ANATOMY OF A TYPEFACE

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FRANKLIN GOTHIC AND THE TWENTIETH-CENTURY GOTHICS

When the late Stevens Watts was manager of the American Type Founders' foundry, he was fond of saying that 'while types come and go, Franklin Gothic goes on forever.' The type was a perennial best seller, and over the past seventy years it has been one of the best-known representatives of a style of type notable for its multiplicity of forms, the modern gothics. These faces are not, despite their name, gothics – at least in the traditional understanding of the term. And Franklin Gothic is doubly misnamed, having no historical relationship to Benjamin Franklin.

If anyone can be blamed for the gothic misnomer it is perhaps the corporate body of the Boston Type and Stereotype Foundry, which back in 1837 issued a new series of types without serifs under the name Gothic. Probably it was the bold weight of this type that prompted the designation. In any event, the Boston firm was the first foundry in America to introduce a serifless design then attaining great popularity in Europe, particularly England and Germany.

In the post–World War II era, when sans-serif types dominate the typography of the marketplace, it is difficult to recall that typefounders up to the beginning of the nineteenth century sought to please only book printers. It was the Industrial Revolution, of course, that brought to printers, as to manufacturers, countless changes and the introduction of extra-bold types, called fat faces, patterned somewhat akin to the Didot and Bodoni styles. These were welcomed for their display value by printers specializing in the production of broadsides, handbills, and posters.

The impact of the new commercial types evidently stimulated William Caslon IV – of the famous English typefounding family – in 1816 to offer experimentally a monotone type without serifs under the name Two-Line English Egyptian. This 28-point type, produced in capitals only, was the first sans serif to be purveyed as a printing type.

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Franklin Gothic (ATF)

Caslon's design did not meet with immediate support, primarily because its introduction coincided with that of the well-received square-serif faces currently being issued by competing typefoundries. But by 1825 the German firm of Schelter and Giesecke was also offering a series of condensed sans serifs, which included lowercase characters. Then, in 1832, three English foundries brought out additional sans-serif types. One of these firms, that of William Thorowgood, termed the style 'grotesque,' a classification that is still standard in Britain for the sans-serif types that originated in the nineteenth century.

By 1850 all of the world's typefounders were issuing sans serifs in an endless, and confusing, variety of weights and widths. This

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CASLON JUNR
LETTERFOUND

The sans serif type of William Caslon IV, c. 1816

venezianischer
Porträtmalerei

Sans serif lowercase of Schelter & Giesecke, c. 1825

MARCHES

Early American sans serif of George Bruce, c. 1853

typographic overkill continued until metal types were largely superseded by film fonts in the past few decades.

When the American Type Founders issued Franklin Gothic in 1905, it didn't seem that the company needed another gothic. For after ATF had been formed in 1892 – as an amalgamation of many American typefoundries – the new firm issued a specimen book that showed about fifty gothic types. Some of these types had such colorful names as Turius, Altona, Octic, and Telescope, but most of them were simply numbered. Many of the faces were difficult to distinguish, but all of the widths now common in gothic series were represented, from extra-condensed to extra-extended.

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When ATF's Morris Benton became fully involved in type design, about 1902 (when he was thirty), he began cutting the Franklin Gothic series. In this he was no doubt influenced by the German production of sans-serif type, for in 1898 the Berthold foundry in Berlin had produced the Akzidenz series (later known to American printers as Standard) which had proved very popular and inspired the cutting of Reform Grotesk by Frankfurt's Stempel in 1903 and the Venus series by the Bauer foundry, also of Frankfurt, in 1907.

Franklin Gothic is an excellent example of a traditional early-nineteenth-century sans-serif letter which retained certain features common to roman. For example, the lowercase *a* and *g* are normal roman characters, and in all of the letters there occurs a thinning of stroke at the junction of rounds to stems. Some of the contrast of roman letters also persists, although the overall appearance is monotone. The weight of stroke of Franklin Gothic is heavy, or what modern practitioners call extra-bold. It should be pointed out that there has never, alas, been any consistency in the terminology for the thickness of a stroke; such unquantified designations as *light*, *thin*, *medium*, *bold*, *heavy*, *extra-bold*, *ultra-bold*, and *semi-bold* indicate the difficulty faced by typographers in type recognition and description.

Benton finished designing Franklin Gothic in 1902, but it did not appear until about 1905. (The years in which typefaces were drawn frequently differ from their dates of issuance. Unfortunately, the records of the manufacturers have rarely survived, making it extremely difficult to affix accurate dates.) In 1905 a condensed variant was drawn, and in 1906 an extended one – the latter was abandoned at the time and not cut until 1953, as Franklin Gothic Wide, following the great revival in the fifties of these early gothics. An extra-condensed version was also produced in 1906. Benton completed his contribution to the Franklin Gothic family with the drawing in 1913 of an italic for the original face and in 1914 of a condensed shaded modification.

The monotone structure of the gothics readily lends itself to a variety of weights in which a type designer can maintain both a uniformity of style and his original concept. In merchandizing their wares, typefounders learned to take advantage of this fact by suggesting to printers that they required two or three *weights* (light, bold, etc.) for each style of type, along with several *widths* (extended, condensed, etc.). The printer was then urged to purchase these variations in series, that is, all of the sizes cast for each family variant.

Such marketing procedures were just beginning to emerge during

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Alternate Gothic No. 1 (ATF)

the period 1900–1910, as an inspection of any typefounders' catalogues will disclose. A very successful example was the dissemination of the Cheltenham design, but it was with the serifless types that this approach to manufacture and selling came to fruition.

It was with the gothic types that early in the present century foundries began exploiting the concept of offering types in a variety of weights and widths. For example at ATF Morris Benton drew a condensed gothic named Alternate Gothic cast in three widths differentiated by number but all narrower than normal. Since Franklin Gothic was an extra-bold type, Alternate Gothic was designed as a normal boldface. To fill out Benton then cut Lightline Gothic and News Gothic, the latter being a medium-weight letter. The success of this venture is evident, since all of these styles remain in use in photographic or digitized versions of the original designs.

Successful from the start, ATF's original twentieth-century gothic was eventually adapted by all the composing-machine manufacturers, and more recently it has been transferred to film. The fact that Franklin Gothic survived the impact of the geometric sans serifs during the period from 1926 to 1950 – in addition to the revival of its contemporary competitors, Venus and Standard – warrants the conclusion

that Morris Benton, even in his early efforts as a type designer, possessed the skill to create a printing type that could withstand obsolescence.

Indeed, up to 1950 the geometric unserifed types, as represented by Futura, dominated commercial printing. But by midcentury a reaction against them had begun to reduce their effectiveness: Futura was damned as being too cold for modern tastes – the word of critical disapprobation being *mécanique*, 'mechanical,' as used by the Swiss typographers, who were the vanguard of a search for a new typography that fitted the needs of a postwar generation. It was not to be expected that the younger designers would sponsor a return to the roman letter, although their elders were buoyantly anticipating such a gesture. Instead, the sans-serif ideal was reaffirmed, but the form embodied a return to an earlier tradition rather than to that of the geometric unserifed types of the turn-of-the-century 'gothics.'

Perhaps resurrecting these gothics seemed more efficient to the typefounders than taking the time to commission new designs. Thus,

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News Gothic (ATF)

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Lightline Gothic (ATF)

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Standard (Berthold)

from the Bauer foundry came Venus, circa 1906, and Berthold reissued the even older Akzidenz Grotesk, which was renamed Standard for the English and American markets. The first series of Venus to reach the United States was the extra-bold extended group, and it precipitated an explosion in the use of wide types, which in turn spread to gothics of all widths. Such was these types' impact on American advertising designers that for a time most of the German freighters making the westerly Atlantic crossing were ballasted with Venus and Standard types. The appearance of the types fortuitously coincided with a design trend then touching every object from furniture to automobiles: wide and squat was in.

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Venus Bold (Bauer)

For two or three years Venus and Standard had the market to themselves, with typographers vehemently disagreeing as to which was superior. ATF in the United States attempted to meet the competition with aggressive promotion of its Benton gothics, but it was a losing battle, for the German types possessed a greater range of compatible series. More important, Venus and Standard were sold as single-type families, thus assuring the typographers of their effectiveness in a comprehensive advertising campaign. In the meantime, new approaches were being sought by the typefoundries, eager to promote and prolong this regeneration of the early serifless letter forms.

In the mid-1950s all this activity came to a boil, with nearly every supplier of printing types peddling redesigned gothics to a trade already saturated with the earlier models. The appeal was made, therefore, to the printer's customer – often an advertising agency – rather than to the printer himself, and the solicitation was explicit in its offer of typographic sophistication.

In 1953 Adrian Frutiger, a twenty-five-year-old Swiss designer and former compositor, was invited by the Paris typefoundry Deberny et Peignot to assist in the selection of types to be used for the Lumitype phototypesetting machine, the European version of the American Photon machine, which the foundry was manufacturing under license. Before this assignment Frutiger had been experimenting with a unified series of gothic types in which a single designer controlled every facet of their construction. At Deberny et Peignot the opportunity to produce such a design was provided, resulting in the type named Univers, first distributed in 1957. The name was anticipatory, but the style did become available to printers in forms other than for photocomposition, for the foundry itself produced the type in metal for its own market and, by agreement with the American Type Founders

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Eurostyle Bold (Nebiolo)

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Univers 65 (ATF-Deberny Peignot)

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Company, for sale in the United States. Arrangements were soon concluded with the Monotype Corporation of London to transfer Univers to the Monotype.

Univers represents a most ambitious program of integrated type design, for Frutiger brought to the task a highly developed skill in letter design. As a critic of the Futura concept of sans-serif construction, he sought to modify its severe strokes yet stay within the serifless boundaries. In discussing his ideas Frutiger said, 'A purely geometric character is unacceptable in the long run, for the horizontal lines appear thicker to the eye than the vertical ones; an *O* represented by a perfect circle strikes us as shapeless and has a disturbing effect on the word as a whole.'

But what is undoubtedly the most unusual contribution of Frutiger to the marketing of printing types was his defiant attempt to simplify typographic nomenclature. Rather than employ the ordinary imprecise designations of weight and width, he organized his entire design plan of twenty-one series into a logical 'palette,' by which each variant received a number that instantly identified its structure. The palette consisted of six vertical and six horizontal rows; the extended versions occupied the vertical rows, diminishing in width from left to right; and the weights were categorized horizontally, the lightest at the top and the heaviest at the bottom.

For the first time, Frutiger's palette for printers brought a rational approach to the difficulties of describing the various type weights and widths, always an area of debate among practitioners. Though not applicable to many other types, the palette clearly differentiated the numerous gothic and sans-serif faces, with their multiplicities of stroke and variations of width. Unfortunately, however, Frutiger's idea never caught on; when printers put Univers into their cases, they compared the weight of each series with that of the geometric sans serifs and applied the weight of the latter to the new type. The type-specimen books of different printers therefore varied considerably from one another, to the great confusion of customers. And, in the Monotype version, Frutiger's numbers conflicted with the font number assigned by the company to all of its types and so the palette was discarded. Thus, a worthy attempt to bring order to the chaotic designation of type weights and widths was allowed to fail.

Univers met with competition when it was introduced – 1957 was a halcyon year for the new gothics, three others also emerging from the drawing boards. Mercator was cut by the Dutch typographer

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Helvetica (Hass-Stempel)

Dick Dooijes for Typefoundry Amsterdam. Folio was produced by Germany's Bauer foundry, and a type named Neue Haas-Grotesk issued from the Swiss Haas'sche foundry, of Basel. The following year, Aldo Novarese, at the Nebiolo foundry in Turin, produced a gothic family named Recta. Neither Recta nor Mercator made an impact in the United States, but Folio and Neue Haas-Grotesk certainly did.

Folio, designed by Konrad Bauer and Walter Baum, benefited from the promotion of the excellent sales agency that Bauer had long retained in this country. It also became available for the linecasting machine when adopted under a royalty agreement by the Intertype Corporation.

Neue Haas-Grotesk, designed by Max Miedinger, was cut for Linotype by the German Linotype firm, which named it Helvetica. And the Stempel foundry entered into an arrangement with Haas'sche to manufacture the type for export, again under the name Helvetica.

By the early 1960s, when the manufacturers of all these competing types had brought their production up to encompass the innumerable series involved, there was, of course, intense rivalry in their promotion. Each design had its adherents, and it was fairly simple to start an argument among typographers concerning the efficacy of each style. The older type professionals naturally recalled the period, thirty years earlier, when the geometric sans serifs had been subjected to similar polemics; at that time, a single design – Futura – received by far the most enthusiastic approval and became the dominant form. Among the neo-gothics, Helvetica has received greatest attention by adver-

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Folio (Bauer)

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Mercator (Amsterdam)

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Record Gothic (Ludlow)

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tising-agency designers, and up to the present it is the most widely used of them all. The more traditional typographers are mystified by this preference, believing that the subtleties of difference among these styles are so slight that an intelligent judgment of them is impossible.

It is evident that the admiration for Swiss typographic design in general was an additional attraction in the selection of Helvetica as the best representative of that style. In any case, the use of Helvetica has spread from advertising into the world of publishing, where it turns up frequently for the setting of textbooks of every description – thus violating long-established precepts concerning typographic legibility.

Notwithstanding the impact of the rejuvenated gothics, the older forms still are very much in evidence at every hand. It would therefore appear that Franklin Gothic will be selected by future designers whose great-grandfathers would have nodded their approval.

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OPTIMA AND THE HUMANIST SANS-SERIF TYPES

Type designers have made numerous attempts to create a sans-serif type that could be considered both beautiful and utilitarian. It was the latter requirement that had shaped the sans serifs that were originally produced early in the nineteenth century, but the prosaic typographic needs of the Industrial Revolution brought forth types containing features of little aesthetic interest.

For the better part of a century, sans-serif types tended to be unimaginative renditions of roman letter forms, although it was discovered that their monotone characteristics did allow for variations of weight and width that would have been more difficult to achieve with their roman counterparts. In Europe these sans serifs were termed 'grotesque' and in the United States 'gothic' quite soon after their introduction. This unfortunate nomenclature was probably due to their weight, which indeed was similar to that of the black letter – the truly gothic fifteenth-century forms – but the term also expressed the disdain of printers for the early serifless typefaces.

This attitude changed abruptly during the 1920s when the Bauhaus typographers selected the sans-serif structure as the most expressive icon of their functionalist ideals. But the types of geometric construction that emerged from the Bauhaus experiments were, of course, considerably removed from the so-called gothics and thus served, in fact, to further alienate typographic designers from the older style. Meanwhile, the traditional typographers, particularly those who espoused the post-Morris canons, severely criticized the geometric typefaces, censuring them as gross caricatures of roman letter forms and as both unreadable and illegible.

Unquestionably, the nineteenth-century gothics were plain letters. In most instances – the traditionalists notwithstanding – the new geometric styles were considered a great improvement over them, particularly by typographers who appreciated the asymmetric designs of

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Optima (Stempel)

the Bauhaus. But the idea persisted in some circles that it might also be possible to combine the forms of roman and sans serif in an aesthetically acceptable type.

One of the first type designers to experiment along such lines was R. Hunter Middleton, then a young man producing types for the Ludlow Typograph Company in Chicago. In 1929, when interest in the sans serifs was at its peak, Middleton drew Stellar, which thus became the first new sans serif to be produced in the United States.

LEIPZIG
SPRING FAIR
1936

ROOM XII

PRINTING
MACHINERY
SHOW

Offenbach design of Rudolf Koch for Klingspor foundry

In its lightface weight, Stellar has much to commend it as a reasoned attempt to blend the spirit of a graceful roman type with a serifless structure. But its appearance at the very moment when American typographers were captivated by such geometric types as Futura and Kabel militated against any success it might have enjoyed.

In Europe, the German Rudolf Koch, who had designed the Kabel series of geometric sans serifs, now turned to a sans serif of roman inspiration and drew Offenbach. This was a pen-drawn roman, and though it was widely admired, its lack of a lowercase alphabet restricted its use.

A decade after the introduction of the geometric types of the 1920s, there occurred a slight reaction to their overuse. The American Type Founders Company accordingly accepted the design for a romanized sans serif brought to the firm by a young American named Warren Chappell, who had studied with Rudolf Koch in the early thirties. The resulting type, Lydian, was introduced in 1938 and was an immediate success. It was highly regarded as a display and advertising type for twenty years after its introduction. Chappell supplied a very legible oblique italic, which he followed with a chancery italic drawn for the bold weight only. The design has been transferred to the film composers and is still in wide use.

But during the 1950s a sans serif emerged that gripped the attention of typographers as the most satisfying blend to date of the best features of both the roman and the sans-serif structures. This was the Optima design of Hermann Zapf.

Zapf – now the most prolific of the world's type designers as well as the most widely known – first began to think of such a type in 1950. He has written, 'The type of today and tomorrow will hardly be a faithful recutting of a 16th century roman of the Renaissance, nor the original cutting of a classical face of Bodoni's time – but neither will it be a sans serif of the 19th century.' He was familiar with Italian inscriptional lettering and, along with other typographers who have admired the fifteenth-century sans-serif characters on the tombs in Florence's Santa Croce, he was entranced by their classic forms. Inlaid in green marble in the floor of that church, these circular inscriptions were cut about 1530; they are the product of sensitive artists attempting to vary the existing roman styles. Zapf had also made sketches of the inscriptions on the fourth-century Arch of Constantine in Rome.

Another source of serifless inscriptions is the Schiattesi tombstone

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Lydian (ATF), designed by Warren Chappel for American Type Founders Co.

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Stellar (Ludlow), designed by R. Hunter Middleton for Ludlow Typograph Co.

in Rome, dated 1423. Here designers can readily observe a possible inspiration for the twentieth-century letters drawn by the English Edward Johnston and the later adaptations in England by Eric Gill.

In several other Italian inscriptions, dated 1423 and 1430, the letters are unserifed but have strong thick-and-thin contrast. It is this style, sharing equally the best features of the roman letters and the sans serifs, that inspired Hermann Zapf to begin experiments that resulted in one of his most successful types. He began his Optima designs in 1952 and spent some six years in their development.

In 1954, while working on this project, Zapf took the suggestion of Monroe Wheeler, of the Museum of Modern Art in New York, and began to consider adapting his developing letter as a book type. He thereupon changed the proportions of the lowercase, and by means of photography (working with Ed Rondthaler at Photolettering, Inc., in New York), he tested the suitability of the design for continuous-reading application. The capitals of Optima, as Zapf has stated, follow the proportions of the Trajan Column inscriptions, which date from A.D. 113 and serve as the best model of Roman majuscules.

Zapf also said that Optima is the first German type not based on the standard baseline alignment established in 1905. Zapf writes: 'This base line is too deep for a roman, as it was designed for the high x-height of the Fraktur and Textura letters. Thus, too many German types have ascenders which are too long and descenders which are too short. The proportions of Optima Roman are now in the Golden Section: lowercase x-height equalling the minor and ascenders–descenders the major. However, the curved lines of the stems of each letter result from technical considerations of type manufacturing rather than purely esthetic considerations.'

All of these details under Zapf's sure hand have been successfully attended to, with the result that Optima is today widely used not only for display composition but also for continuous reading, for which its contrast of stroke makes it more adaptable than the monotone sans-serif types. The regular and the medium weights show to best advantage the classic principles called upon by the designer. In the variants of the face, the semi-bold and the black, the nineteenth-century gothic characteristics seem to dominate, although these weights are meant to be complementary to the regular one.

Optima was first manufactured in 1958 in a foundry version by Stempel of Frankfurt, and shortly thereafter in linecasting matrices by America's Mergenthaler. It made its debut that year at the Drupa

exhibition in Düsseldorf. Like all popular new types (particularly those of Zapf), Optima has been widely pirated for use with competing photographic typesetting systems. It is now sold under several names, and the results are frequently very unhappy.

In a discussion with the writer, Zapf admitted a preference for Optima over his other types, but he has also observed in print that a father should not have to select a favorite among his daughters! If left to his own devices, Zapf would have called the type, in a straightforward manner, New Roman, but the marketing staff at the foundry insisted on naming it Optima. By any name, it is a splendid addition to the resources of twentieth-century typographers.

In 1929, when the geometric sans-serif types revolutionized commercial printing, the emphasis in their development was quite different from that of roman types. For traditionalists the new styles, no matter how functional, were still without any aesthetic merits. The astute Stanley Morison said of this period that 'typography was in a *cul-de-sac* and life could only be wrung from the letterforms by torture.' Daniel Berkeley Updike had not given consideration even to the nineteenth-century gothics in his monumental *Printing Types* of 1922. Indeed, in the chapter 'The Choice of Types' he asked, 'And what are the types we ought not to want – which have no place in any artistically respectable composing-room?' He then proceeded to name the outlaws, lumping sans serifs with fat-faced romans, hairline types, and almost all ornamental types. In the second edition of this text, published in 1937, the typographic pundit was confronted with the sans-serif explosion. But of it he merely said that he had nothing to add or take away from his original remarks, 'save that if sans serif fonts must be had, the medium Futura of Paul Renner or the Gill Sans may be used.'

In 1929 William A. Dwiggins became involved with a sans-serif typeface. Following a conversation on the subject with Dwiggins's cousin Laurance B. Siegfried (a distinguished figure in American printing until his death in 1978), Mergenthaler's Harry Gage visited Dwiggins at his home in Hingham, Massachusetts. There ensued some correspondence, with the result that Dwiggins was engaged to draw a sans-serif type for Mergenthaler.

Dwiggins, then forty-nine, had a solid reputation as a book designer, calligrapher, illustrator, and advertising typographer. As a young man he had studied lettering with Frederic W. Goudy in Chicago and later produced a number of designs for Updike's Merrymount Press. His connection, as of 1926, with Alfred A. Knopf's

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Modelled san-serif that might be interesting
intended to be close-fitted – experimental showing WAD March 21 1929

Drawing for humanist roman by William A. Dwiggins, 1929

publishing firm resulted in the design of hundreds of books that established Dwiggins as the indisputable leader in American trade book design.

Mergenthaler's interest in the production of a sans-serif type was to satisfy the requests of its customers; to supply a type in the Futura mode to be made available in matrix form. The collaboration with Dwiggins was most successful: from it came the popular type family Metro, cut in 1929, which is still used in newspaper typography.

W. A. Dwiggins was happiest with traditional forms, but his lively imagination and whimsical approach to design freed his thinking from the conservatism expressed by so many contemporary type designers. Whereas his old teacher, Goudy, was a purist in letter design who never fully accepted the technical modifications of manufacturing, Dwiggins felt that he had a good deal to learn from the engineers responsible for the transfer of drawing to matrix; moreover, he thoroughly enjoyed working with them.

Although Dwiggins had satisfactorily met the demands of the Mergenthaler firm, he was also eager to generate a sans-serif type along somewhat different lines. This letter would be far removed from dependence on geometric principles or the concepts of the nineteenth-century gothics. In fact, what Dwiggins really wanted to design was a sans-serif type with a humanist structure.

Since the center of the sans-serif revival was in Europe, Dwiggins at first investigated the possibility of designing such a type for a European typefoundry. Working through Melbert B. Cary, Jr., president of the Continental Typefounders Association – an import house connected with a number of the European firms – he prepared a few drawings to demonstrate his tentative ideas. Shortly after this, however, Dwiggins decided that the Atlantic Ocean was too formidable a barrier for effective type design and so abandoned his hope of finding a European foundry.

The stats of the sketches Dwiggins made for Cary are contained in the Melbert B. Cary, Jr., Graphic Arts Collection at the Rochester Institute of Technology. Dated March 1929, the drawings show a sans-serif type with definite roman characteristics. Dwiggins had prepared these sketches in his own preferred manner, by cutting stencils for stem weights, curves, arches, and so on, and 'getting a focus' by combining related elements of letter anatomy. This is also the procedure he employed in constructing the elements of his inimitable ornaments, used with such success in his book design.

Several years later, when Dwiggins had become more involved in the design of types, particularly for book composition, he changed his method, drawing letters with a brush or pen to a size of ten times 12-point. In this he followed the style of his former teacher, Fred Goudy, who also drew freehand to a large size.

In the drawings prepared for Cary, Dwiggins noted, 'Somebody is sure to try this pretty soon, san-serif [*sic*] – a mechanically finished o.s. body-letter of good shape. These are experimental – not perfected – but there is an idea lurking in this somewhere.'

So when Mergenthaler Linotype approached Dwiggins for a sans serif, the designer immediately thought of his earlier ideas. Unhappily the firm was not prepared to break new ground. Though its customers were persistently demanding a 'new' sans serif, of course what they really wanted was a geometric style in the pattern of Futura. Dwiggins, always practical, bowed to the unavoidable requirements of the marketplace. His Metro design therefore followed the Futura idea in the capitals, though departing from it in the lowercase; Rudolf Koch, another traditional type designer, had done the same with the Kabel type. Dwiggins had earlier commented on the geometric sans serifs: 'They are fine in the caps and bum in the lowercase. I don't know if you can make a Gothic that is good in the lowercase, but we might try.'

Once the Metro design was launched, Dwiggins again turned to his dream of a sans serif with classic proportions and style. The earliest evidence of this continuing interest that the writer can discover appears in a letter dated January 4, 1930, addressed to C. H. Griffith, at that time assistant to the president of the Mergenthaler Linotype Company. Here Dwiggins states: 'I shall send you a few more characters of that experimental face of mine. [Harry] Gage took down to you some stencils of a modelled san [*sic*] serif that you were to try experimentally but it has been side-tracked. I have a hunch that it may be important (listening to the whispers among the younger set), and maybe it would be well to dig it out and look at it.'

During the next three years Dwiggins produced numerous drawings for a humanist sans serif, and Mergenthaler produced matrices for a sufficient number of characters to obtain a realistic idea of the final appearance of the design. But after several attempts to evolve a satisfactory style (all of which were, in Dwiggins's phrase, 'drowned' by the manufacturer), the company turned to other matters. Dwiggins, however, persisted. By 1931 he was back at the drawing board, and he wrote to Mergenthaler:

It seems that I can't keep away from the 'modelled san-serif,' [*sic*] partly because I think there is something valuable to be done along that line, and partly because the 'young ones' keep howling for a face, sanserif, [*sic*] that can reasonably be used for body-matter in a book.

I enclose the latest effort, which I send with no suggestion that it be cut, but that you lay it in the portfolio and take a look at it now and then.

One of the secrets of success in such a face would be great finesse in fitting. With no cerifs [*sic*] the exact relation between black mark and white paper becomes even more important than with usual characters. For every two black bands of a given weight, there is just right white to go with them, e.g., in rules scheme. I think these san-serifs [*sic*] could be fused into a correct color by finding out just that right white interval. If it were formed between straight stems the round letters could be brought into position to meet it, couldn't they? I should suppose that there is a formula that controls that: if the m, n, interval is so much, the m, o, interval will be so much?

The straight-stem interval in Met Black and Met Medium struck me as very well calculated.

Mergenthaler finally got around to cutting a few characters of this type, labeling them '12-point Experimental No. 63.' On May 24, 1932, Griffith wrote Dwiggins as follows:

Dear Bill:

Experimental No. 63 Modelled Sans Serif. Further to your comments on the above and in answer to your query I am frankly of the opinion that Experimental No. 63 can be nothing else than a 'stunt' face. At the moment I cannot bring myself to the point of feeling that it has any immediate sales value; or perhaps I should say that I do not regard it of sufficient importance to interfere with the development of Electra or the development of your ideas with regard to a face on the Scotch base.

On the other hand I cannot get away from the feeling that there is an important place somewhere for a Modelled Sans Serif and I do not think that we should let it get away from us altogether. Two or three young designers who have recently returned from a sojourn in Germany have told me that our German contemporaries are searching for a model of this kind and that it is a live topic of discussion. They all seem to feel that the key to the solution of the problem is just around the corner; but they are unable to find it. I recall that you used the identical expression a year or so ago. I heard it again today from a young man who had just returned from a year's study in Germany with Dr. [Rudolf] Koch. So let's not drop it altogether.

Dwiggins replied to what was beginning to appear to be Linotype's final rejection of the whole concept of the modeled sans serif:

Your comments are entirely correct. For myself I am not awfully thrilled. In spite of the clamor of the 'young' typographers, I doubt if a san-serif [*sic*] body letter will work. This one looks flea-bitten – like a hand-lettering plate that had been over-etched. Metroblack and Metromedium carry the eye on

AaBbCc AaBbCc

Albertus Light 534 Albertus 481

ABC

ABCDEFGHIJKLMNOPQRSTU
VWXYZ & £1234567890

Albertus Titling 324

ABCDEFGHIJKLM

Albertus Bold Titling 538

Albertus, designed for English Monotype by Berthold Wolpe, 1932

the line because of the thickness of the stems. It seems that anything with lighter stems than Mblack and Mmed. requires the cerif [*sic*] stroke to carry the line. Metrolight, e.g., doesn't work as a body face at all well.

I will follow your lead as to further experiments with No. 63. If you think it worthwhile, there are things that are plain to be done. My query would be: can it be anything else than a 'stunt' face? If a stunt face looks like sales to you, good enough, let's go. But don't let's go on my account. 'Within me is more.'

Attached to this letter in the files of the Griffith-Dwiggins correspondence, at the University of Kentucky, is a handwritten note from WAD, dated May 27, 1932, which might very well be the final comment on a humanist sans-serif type by one of the greatest of American type designers and graphic artists: 'On the strength of your comments I will not let the idea die. Using that last experiment as a point of departure, I'll try some more twists. But as you say, do Electra stuff, etc., first. If it is possible to make a sans serif body-letter that the American public can read without noticing the fact that it is reading, we are the ones who can do it. Yes?'

The idea did not perish but what did come to an end was the opportunity for William A. Dwiggins to accomplish something that was very close to his heart – a sans-serif type based on humanist roman forms.

The 'modelled sans serif' that Dwiggins so hoped to produce was finally and superlatively drawn as Optima by the thirty-four-year-old Hermann Zapf in 1952. In 1969, the writer showed Zapf the Dwiggins drawings in the Cary Collection, and they were a revelation to him. Zapf could only shake his head at the coincidence of inspiration between himself and Dwiggins, thirty years and four thousand miles apart. Zapf fully agrees that the success of a printing type depends on numerous factors other than the skill of a designer, and proper timing is one of the most essential. The Dwiggins experimental sans serif, like Middleton's Stellar type, is a case in point.

William A. Dwiggins

29

FUTURA AND THE GEOMETRIC SANS-SERIF TYPES

The types that Americans call gothic and that Europeans call grotesque were the first serifless letters to achieve popularity as printing types. Now, more than a century and a half since their introduction, their appeal has not diminished in the eyes of most typographic designers. Naturally there have been several dips in the curve of these styles' acceptance, but they continue to flourish and fulfill a substantial niche in the typographic requirements for commercial printing.

The specimen books of the nineteenth-century typefounders were brimming with gothics, and when the family concept of providing various weights and widths for one face became established – after 1900 – it seemed that these types would continue their domination of commercial printing. In the midtwenties, however, the gothics experienced a setback, which was to last for a quarter of a century. This was a result of the influence of the German school of design (encompassing the Bauhaus), from which emerged an approach to structuring serifless letters that captured the imagination of the younger typographic designers. The typeface that expressed *die neue Typographie*, 'the new typography,' was Futura.

But though Futura made a definite impact upon its introduction in 1926, it was not the first sans-serif type to depart from the gothic model – there were antecedents that had influenced its design. Probably the most important of these was the alphabet drawn by Edward Johnston for the London Underground Railway in 1916. Johnston was an outstanding teacher of calligraphy, who in 1906 had published *Writing and Illuminating and Lettering*, a work that held great authority in England and Germany and is still considered probably the most influential book on lettering ever published.

The Johnston Underground Alphabet – still in use – represented a departure from the nineteenth-century gothic letters. Whereas these gothics had been primarily serifless modifications of roman forms,

ABCDEFG
HIJKLMNOP
QRSTUV
WXYZ

abcdefghi
jklmnopqrstu
vwxyz
1234567890

Futura Medium (Bauer)

ABCDEFGHIJKLMNOP
QRSTUVWXYZ
abcdefghijklmnopqrst
uvwxyz
1234567890&£

The "Underground" type of Edward Johnston

abcdefghi
jklmnopqr
stuvwxyz
a dd

Herbert Bayer's experimental Universal typeface, 1925

Johnston, with compass and straightedge, created monotone characters of geometric construction. Utilizing his profound knowledge of traditional letters, he produced an alphabet that had far greater legibility than the earlier sans-serif forms.

The Johnston approach to sans-serif lettering was to come to fruition in the type of the fine English designer Eric Gill. Named Gill Sans, this face was cut by the Monotype Corporation in 1928 and

rapidly became the most widely used serifless type in Great Britain. As the American Monotype firm refused to offer the Gill type for the American market, it received limited use here with the result that the Continental sans serifs became dominant.

In Germany just before the First World War there had been a movement to discard conventional ideas in typography. Its spokesman, Jakob Erbar, believed that the type that would best express the new concepts would have to be a serifless letter. The world conflict delayed the spread of Erbar's ideas, but after the war their effect was enhanced by the Johnston alphabet, giving further impetus to the reform movement.

In 1919 the Bauhaus school, under the direction of the architect Walter Gropius, brought to fruition some of the untried theories of design–particularly those related to architecture–that had previously only been discussed. Function and form became the key words of the philosophy of this new design, whose focus was the elimination of the Victorian 'gingerbread' decoration on buildings and the substitution of pure line. Applied to type, this approach could only result in clean sans-serif characters. And what could be more appropriate than constructing these characters with compass and straightedge?

The timing of the sans-serif experiments coincided with a period that many observers of typography considered deplorable. Blackness reigned supreme, in such faces as Cooper Black, Ultra Bodoni, and Broadway. Complementary to the heavy types were rules of equal weight, with dingbats and cubes to match. Thus, the functional movement, with its clean lines and geometric distribution of white space, offered a most dynamic contrast to the existing styles. Indeed, American typographers had been experimenting with the asymmetric designs of the neo-Bauhaus period before Futura became available. And since the resulting designs – being based on the extra-bold types then popular – were appalling, the advent of the German sans serifs by contrast sparked even greater enthusiasm for geometric sans serifs.

The first type to emerge from this philosophy was a sans serif designed by and named for Jakob Erbar. Produced in 1926, this type should be recognized as the initiator of 'the new typography,' but it was followed closely by another design, Futura, that appeared to most observers to be superior in every way. Futura captured the imagination of typographers worldwide and thus robbed its predecessor of its claim to being 'the first.'

Futura was created by Paul Renner, a book designer and founder

Original concept of the Futura design by Paul Renner

of the Masters' School for German Printers in Munich. As originally conceived, Futura represented what can only be termed an abstraction of the idea of the roman letter. The capitals were more traditional than the lowercase characters, and they followed more closely the features of the earlier gothics, although they were of monotone and geometric construction. But in drawing the lowercase, Renner's obvious enthusiasm for 'form follows function' resulted in a font in which several letters became caricatures of classic minuscules.

Renner offered the design to the Bauer Typefoundry of Frankfurt, which recommended a number of changes based on its long experience in producing printing types. The design as it is now recognized was completed in 1927. The major changes, made in the lowercase charac-

ters, brought them closer to the accepted forms. The type became enormously successful and instigated a sans-serif renaissance that quickly spread from Europe to the United States.

At the same time that Futura was under development, the most widely known and respected German type designer, Klingspor's Rudolf Koch, was also preparing a geometric sans serif, ultimately named, for the export market, Kabel. Appearing the same year as Futura, Kabel was also heartily received.

As Koch was in every sense a traditional designer – who had cut many of the punches of his earlier types by hand – he evidently found it more difficult than did Renner to depart from the normal roman forms. For example, in Kabel the lowercase *a* is in the standardized roman pattern, as are *g* and *t*. The *e* reaches back to the Venetian period in its retention of the slanted crossbar. It is in the capitals that Kabel holds more closely to the geometric style, although several letters are unique among the sans serifs in having slanted stroke endings.

In the cap font Futura is a surprisingly simple design of plain block letters with no remarkable individual characters other than perhaps the *Q*, whose tail is a diagonal that is longer inside the counter space than outside it. It may be noted that the caps are shorter in height than the ascenders of the lowercase, a feature of practical value in German-language printing in which there are so many capitals. The lowercase alphabet utilizes the perfectly round *o* as the base for seven other characters, which are changed with the mere addition of a stroke to create *a*, *b*, *d*, *e*, *g*, *p*, and *q*.

Together Futura and Kabel were received by the more progressive typographers in the United States as harbingers of a whole new world of typography. Some traditionalists, as could be expected, took an entirely different view – one of them called the faces 'block letters for block-heads.' It was probably the combination of geometric sans-serif types with the asymmetric design that was most disturbing to the conservative typographers. But the movement could not be halted or even slowed. The excitement greeting the debut of the geometric sans-serif types in the United States prompted the American manufacturers of type and matrices to take immediate steps to counter the competition from the German foundries. By 1930 this had been accomplished, but since accurate records of the dates of introduction of these designs do not exist, it is difficult to determine the exact sequence of presentation. The fact remains, however, that within

THOSE

desirable

Characters in Font

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

& ◆ « » ¢ . , - ' : ; ! ? ( )

$ 1 2 3 4 5 6 7 8 9 0

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 ch ck ft ff fi fl

Kabel Light

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

Kabel Bold, designed by Rudolf Koch for Klingspor foundry

three years of the arrival of the German types, all American manufacturers had produced competitive styles.

The Intertype Corporation entered the sans-serif derby with the Vogue series, created for the fashion magazine of the same name. Designed anonymously, Vogue superficially resembles Futura. The response to Futura of two of the other manufacturers of linecasting machines – the Mergenthaler Linotype Company and the Ludlow Typograph Company – was the production of independently designed sans-serif styles. Mergenthaler turned to one of the finest graphic designers of our time, William A. Dwiggins.

A year previously, Dwiggins had written a great book on the subject of typography, entitled *Layout in Advertising*. In this volume he had discussed the legibility of types and stated: 'Gothic in its various manifestations has little to commend it except simplicity. It is not overly legible, it has no grace. Gothic capitals are indispensable, but there are no good Gothic capitals; the typefounders will do a service to advertising if they will provide a Gothic of good design.'

Dwiggins received an immediate response from Harry L. Gage, at Mergenthaler, who requested that Dwiggins define good design in a gothic, illustrate it, and then cut it for the Linotype. This Dwiggins proceeded to do, and from then on he was, in addition to all of his other roles, a type designer.

Linotype's sans serif was named Metro, and the first series to be drawn was the bold weight called Metroblack. The subsequent variants of the series were drawn by the firm's design department under Dwiggins's supervision. Metro is at its best in the capitals, which represent the same approach as that of Edward Johnston to his alphabet for the London Underground. In the lowercase several characters depart from the geometric principles, such as the *e* in its

HOW IS ONE TO ASSESS AND EVALUATE A TYPE FA
How is one to assess and evaluate a type face in terms of its esthetic design? Why do the pace-makers in the art of printing rave over a specific face of type? What do they see in it? Why is it so superlatively pleasant to their eyes? *Good design is always practical design.* And what they see in a good type design is, partly, its excellent practical fitness to perform its work. It has a "heft" and balance in all of its parts just right for its size, as any good tool has. Your good chair has all of its parts made nicely to the right size

ABCDEFGHIJKLMNOPQRSTUVWXYZ&
ABCDEFGHIJKLMNOPQRSTUVWXYZ&
abcdefghijklmnopqrstuvwxyz 1234567890 ($,.:;'-'?!)
abcdefghijklmnopqrstuvwxyz 1234567890 ($,.:;'-'?!)

Metromedium (Linotype)

thin crossbar and the *f*, *j*, and *t* in their peculiar slabbed-off stroke endings.

A successful individualized approach to the redesign of a gothic – which has sold very well for Linotype, particularly in the newspaper field – Metro is nonetheless scarcely a face in the Futura pattern, and it was later felt that a closer copy of Futura was needed. This was supplied in conjunction with the American Type Founders Company when Spartan, an almost identical copy of Futura, was brought out in the early 1930s.

Another rendition of the Futura design was created by R. Hunter Middleton, typographic director of Ludlow. Like Dwiggins, Middleton was intrigued by the sans-serif idea, and he, too, went his own way. When he introduced it in 1929, Middleton called Stellar 'a modification of the Futura severity,' although, like Metro, it was a considerable remove from Futura, actually resembling a humanist sans serif, a form that would garner attention thirty years later. Under pressure from its customers, Ludlow felt it necessary in 1930 to pro-

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
&.,:;!?'‘’"-()¢$1234567890%

Spartan Medium (ATF)

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
&.,:;!?"-..¢$1234567890

Bernhard Gothic Medium (ATF)

ABCDEFGHIJKLMNOPQRST
UVWXYZ
abcdefghijklmnopqrstuvwxyz
(&$1234567890.,:;'"--!?+[])

Tempo Bold (Ludlow)

vide a type closer to Futura, and thus brought out its Tempo series, also drawn by Middleton.

Meanwhile, the American Type Founders Company had contracted for a sans-serif type with Lucien Bernhard, a German artist who had come to the United States in 1923, having earlier produced several types for the Bauer Typefoundry in Germany. In 1929, the series called Bernhard Gothic was introduced. Displaying his skill as an imaginative designer of posters, Bernhard brought the same flair to his sans-serif type, prompting an instant acceptance by printers dependent on foundry types.

But despite the success of Bernhard Gothic, ATF was also compelled by competition from the European foundries to make available for American printers a sans serif that was closer to Futura. As mentioned above, this decision to satisfy the market resulted in the joint undertaking with Mergenthaler to bring out Spartan.

The Lanston Monotype Company in Philadelphia, in its desire quickly to provide a geometric sans serif, adapted Koch's Kabel design, naming it simply Sans Serif. But during the middle 1930s, under the direction of Sol Hess, this firm also bowed to the inevitable and manufactured its own copy of Futura, which it called Twentieth Century.

It may be noted that Monotype also asked Frederic W. Goudy, in 1929, to produce a sans serif. He acceded to this request somewhat reluctantly and, like his fellow-American designers Dwiggins and Middleton, turned away from the German style. The type that emerged, Goudy Sans, was disappointing to the Monotype firm, though it was nonetheless produced. Goudy later wrote of it, 'I attempted to give to my type a definite expression of freedom and a personal quality not always found in this kind of a letter.'

The Intertype Corporation was the only American firm to enter into an arrangement with the German Bauer foundry to produce Futura for machine-composition, and it was given permission to apply the original name to its cutting.

With the availability of Futura in either the original or the numerous copies, it may be seen that the geometric sans serif came into its own during the 1930s. Although there have been a few periods when the nineteenth-century gothic types have returned to favor, the Futura style has remained possibly the most popular of all the sans-serif types for the past half-century.

ABCDEFGHIJKLMNOP
QRSTUVWXYZ abcd
efghijklmnopqrstuvw
xyz 1234567890

20th Century Bold (Monotype)

ABCDEFGHIJKLMNOPQRSTUVW
XYZ&
abcdefghijklmnopqrstuvwxyz fiflfffiffl
1234567890£

Gill Sans Bold (English Monotype)

Eric Gill