examples of well-known typefaces that preceded and followed Futura’s 1927 release. To make the choice of grotesques more arbitrary, they

were selected so that when listed alphabetically they would also appear in chronological order. The following table provides the Panose numbers derived for the six typefaces.

Table 1. Panose Numbers for Six Sans-serif Typefaces ^a

Typeface	date	letter type	serif type	weight	proportion	contrast	stroke variation	Armstyle/stroke end	letter form	Midline & apex	x-height
Akzidenz Grotesk	1898	2	11	6	4	2	2	3	2	2	4
Franklin Gothic Futura	1905	2	11	7	4	3	3	3	3	2	4
Gill Sans	1927	2	11	6	2	2	2	4	2	3	3
Kabel	1928	2	11	6	2	2	2	4	2	2	3
	1927	2	13	6	2	2	2	3	2	9	3
Univers Roman 55	1927	2	11	6	4	3	3	2	3	2	4

^a This and the following tables are the result of calculations made by the author. The calculations are based on measurements of contemporary digital forms of the typefaces listed. All characters were scaled to 200-point size and measured to the nearest 1/10th of one point.

The table makes it clear that the serif-less romans of the 1920s share proportions and x-heights different from the grotesques. The Panose system uses comparative measurement of the widths of particular pairs of capital letters to distinguish among five different kinds of proportion; “oldstyle,” “modern,” “even width,” “condensed,” and “expanded.” As used by the Panose system, “oldstyle” encompasses roman typefaces developed from the era of incunabula to the Romain du Roi of 1692, “modern” includes typeface designs developed between 1700 and 1820, and “even width” covers text typeface designs that emerged after the mechanization of printing in the nineteenth century. “Condensed” and “expanded” are terms referring to typefaces of markedly narrow and wide set widths that emerged after the development of mechanized type matrix engraving in the 1880s. As opposed to the “even widths” of the three grotesque

fonts, the measurements of Futura, Gill Sans, and Kabel identify them as possessing the “old style” proportions of roman fonts that antedate the modern style.

The comparison of the height of the lower-case ‘x’ with the height of the upper-case ‘H’ is called “x-height.” All three of the serif-less roman typefaces are classified as having a “standard” x-height. The grotesques exhibit the large x-height common among mid- to late-nineteenth-century commercial typefaces. The comparatively smaller x-heights of the serif-less romans are more characteristic of styles developed prior to the eighteenth century and later revived by the private press movement. The smaller x-height in typefaces designed for commercial printing indicates the adoption of a taste for more refined typography developed by the private press movement and facilitated by significant improvements achieved in mechanized printing in the second and third decades of the twentieth century

Another difference between the serif-less romans and two of the grotesque typefaces cited, Franklin Gothic and Univers Roman 55, is that of “stroke contrast.” The serif-less romans, and Akzidenz Grotesk, are classified as having “no stroke” contrast while the other two grotesques exhibit “very low” stroke contrast. “Stroke variation,” which logically follows from the stroke contrast seen in the typefaces, cannot be of visual significance in a typeface with minimal variation in the thickness of its curved strokes. So, while the serif-less romans do not exhibit any significant variation in the thickness of the stroke that defines the character ‘O,’ grotesque fonts such as Univers, with their recognizable differences of stroke thickness, generally exhibit a slight tapering of these curved strokes.

The fourth difference, “arm style,” specifically defines differences among sans-serif fonts. It considers the angle of the termination of curved strokes in letters such as ‘S’ and ‘C.’ Futura’s tendency toward vertical stroke terminations, particularly in capital and lower-case ‘c’ is shared with Gill Sans. Kabel exhibits a quirky, reverse oblique angle in keeping with its origin in pen-drawn letters. The uniformity of “wedge” stroke ends in both Franklin Gothic and Univers is characteristic of older grotesque fonts. Akzidenz Grotesk displays horizontal stroke ends, which are a feature of many grotesques.

Futura has a design feature not shared by any of the other five typefaces in this comparison. Futura’s ascenders in lower-case characters such as ‘h’ are taller than the upper-case letters. Such ascenders are found in virtually no other serif-less typeface, but are common in oldstyle typefaces and particularly in the humanist style typefaces that originated in the fifteenth century. Since the capitals are smaller on the type body and x-height is related to capital height, the overall visual size of the typeface is reduced and additional white space introduced between the lines of type. As currently defined, the Panose system does not take this feature into account within its calculations. However, because it is such a significant aspect of Futura’s design, the following additional comparison is offered.²⁴

Since the measure of cast metal type is determined by the physical size of the type body and that measure is in fixed units, all type of the same size, say 24-points, must be cast on a piece of metal that measure twenty-four points on the vertical edge of its top surface, or “face.” The Panose system compares the size of the lower-case x to the height of the upper-case H, but a more telling measurement can be made when Futura’s x height is compared to its tallest characters (fig. 35). As the table that follows indicates, when the

x-height of the six typefaces is compared to their body size in this way, the two serif-less romans of German origin, Futura and Kabel, have x-heights that are not only identical but are also the smallest among the six typefaces under consideration.²⁵

Table 2. x-height as a Percentage of the Height of the Tallest Character

Akzidenz Grotesk	Franklin Gothic	Futura	Gill Sans	Kabel	Univers
51	56	41	50	41	53

There is a specific technical reason for the concurrence of size between the two German serif-less roman typefaces. Prior to World War I, a German standard for the location of the baseline on the type body was established that was modeled on the Inland Standard developed by the Inland Type Foundry of St. Louis.²⁶ Because any German typographic standard had to accommodate both roman and blackletter typefaces, and descenders of blackletter characters are generally shorter than those of roman characters, the standardized baseline for German typefaces was located lower on the body than in England and the United States.²⁷ In Renner's opinion, the lower German Standard Baseline produced typefaces with descenders that were too short. He knew that moving the standard baseline was unthinkable—the whole German foundry industry would have to re-tool and the printers re-equip themselves with type. Since there was no more room below the baseline, Renner suggested that the longer descenders common in old-style typefaces could be maintained if the designers and foundries would not enlarge the letters to fill the space above the baseline:

By these means, the image of the type would become somewhat smaller;
something no one will be annoyed with, given today's current preference for
smaller types. The descenders could once again become as large as with classic

fonts, and it would leave sufficient space over the capital letter for the accents and umlauts.²⁸

To complete the picture, one last table is offered. In addition to the specific characteristics of Futura and the general characteristics²⁹ of the grotesque typefaces presented in Tables 1 and 2, Table 3 lists the Panose style indicators for the Golden type and Centaur. Morris' Golden typeface set the original standard for returning to the designs of fifteenth century scripts and Centaur is representative of those letters descended from the Golden type that were designed for the private press movement but executed by mechanized punch engraving when adopted for commercial practice.³⁰ Because these two typefaces antedate Futura and, like Futura, were the result of a conscious return to the origins of the roman letter, they provide a fair comparison with Futura.

Table 3. Panose Numbers Comparing Futura to Grotesque Typefaces, William Morris' Golden Type, and Bruce Roger's Centaur.

	Weight	Proportion	Contrast	Stroke Variation	Letterform	Midline & Apex	x- height
grotesque	6	4	3	3	3	3	4
Futura	6	2	2	2	2	3	3
Golden	6	2	4	3	2	3	3
Centaur	5	2	5	3	2	3	3

Aside from its absence of serifs, Futura has more in common with Morris' Golden type and Centaur than it does with grotesque typefaces in general. The most important points of concurrence are proportion, letterform (the roundness of the uppercase 'O' and lowercase 'o'), and x-height. The other style element that Futura has in common with Centaur and other twentieth century typefaces derived from the Italian humanist model is in having lower-case ascenders taller than the upper-case letters. Futura can therefore be

described as a typeface of medium weight with old style proportions, no significant stroke contrast, no stroke weight variation, vertical terminations to some of its curved strokes, circular ‘o,’ pointed apexes, standard x-height, and ascender lengths like those of Italian humanist minuscule letters. Thus, while Futura, Gill Sans, and Kabel were a new departure for the design of letters for printing, Futura’s lack of stroke weight variation, even color (tone), consistent adherence to the geometric proportions of Roman inscriptional capitals, and tall ascenders distinguish it even within this small group of contemporary typefaces. In 1947, Paul Renner expressed this view:

The last typeface produced in Germany that the world adopted was Futura. That was no accident: next to the classic old-face form and the modern-face roman in the style of Bodoni and Didot, the serifless roman with classical proportions is the third and presumably last *Typus* of eternally usable and timeless roman forms. I personally, at least, do not see the need for a fourth *Typus*.³¹

Rivers—like events—course. Maps—like history—discourse. The most accurate maps are based on the most objective measurements. Objective observation reveals continuities of style among Futura, Gill Sans, and Kabel that are otherwise obscured by boundaries erected by more arbitrary classification systems. Objective analysis demonstrates that Futura, and similar designs that emerged in the middle 1920s, define a typographic category that is best described as serif-less roman, and constitute the twentieth century’s first original contribution to typographic vocabulary.

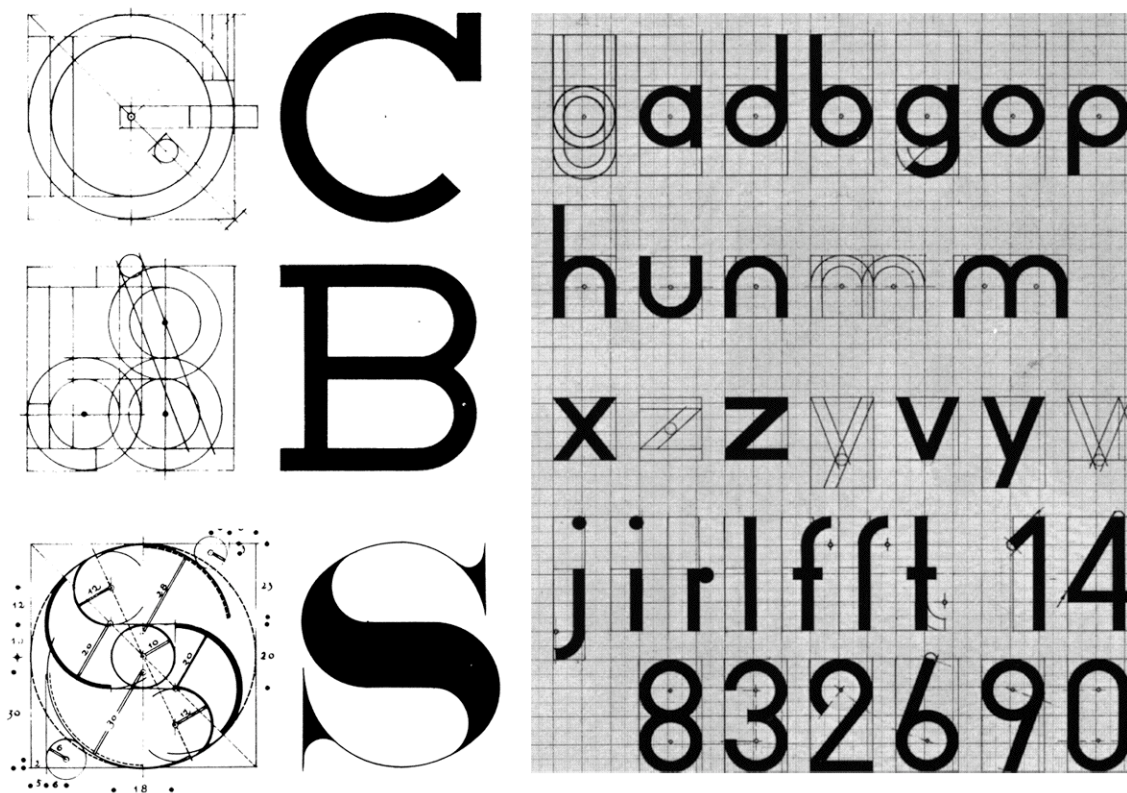


Figure 31. Letter designs. Joost Schmidt. C. 1925. Upper left: Schmidt Egyptian. Lower left: Schmidt Neo-Classic. Right: Schmidt Grotesque. Details of images reproduced in Willberg, *Schrift im Bauhaus / Die Futura von Paul Renner*.

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
(&\$1234567890€£.,:;'"'---·---.*%/!/?[]«»)

Figure 32. Kabel bold, designed by Rudolph Koch, Klingspor Foundry, 1927. As reproduced in Lawson, *Anatomy of a Typeface*, 344.

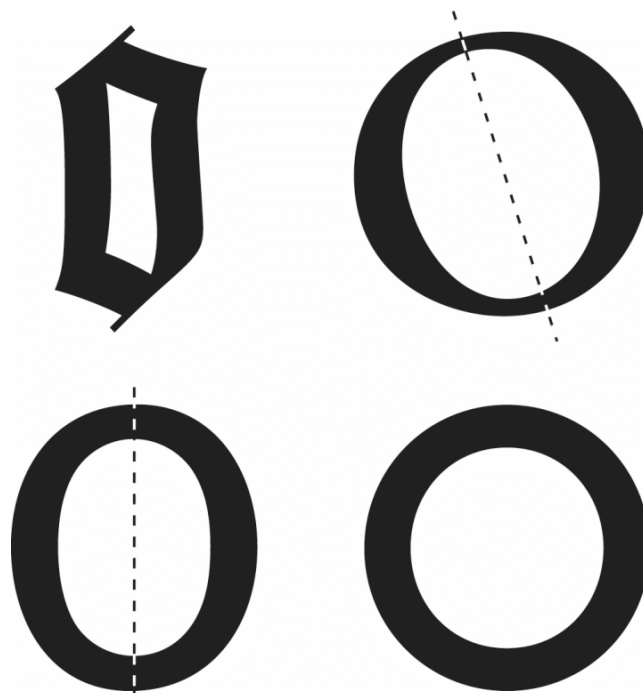


Figure 33. In that the strokes of the four characters uniformly enclose the negative space (counter), the fundamental form—that which defines the symbolic value—of these letters is the same. It is style that produces their different appearance. The style of the fraktur character (upper left) is determined by the persistence of the artifacts of pen-drawn letters. The slant of the counter of the humanist character (upper right) is also a manifestation of the effect of the broad-nib pen. Over time traces of the hand diminished and by the nineteenth century (lower left) all that remained was a slight tapering of the thickness of the stroke. Futura and other twentieth-century mono-weight fonts (lower right) dispensed with all trace of the hand and pen.



Figure 34. Diagram of critical characters for Panose classification with lines from which measurements are taken. Typefaces correspond to their order in Table 1: Akzidenz Grotesk, Franklin Gothic, Futura, Gill Sans, Kabel, and Univers.



Figure 35. Sans-serif typefaces with sizes adjusted to equalize the distance from baseline to the top of the tallest character, showing the effect on comparative x-height. Typefaces correspond to the order in Table 2: Akzidenz Grotesk, Franklin Gothic, Futura, Gill Sans, Kabel, and Univers.

Notes to Chapter 4

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- ¹ Lawson 337.
- ² Renner makes repeated use of this word in his discussion of German orthography in *Mechanisierte Grafik*. He is perhaps making a word-play on *Wortbildung* [“morphology”] and suggesting that understanding of meaning requires attention to physical form of language signs. In *Typografie als Kunst*, he suggests that if “we didn't look at letters in the verbal sense, but would look at their form itself, that would undoubtedly be an uncommon kind of contemplation. It would be a concrete approach in contrast to the conceptual” (29).
- ³ This brief survey of categories is derived from general discussions of typeface categories that can be found in any general book on typefaces and their design. My source for the list of categories and their dates is taken from Robert Bringhurst, *Elements of Typographic Style* (Vancouver: Hartley & Marks, 1992) and Alexander Lawson, *Anatomy of a Typeface*.
- ⁴ Dates given for fonts are taken from the best available source. For fonts prior to 1950, dates are taken from Alexander Lawson's *Anatomy of a Typeface*. For others, dates are those published by the foundry that issued the font.
- ⁵ I will use the nomenclature proposed by Phillip Gaskell in “A Nomenclature for the Forms of Roman Type,” *Visible Language*, 10.1, 1976 to discuss the specifics of typefaces. I will, however, use American English spellings where they are different from those used in the article.
- ⁶ First given wide distribution by the American Typefounders Company, gothic is an American term. Grotesque, which first appeared in nineteenth century English type catalogs, is more common in European type catalogs. Both refer to sans-serif typefaces that began to appear after about 1830 and today the style is best exemplified by Helvetica.
- ⁷ Renner, *Mechanisierte Grafik* 47.
- ⁸ Renner, *Mechanisierte Grafik* 58–59.
- ⁹ This claim (Renner, “Vom Georg-Müller-Buch bis zur Futura und Meisterschule” 5) is substantiated by the absence of the word in *Typografie als Kunst*.
- ¹⁰ In a similar way, Rudolph Koch's Kabel also defies categorization. The font uses geometric shapes but its strokes ends are all perpendicular to the stroke “direction”—that is the way a pen would be drawn to form the strokes—and thus the font is a kind of humanist sans-serif that constrains the letter within a geometric template.

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- ¹¹ This claim (McLean, *The Thames and Hudson Manual of Typography* 62) is rather coy since McLean is well aware that since the fifteenth century traditional typefounding employed the same counter-punches to shape similar letters, e.g. ‘b’ and ‘d’. See Fred Smeijers, *Counterpunch: Making Type in the Sixteenth Century, Designing Typefaces Now*, (London: Hyphen, 1996).
- ¹² Renner letter of 1940 quoted in Burke, *Paul Renner* 103.
- ¹³ Renner, *Typografie als Kunst* 36.
- ¹⁴ Renner, *Typografie als Kunst* 33.
- ¹⁵ Renner, *Mechanisierte Grafik* 36.
- ¹⁶ Burke, *Paul Renner* 88.
- ¹⁷ Renner, *Mechanisierte Grafik* 55.
- ¹⁸ Monotype specimen sheet c. 1975.
- ¹⁹ One indication of this is the attraction Jan Tschichold holds for British design historians. Tschichold was certainly one of the most important typographic designers of the twentieth century. However, the primary attraction he holds for many modern critics appears to be his rejection of the radical typography he championed prior to his forced emigration, and his subsequent acceptance of British typographic orthodoxy acquired through his post-World War II work in England.
- ²⁰ Eric Gill was a disciple of Edward Johnston, and Kabel’s creator, Rudolph Koch, had been a student of Rudolph Larish.
- ²¹ On-line access to files related to the Panose system’s development and the calculations involved in determining the Panose numbers was made available to the author in November 2004 by Benjamin Bauermeister, the developer of the system.
- ²² Renner, *Mechanisierte Grafik* 53.
- ²³ The proportional similarity between fraktur and common grotesque sans-serifs partly explains the extent of their popularity in Germany.
- ²⁴ Bauermeister did consider making this aspect of letter design a part of the Panose system. Although not required by the current system, digits are reserved in the x-height classification to reflect fonts that have ascenders taller than the cap height.
- ²⁵ I personally discovered this effect when I was a novice art director. When a headline I had ordered in various faces at a 48-point was delivered, I was stunned by the difference in the size of the different styles. Kabel was the smallest of the lot.

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- ²⁶ In that it made printers more reliant on a single foundry, not having an industry standard for baseline location was an advantage for individual foundries. The standard only became established after the many smaller foundries were consolidated into larger concerns around the end of the nineteenth century. American Typefounders, which absorbed the Inland Foundry in 1912, became the dominant provider of pre-cast type in the United States, and their baseline standard became the de facto standard in the United States. Outside of the United States similar, localized processes took place that led to different “national” standards.
- ²⁷ Albert Kapr, *The Art of Lettering, The History, Anatomy, and Aesthetics of the Roman Letter Forms*, trans. by Ida Kimber (Munich: K.G. Saur, 1983) 330.
- ²⁸ Renner, *Die Kunst Der Typographie* 23–24.
- ²⁹ The numbers indicating the general characteristics of the grotesque values were determined by the simple expedient of averaging the values of the three grotesque typefaces included in the first table.
- ³⁰ Centaur was adapted for use in machine set type by the Monotype Company in 1928–9.
- ³¹ Renner, “Interview mit Paul Renner,” 7.

Chapter 5

The Suppression of Futura's German Identity

Despite the fact that Futura established a significant new model for printing types, recognition that its specific attributes were initially developed to remedy problems inherent in German typography after World War I consistently have not been recognized. Because Futura has been investigated for how it happened and what it was, but always from a contemporary perspective that has ignored the font's roots in the history of German scripts and type design and the context of its development during the Weimar Republic, this point of view has consistently failed to consider why it came into existence. This chapter will consider the roles that differences of social experiences, understanding of the nature of typographic form, and the absence of Renner's voice in non-German typographic discourse had in the failure of English and American typographic historians to recognize Futura's Teutonic roots.

Instead of the unadorned manifestations of Arts and Crafts letters pursued by Eric Gill and Rudolph Koch, Paul Renner sought to remedy the historicism he considered to be the error of his typographic era. Renner's phrase "the inflation of historicism"¹ implies a form of mechanized corruption that devalued typographic culture for the purpose of one more foundry making one more typeface available to an audience of printers, advertisers, and readers that grew more insatiable with every new typeface. The elimination of economic inflation by revaluation of the currency provided Renner with a model by which German typography could be freed from the inflation of historicism and returned

to its true function of being read rather than being “written.” The opportunity for his reform was presented by the post-inflationary enthusiasm to replace the old and devalued. However, the opportunity to establish a new German norm ended when the Nazi party came to power in 1933 and Futura was effectively banned from wide use in Germany.

The judgments of design critics after World War II have turned German typographic history in the twentieth century into a sort of palimpsest where specifically German measures attempted by Renner and others have to be read through the American and Western European typographic overlay that has prevailed since Germany’s total defeat in that war.² Perhaps because scripts are so embedded in culture, it is difficult to perceive that assignment of Futura’s origin to the modernism the font came to serve proposes an Aristotelian argument of origin arising from end use. This myth of origin excludes the possibility that the moderating influence leading to Futura’s international success was inherent in a German conception of the relationship of script and culture. This Anglo-American parochial perspective includes several fallacies and overly broad generalizations that framed how I originally viewed the invention of Futura: the use of a roman typeface means Latin typographic practice, *Bruchschrift* is a historical oddity tainted by irrational and destructive nationalism, English orthography is the native form for roman type, and German design reforms of the Weimar era uniformly embraced modern western European civilization at the expense of German culture. Seen through such a filter, it is not surprising that English and American writers have regarded Futura as an international project that began with some particular German quirks rather than as a German project that was forced to configure itself to international constraints once

German political conditions determined that the font's larger success was to be outside of Germany.

Compounding the problem of achieving a clear understanding of Renner's objectives is the fact that since Futura was issued in 1927, typographic mechanical processes have continued to develop. With each new technology, typeface design has completed another iteration, once for phototypesetting, once again for bit-mapped digital typesetting, and now for path-defined digital typesetting, which has passed through three iterations of its own in just twenty-five years. Every new technology, every new standard for digital typographic files requires the regeneration of all previously existing typefaces. The use of increasingly sophisticated machines to define the reproduction of any letter created by any process has embedded historicism in standard typographic practice.

Under the influence of Boston printer and typographic scholar Daniel Berkeley Updike in the United States and Stanley Morison in Great Britain, the historical attribution of a typeface became an aspect of mainstream typographic practice.³ Morison's prominence as a typographic historian and his position as London design director for Monotype secured historical attribution as a means by which typeface manufacturers authenticate the value of their reproductions. The attributed colophon became a standard device for the authentication of typographic design and practice.⁴ Alexander Lawson's *Anatomy of a Typeface* provides an example of this mix of historical authentication and commercial promotion:

Anatomy of a Typeface was set in Galliard, a typeface designed by Matthew Carter and introduced by the Mergenthaler Linotype Corporation. Based on the types created by Robert Granjon in the sixteenth century, Galliard is the first of its

genre to be designed exclusively for phototypesetting. A type of solid weight, it possesses an authentic sparkle that is lacking in current Garamonds. The italic is particularly felicitous and reaches back to the feeling of the chancery style, from which Claude Garamond's italic departed.⁵

The joint forces of parochial typography, continued technological development, and appropriation of historical attribution by type and equipment manufacturers have combined to divert attention from serif-less roman type as a "typus" and have obscured its origin in the efforts to reform German typography in the decade following World War I. Working in the typographic idiom of Weimar Germany, Renner devised a new kind of roman script. Reflecting German typographic practice and initially created for cold-metal composition, Futura, like its German contemporary Kabel, was originally released only in roman form. Once Futura was employed in Latin typographic practice, its German origins were hidden by adaptations made to configure Futura for use outside of Germany. In response to pressure from the American market, an oblique version of Futura was created in 1931.⁶ There has never been either an italic or oblique version of Kabel. Gill Sans, commissioned and released by Monotype's London office, was meant for Latin practice. In keeping with the Latin practice of using both roman and italic on the same page for general typesetting, it provides matching roman and italic forms expected by British and American users for fonts created for machine-composition.⁷

As seen previously, much has been made of Futura's alternate characters. They have been regarded as an oddity particular to Futura's development that was mitigated by the experience of the Bauer Foundry staff.⁸ The process was not as remarkable as much of the writing about Futura has suggested.⁹ Gill Sans also includes multiple forms of

particular letters (fig. 36). Where Futura started out with abstract representations of German letter forms that through the foundry design process became less German and therefore, to English and American observers, more conventional, the evidence of the complete Gill Sans character set (fig. 25) suggests that Gill Sans began as a more calligraphic expression and the Monotype staff added additional “geometric” characters in an attempt to compete with Futura’s popularity.¹⁰

While Futura is not alone in its inclusion of “alternate” characters, those characters, based on German scripts rather than the more familiar Italian humanist script, are distinctive. The Carolingian form of ‘a’ with an upper arm and of the “eyeglass” ‘g’ are well known, as are the more simple uncial forms of these two characters that were passed down to the Italian humanists through Gothic scripts including *textura*—the script of Italian scholarship prior to the reform of Florentine scriptal practice by Poggio Braccolini in the 1420s.¹¹ These early Italian humanist scripts did not have a pronounced slant—the humanist scribes were trying to emulate the form of Carolingian manuscripts that they took to be the hand of classical antiquity. The pronounced slant associated with italic typefaces did not begin to appear in Italian humanist scripts until the last half of the fifteenth century.¹² The slope of this new italic hand provided scribes with two means of fending off the competition of the letterpress printers. The sloped characters were faster to write and printers could not copy the script until the end of the fifteenth century when Francisco Griffo cut the Aldine italic typeface that solved the problem of mounting an oblique letter on a rectangular type body.

Italics introduce a difficulty into the classification of typefaces. Latin practice holds that italic is a different form of letter, but Renner’s German view was that italic is a

different style. If form means the distinct patterns such as the way counter space is enclosed within ‘o’ or excluded in ‘x’ that make a letter shape recognizable as a language symbol, there is no difference between roman and italic, and the presence of oblique rather than vertical strokes is an aspect of style. This is the position taken by Renner. On the other hand, in Latin practice roman and italic often occur within the same line, so distinctions of lateral compression—an italic ‘o’ is oval rather than circular—that in roman typefaces are solely an aspect of style are, in the case of italic, considered to be fundamental to the letter form and thus not a stylistic difference. Classification was further complicated by the machine-cast equipment manufacturers practice of releasing fonts as “matched” sets of roman and italic and applying the same family name to both.¹³ The oxymoronic font name “Times Roman Italic” expresses this conundrum. Because the nomenclature by which Futura is classified in the United States and England is based on typographic practice in those countries, Futura’s original lack of an accompanying italic, which was simply not required in Weimar Germany, is seen as a deficit outside of Germany. More critical to Renner’s original conception is the relationship between German *Bruchschriften* and roman type. Futura began as an attempt by Renner to create a new German font capable of resolving the differences between Roman capitals and German descendants of Carolingian minuscules. In his initial conception, Futura provided a possible successor to fraktur and schwabacher. However, over the period of its development Futura added more roman lowercase characters that displaced and eventually repressed the original German font. I suspect that during the process Renner began to think of Futura as a typeface with alternate characters that could express either German and roman typographic voices, and it was for this reason that he held out for the

“experimental” characters, ‘a,’ ‘g,’ ‘m,’ ‘n,’ and ‘r’ that survived into Futura’s original release in 1927.

Two brief paragraphs in *Typografie als Kunst* recount the origins of italic and fraktur styles. The humanist italic “is refined from elements of the Carolingian minuscule and Gothic italic-forms” and “becomes a script of all roman countries.”¹⁴ The second paragraph discusses German scripts emerging from Gothic cursive scripts, and therefore a different developmental path than the italic, that over time “assumed the tendency of Gothic italic sharpening and stroke ligatures.”¹⁵ Because they were created to enable the persistence of manual lettering in a hostile technological environment, Renner considered them they styles to be evolutionary dead-ends, but the forms themselves, Carolingian ‘a’ and uncial ‘a’ for example, he saw as fundamental to European script.

Renner’s separation of German type from roman type is made clear in the glossary to *Die Kunst der Typographie* where he proposes two primary categories: scripts and type related to hand practices, and printing types. The printing types are divided into two sub-categories: the *Antiqua-Schriften* (“old-style roman”) and the “so called” Gothic—he recommends that this style would be better labeled as “French.”¹⁶ Within each of the roman and German groups, he identifies four sub-categories, but nowhere in the categories does he make it clear where to put italic. Italic simply was not that important to German typographic practice. From Renner’s point of view, italic was to Latin practice as *Schwabacher* was to German. Because he was proposing a new German standard that excluded *Bruchschrift* and did not follow Latin practice, italic had no role to play in the *Schrift unserer Zeit*.

In serving historicism, type design retains aspects of historical styles at the expense of purity of form. The preservation of scriptal artifacts such as slant, stroke weight variation, and serifs can obscure the essential forms of letters. Renner believed that typography, the arrangement and printing of words for communication, could be returned to its true function of being read rather than written by the careful balance of functional and formal aspects of typography. True typographic functionality could only be achieved by clear identification of the forms of letters, not the style in which they are articulated. Recognition of the ideal form of any art is achieved through “pure visibility” or Gestalt. Anything that detracts from the simplest recognition of pure form, therefore, diminishes legibility and shifts typography from its true function.

In Renner’s schema, style is dictated by will and the execution of style is the province of the artist who must work in the material processes of the era. Prior to the nineteenth century, manual typefounding constrained the typographic manifestation of letterform in a given era. Released from the constraints of punch cutting by the mechanization of typefounding, style overwhelmed form. The persistence of the visual artifacts of obsolete technologies—once the province of media and technique—became stylistic determinations that worked against the expression of pure visibility. Any art so created replaced the “specific and purposeful artistic volition” of the era with vain personal will that diverted form from fulfilling its purest expression and replaced legitimate printing types with counterfeit scripts that made the value of typographic art suspect. Therefore, Renner’s pursued the “task of his time” with a design that eliminated the trace of obsolete technologies, avoided the artificial reproduction of the styles of bygone eras, and achieved clear expression of ideal letter form in an apposite style.

Renner's place in the transformation of Arts and Crafts book arts into modern typography is difficult to discern in a style where the role of the artist requires the conscious erasure of all traces of previous technologies. In the case of Futura, the presence of the artist can only be seen in Futura's absence of serifs, absence of stroke weight variation—other than to avoid optical distortion, and even the absence of customary strokes such as the vestige of a 'tail' that clings to most versions of the lowercase 'u' and occasionally remains attached to the lowercase 'a' (fig. 37).

In Renner's case, the visual absence of the author's hand has been exacerbated by his absence from American and English historical discourse of twentieth century graphic design. This is somewhat puzzling since among practitioners of modern typography Renner was a prolific writer. However, he wrote in German and none of his works on typography have ever been published in English. Worse, he did not leave Germany after the national socialists forced him to resign his position as director of the *Meisterschule für Deutschelands Buchdrucker*, and the post World War II silence that surrounded anyone who remained in Nazi Germany by choice stilled his voice. I suspect that Renner was "too" German. He was a handsome, blue-eyed "Aryan" male who reconciled himself to his politically imposed internal-exile, drew on professional connections in order to continue working in the Nazi state, was quoted in German design journals during the war, and, once the war was over, reciprocated the embarrassed silence of his émigré colleagues. The most simple explanation for his acceptance of his internal-exile is that he was older than most of the designers and architects who left Germany.¹⁷ Fifty-five years old when the Nazis forced his resignation in 1933, he retired to his family home on Lake Constance where he waited out the German catastrophe.

Function and form

In keeping with Shearer West's description of *Neue Sachlichkeit* aesthetics of objectivity, functionalism can be seen as a purification of the surface.¹⁸ Purification of the surface may enhance transparency, but response to function is not the sole aesthetic determinant. Renner stated that the function of type, which produces letters by the transfer of ink through a "single vertical application of pressure," was to be read not to be written.¹⁹ The form of the letters, their raw shape, is what allows them to fulfill their function. Because casual scripts are manually written, they include aspects of style that facilitate writing but diminish contrast of form. Monumental scripts, including typefaces, that are derived from manually written scripts often appropriate aspects of manual style inappropriate for the media in which they are rendered.²⁰ Because Renner's *Schrift unserer Zeit* was not manually written, he thought that any trace of the hand would not only disguise the means of making, but also diminish the "visibility" of the form. In Renner's aesthetic system legibility required cognizance of the form, and formal relationships of proportion could bind the disparate forms of the alphabet into a stylistically consistent typeface. Deleting the trace of the hand from Futura fulfilled the function of legibility and the formal requirement that the style not misrepresent how the letter was produced. Thus Futura's abstraction is not the result of some constructivist agenda, but one to enable it to best fulfill its legitimate function.

Futura is certainly a purification of the typographic surface, but in its own time, and later, it has been criticized as a product of the "form follows function" school that by making the pure form of each letter so evident calls too much attention to its style.²¹ Ironically, these same critics enlisted functionalism to enforce formal orthodoxy. They

argue that the function of type is transparency. Beatrice Warde, an American expatriate working in London, who famously compared type to a “crystal goblet”, provides the best example of this argument. The function of the typographic goblet is not to obscure its precious contents, but to enhance the color and flavor of the text with delicate grace.²² In the English school of typography, transparency came to mean type that did not interrupt the accepted surface of social convention. Thus, the connection of a letter design to Latin scriptal tradition became a function of type. The English historicized functionalist ideal was achieved by Stanley Morison’s Times Roman (fig. 38), a typeface with slight lateral compression—in order to fit more characters within a newspaper column, a slightly larger than average x-height—to make character recognition easier within the column made more dense by narrowed character proportions, and rendered in the style of “Dutch/English” transitional serif typefaces—that referenced and paid reverence to Caslon, the ultimate “English” typeface.

The difference between Renner and the English functionalist school can be seen in a different viniferous metaphor he used to illustrate the principle *Sichtbarkeit* (“visibility”) when he described a person who instead of experiencing the color and flavor of the wine, contents himself with reading the label.²³ Renner’s “functionalist” agenda, legibility, led him to a different archetype that produced a typeface with a slightly higher character count, differential capital character widths derived from the proportions of Roman inscriptions, a small x-height with lower-case ascenders taller than the capitals, and the removal of any trace of earlier scriptal practice and technique. The separations of authenticity and representation, culture and civilization, and form and style that were made evident by isolation and inflation in Weimar Germany led Renner to

reject *Bruchschrift* and historicized roman letter styles—what Ernst Bloch referred to as “rotten archetypes”—that inhibit future development by regressing to the archaic. The primal forms of Roman capital and Carolingian minuscule letters rendered without reference to earlier styles yielded a typeface that provided recognition of form rather than recollection of style and was thus charged with utopian potential.²⁴

Politically—and this may well be the true dividing line—Times Roman and Gill Sans pay homage to authoritarian and elite models, whereas Futura, for all its refinement, reflects its Weimar origins in its resemblance to the unadorned scripts of pre-imperial Roman and renaissance Florentine republics (fig. 39). Britain was the only nineteenth-century imperial power left standing at the end of World War I. As England yielded political and economic dominance to its former American colonies, its language remained its greatest colonizing achievement. Even as its geographic hegemony diminished, its authority over spoken and written language came to dominate typographic histories, where dismay at the fading of the English typographic empire was hidden behind Morison’s scholarly colonization of typographic history. The Germans, denied the prerogatives of victory enjoyed by the English, squandered their typographic currency by investing in the fascist appropriation of cultural heritage and rejecting Weimar typographic innovation.

Ultimately Futura was orphaned by political events. On their accession to power in 1933, the Nazi party effectively banned roman type from German printing, and labeled sans-serif fonts as decadent signs of international socialism. Although it was widely adopted by the advertising community and commercial press, Futura was never widely used as the book type Renner had envisioned. In England, Futura came to be viewed as

an unwelcome intrusion of German absolutism.²⁵ Because Futura was so Spartan, its republican severity was incompatible with the vainglorious Nazi state that discouraged the use of any script that disputed the party's view of German culture. Renner's personal opposition to fascism was unknown outside of Germany, and so Futura's combination of stylistic severity and classical proportion became associated with the stark, pseudo-classicism appropriated by the European absolutist governments, its humanism obscured by its mechanical perfection, and its promise compromised by commercial and political appropriation of myths of origin.

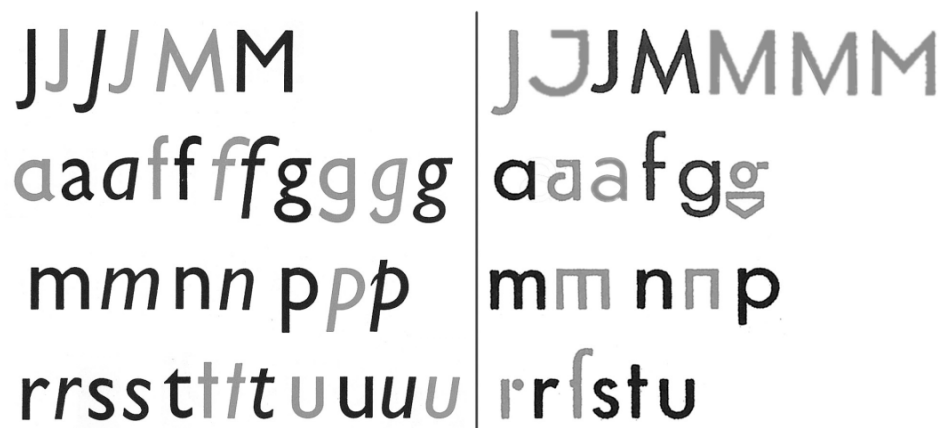


Figure 36. Multiple characters in the font sets of Gill Sans, on the left, and Futura, on the right. Black indicates characters in common current use. Gill Sans italic are included to facilitate comparison of the continuity of letter style between the roman and italic versions of the typeface (Futura uses a oblique version of the roman in lieu of a true italic).

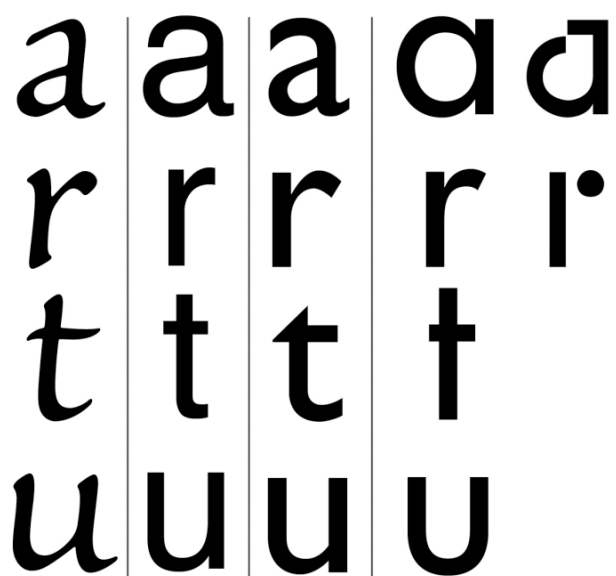


Figure 37. Left to right: SanVito (a typeface based on the pen drawn letters of fifteenth century Paduan scribe Bartolomeo San Vito), Helvetica, Gill Sans, Futura. The vestigial tails of the ‘a’ and ‘u’ and the pen based diagonal cap of the ‘t’ present in Gill Sans are absent in Futura. The original Futura ‘r’ attempted to eliminate the trace of a pen formed letter but was replaced by the more conventional form in the fourth column.

ABCDEFGHIJKLMN
 OPQRSTUVWXYZ
 abcdefghijklmnop
 qrstuvwxyz
 0123456789
 & £ # ¶

Figure 38. Times Roman.

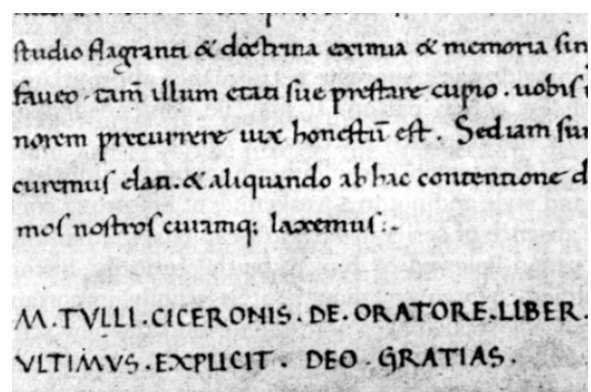


Figure 39. Poggio Braccolini, detail of manuscript Cicero, Florence, Laurentian Library, 1423–31. A script representing the humanist scripts developed in the Florentine republic of the first third of the fifteenth century.

Notes to Chapter 5

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- 1 Renner, *Mechanisierte Grafik* 21.
 - 2 It is interesting to note how political these attitudes are. After World War II, the only surviving voice for German international style came out of politically and linguistically neutral Switzerland.
 - 3 Lawson 75.
 - 4 *The Colophon* (1925–1935) was an American trade journal concerned with reestablishing the value of books as cultural objects through their quality of production rather than as collectibles where the value was solely determined by a book's scarcity. Although its editors strove mightily to resist the influence of commerce within its pages, *The Colophon* was subject to and instrumental in the blurring of the line between news of typographic developments and commercial use of the media for "publicity hypnosis" (Claire Bararacco, "Inventing Book News, 1925–1935: 'Publicity Hypnosis' and *The Colophon*," *Book Research Quarterly*, 6.4, 1991, 17).
 - 5 Lawson, colophon page, not paginated. On a personal note, I have met Matthew Carter several times and he is a gracious and talented person. By including a colophon describing his admirable typeface, I intend no slight to his expertise.
 - 6 Lawson, 347.
 - 7 Gill Sans italic is a true italic in that the italic characters are drawn separately from the roman instead of simply being skewed versions of the roman characters as in the case of an oblique typeface.
 - 8 There seems to be little doubt that it was Renner's former student Heinrich Jost who supervised most of the work on Futura, but there has been very little consideration of how much the teacher deferred to the student and vice versa.
 - 9 Both Renner and Gill seem to have drawn their inspiration from personal experience with incised letters in Roman inscriptions, Renner during his honeymoon year of 1905–6 and Gill during an extended stay in 1909.
 - 10 The sample used is taken from a figure in Kapr's *The Art of Lettering* and does not include all dicriticals and does not include all the ligatured pairs actually provided by Monotype. However, in all specimen samples that I have been able to obtain from Monotype, there is nowhere near the range provided in the original Futura font set. In particular, the *ch* and *ck* combination characters do not appear.
 - 11 Martin 193–4.

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- 12 Armando Petrucci, *Public Lettering: Script, Power, and Culture*, trans. Linda Lappin (Chicago: The University of Chicago Press, 1993) 17.
 - 13 The tangled relationship of roman to italic is documented throughout typographic literature, and the relationships of the personalities involved are no less confusing. Lawson provides a good starting point in his chapters on Arrigi and Galliard. Fredrick Warde—husband of Beatrice Warde, who was later Eric Gill’s lover and model—designed Arrigi. When Monotype added Centaur to its catalog in 1928, Stanley Morison teamed it with Arrigi. The web of relationships remains tangled to this day. Matthew Carter, the designer of Galliard—mentioned above as one of the first “Garamond” style fonts created for phototypesetting—used an alternative source for his italic. His choice was informed by his father’s (Harry Carter) research on the origin of italic and roman typefaces designed in tandem. (Lawson 84–97, 141–46).
 - 14 Renner, *Typografie als Kunst* 50.
 - 15 Renner, *Typografie als Kunst* 51.
 - 16 Renner, *Die Kunst der Typographie* 263–64.
 - 17 He was five years older than his best-known émigré contemporary, Walter Gropius, and twenty-four years older than Jan Tschichold.
 - 18 Janet Ward, *Weimar Surfaces, Urban Visual Culture in 1920s Germany* (Berkeley: University of California Press, 2001).
 - 19 Renner, *Mechanisierte Grafik* 53.
 - 20 Petrucci 16–18.
 - 21 Lawson 341.
 - 22 Beatrice Warde, “The Crystal Goblet, or Printing Should be Invisible,” *Typographers on Type, An Illustrated Anthology from William Morris to the Present Day* ed. Ruari McLean (New York: Norton, 1995).
 - 23 Renner, *Typografie als Kunst* 32.
 - 24 For a summary of Nazi appropriation of myths of cultural origin and resistance to that process, see Wiedmann 349–77.
 - 25 This perspective was furthered by Jan Tschichold’s post-World War II rejection of the “new typography” he had done so much to create. His rejection was based in large part on his belief that adamant prescriptions of the “new typography” were symptomatic of the German societal obduracy that had led to the Nazi disaster. See, Robin Kinross, “Introduction to the English-Language Edition,” *Die Neue*

Typographie. By Jan Tschichold. Weimar and Now: German Cultural Criticism 8
(Berkeley: University of California Press, 1998) xxxviii.

Conclusion

Part of Futura's original strength and continuing power to evoke an era comes from its name. Fritz Wichert, director of the Frankfurter Kunstschule, who in 1925 hired Paul Renner to teach typography, proposed the name. Wichert compared Futura to the new architecture that was turning Frankfurt into a new city, and the name he coined brilliantly positioned Futura in the market in the late 1920's as a typeface of tomorrow. For him, Futura offered a clearly functional typeface without stiffness that held the promise of a "new, sharp utility" free from overly individualistic expression.¹ Futura was Renner's *Schrift unserer Zeit*, "a true, right landmark of the German soul, at the same time new and archaic ... today and in the future..."² If Germany was "the country from the day before yesterday and day after tomorrow," then Futura was the type drawn from the day before yesterday for use in the day after tomorrow. Nominating an object of the current moment as something belonging to a present that has not yet arrived, Renner joined in the era's optimistic expectation that technology guided by art could have a positive, transformative effect on society.

Despite the promise Renner thought Futura held for the future in 1928, today, it evokes an image of a distant, past time. Maria, the cyborg from Fritz Lang's *Metropolis*, was created in the same year as Futura. The cyborg and the typeface share an additional aspect; they are creations designed to evoke emotional responses founded in a distant past beyond the reach of the urbanized human masses that populated Weimar Germany. Maria was an emotionless surrogate for Mary, the mother of redemption. All she shares with the spiritual mother is her idolized surface. Futura is a subtle evocation of Roman capital and

Carolingian minuscule letters, but its historical roots are hidden beneath its cool, restrained style and beautifully “engineered” surface. Futura and Maria both failed to bring about the revolutions intended by their creators. *Metropolis* dramatizes Weimar fears of how rapacious technology, even when made beautiful by art, cannot provide a cultural center capable of harnessing primal emotion. The machines did not bring a better life to those who had to operate them, nor could Maria—a machine itself—provide anything other than superficial beauty and the illusion of emotional fulfillment. The same modernist dream is manifest in any page set in Futura, its connection to an authenticating past secreted beneath its smooth well-machined face. Society, unable to perceive the cultural depths from which Renner drew Futura, and confused by its apparent reflection of modern, technological civilization, sought more easily recognized manifestations of cultural identity in scripts that hide their modern, technological foundation behind artificial antique facades.

Failure promotes nostalgia: a longing not for what was, but for what might have been. Separated from a future it promised but which never arrived, Futura, like the image of Maria, evokes an era distanced from the present by cataclysmic failure. The gulf separating Futura from its failed future provokes a didactic interest in this distinct marker of a bygone time. Futura has been investigated for how it happened and what it was, but from a contemporary perspective that has consistently ignored why it came into existence. Our unquestioning acceptance of Futura, a script that comes from another place and time, as appropriate for recording our histories and projecting our dreams disguises identical questions that could be asked about any other script. It was in this question of the relationship between scripts of the past and his own era that Paul Renner

began to invent Futura, and the failure of our own era to seek the answer to this paradox has, until now, obscured the nature of his quest.

Notes to the conclusion

- 1 Renner, "Vom Georg-Müller-Buch" 7.
- 2 Renner, *Mechanisierte Grafik* 14.

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