

The Bauhaus and the New Typography

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It is obvious,” wrote Aldous Huxley in 1928, “that the machine is here to stay. Whole armies of William Morris and Tolstoys could not now expel it. . . . Let us then exploit them to create beauty—a modern beauty, while we are about it.” Ideas from all the advanced art and design movements were explored, combined, and applied to problems of functional design and machine production at a German design school, the Bauhaus (1919–33). Twentieth-century furniture, architecture, product design, and graphics were shaped by the work of its faculty and students, and a modern design aesthetic emerged.

On the eve of world war in 1914, the Belgian art nouveau architect Henri van de Velde, who directed the Weimar Arts and Crafts School, resigned his position to return to Belgium. Thirty-one-year-old Walter Gropius (1883–1969) was one of three possible replacements he recommended to the grand duke of Saxe-Weimar. During the war years the school was closed, and it was not until after the war that Gropius, who had already gained an international reputation for factory designs using glass and steel in new ways, was confirmed as the new director of an institution formed by merging the applied arts-oriented Weimar Arts and Crafts School with a fine arts school, the Weimar Art Academy. Gropius was permitted to name the new school *Das Staatliche Bauhaus* (literally translated, *The State Home for Building*). It opened on 12 April 1919, when Germany was in a state of severe ferment. Its catastrophic defeat in “the war to end all wars” led to economic, political, and cultural strife. The prewar world of the Hohenzollern dynasty was over, and a quest to construct a new social order pervaded all aspects of life.

The Bauhaus Manifesto, published in German newspapers, established the philosophy of the new school:

The complete building is the ultimate aim of all the visual arts. Once the noblest function of the fine arts was to embellish buildings; they were indispensable components of great architecture. Today the arts exist in isolation. . . . Architects, painters, and sculptors must learn anew the composite character of the building as an entity. . . . The artist is an exalted craftsman. In rare moments of inspiration, transcending his conscious will, the grace of heaven may cause his work to blossom into art. But proficiency in his craft is essential to every artist. Therein lies the prime source of creative imagination.

Recognizing the common roots of both the fine and applied visual arts, Gropius sought a new unity of art and technology as he enlisted a generation of artists in a struggle to solve problems of visual design created by industrialism.

It was hoped that the artistically trained designer could “breathe a soul into the dead product of the machine,” for Gropius believed that only the most brilliant ideas were good enough to justify multiplication by industry.

The Bauhaus was the logical consequence of a German concern for design in industrial society that began in the opening years of the century. As discussed in chapter 14, the Deutsche Werkbund worked to elevate standards of design and public taste, attracting architects, artists, public and industry officials, educators, and critics to its ranks. The Werkbund attempted to unify artists and craftsmen with industry to elevate the functional and aesthetic qualities of mass production, particularly in low-cost consumer products.

Gropius had served a three-year assistantship in Peter Behrens’s architectural office beginning in 1907. Behrens’s advocacy of a new objectivity and theories of proportion had an impact on the development of the young Gropius’s thinking. Henri van de Velde was also an important influence. During the 1890s Van de Velde declared the engineer to be the new architect and called for logical design using new technologies and materials of science: reinforced concrete, steel, aluminum, and linoleum.

The Bauhaus at Weimar

The Bauhaus years in Weimar (1919–24) were intensely visionary and drew inspiration from expressionism (Figs. 16–1 and 16–2). Characterized by the utopian desire to create a new spiritual society, the early Bauhaus sought a new unity of artists and craftsmen to build for the future. Stained glass, wood, and metal workshops were taught by an artist and a craftsman and were organized along medieval Bauhütte lines—master, journeyman, apprentice. The Gothic cathedral represented a realization of people’s longing for a spiritual beauty that went beyond utility and need; it symbolized the integration of architecture, sculpture, painting, and crafts. Gropius was deeply interested in architecture’s symbolic potential and the possibility of a universal design style as an integrated aspect of society.

16–1. Lyonel Feininger, Cathedral, 1919. This woodcut was printed on the title page of the Bauhaus Manifesto.

16–2. Attributed to Johannes Auerbach, first Bauhaus seal, 1919. The style and imagery of this seal—chosen in a student design competition—express the medieval and craft affinities of the early Bauhaus.

Advanced ideas about form, color, and space were integrated into the design vocabulary when Der Blaue Reiter painters Paul Klee and Wassily Kandinsky joined the staff in 1920 and 1922 respectively. Klee integrated modern visual art with the work of non-Western cultures and children to create drawings and paintings that are charged visual communication (see Fig. 13–48). Kandinsky’s belief in the autonomy and spiritual values of color and form had led to the courageous emancipation of his painting from the motif and from representational elements (see Fig. 13–47). At the Bauhaus, no distinction was made between fine and applied art.

The heart of Bauhaus education was the preliminary course, initially established by Johannes Itten (1888–1967). His goals were to release each student’s creative abilities, to develop an understanding of the physical nature of materials, and to teach the fundamental principles of design underlying all visual art. Itten emphasized visual contrasts and the analysis

of Old Master paintings. With his methodology of direct experience, he sought to develop perceptual awareness, intellectual abilities, and emotional experience. In 1923 Itten left the Bauhaus because of disagreement about the conduct of this course. The Bauhaus was evolving from a concern for medievalism, expressionism, and handicraft toward more emphasis on rationalism and designing for the machine. Gropius began to consider Itten's mysticism to be an "otherworldliness" inconsistent with the search for an objective design language capable of overcoming the dangers of past styles and personal taste.

As early as the spring of 1919, Bauhaus teacher Lyonel Feininger (1871–1956) learned about De Stijl and introduced it to the Bauhaus community. The Bauhaus and De Stijl had similar aims. In late 1920 Van Doesburg established contacts with the Bauhaus, and he moved to Weimar the following year. He desired a teaching position, but Gropius believed Van Doesburg was too dogmatic in his insistence on strict geometry and an impersonal style. Gropius opposed creating a Bauhaus style or imposing a style on the students. But even as an outsider, Van Doesburg exerted a strong influence by allowing his home to become a meeting place for Bauhaus students and faculty. He lived in Weimar until 1923, teaching courses in De Stijl philosophy primarily attended by Bauhaus students. Furniture design and typography were especially influenced by De Stijl; this influence among faculty and students probably supported Gropius's efforts to lessen Itten's role.

16–3. Oscar Schlemmer, later Bauhaus seal, 1922. Comparison of the two seals demonstrates how graphic designs express ideas; the later seal connotes the emerging geometric and machine orientation.

16–4. Joost Schmidt, Bauhaus exhibition poster, 1923. Echoes of cubism, constructivism, and De Stijl provide evidence that the Bauhaus became a vessel in which diverse movements were melded into new design approaches. This poster shows the influence of Oscar Schlemmer, then a master at the Bauhaus. The opening of the exhibition was postponed until August, and two pieces of paper were pasted on with the corrected dates. This example is the original version.

16–5. Herbert Bayer, cover design, Staatliches Bauhaus in Weimar, 1919–1923, 1923. Geometrically constructed letterforms printed in red and blue on a black background are compressed into a square.

16–6. Laszlo Moholy-Nagy, title page, Staatliches Bauhaus in Weimar. This page structure is based on a rhythmic series of right angles. Stripes applied to two words create a second spatial plane.

16–7. Laszlo Moholy-Nagy, proposed title page for *Broom*, 1923. This inventive design for the avant-garde magazine shows how thoroughly Moholy-Nagy understood cubism and Lissitzky.

Continuing conflicts between the Bauhaus and the Thuringian government led the authorities to insist that the Bauhaus mount a major exhibition to demonstrate its accomplishments. By the time the school launched this 1923 exhibition—attended by 15,000 people and internationally acclaimed—romantic medievalism and expressionism were being replaced by an applied-design emphasis, causing Gropius to replace the slogan "A Unity of Art and Handicraft" with "Art and Technology, a New Unity." A new Bauhaus symbol reflected this shift (Fig. 16–3). Joost Schmidt's poster for this exhibition combines geometric and machine forms (Fig. 16–4), reflecting the reorientation occurring at the Bauhaus.

The impact of Laszlo Moholy-Nagy

In this same year, Itten's replacement as head of the preliminary course was the Hungarian constructivist Laszlo Moholy-Nagy. A restless experimenter who studied law before turning to art, Moholy-Nagy explored painting, photography, film, sculpture, and graphic design. New materials such as acrylic resin and plastic, new techniques such as photomontage and the photogram, and visual means including kinetic motion, light, and transparency were encompassed in his wide-ranging investigations. Young and articulate, Moholy-Nagy had a marked influence on the evolution of Bauhaus instruction and philosophy, and he became Gropius's "prime minister" at the Bauhaus as the director pushed for a new unity of art and technology.

Gropius and Moholy-Nagy collaborated as editors for *Staatliches Bauhaus in Weimar, 1919–1923*, the catalogue for the 1923 exhibition. The cover (Fig. 16–5) for this record of the first years was designed by a student, Herbert Bayer (1900–85), while the interior was designed by Moholy-Nagy (Fig. 16–6). Moholy-Nagy contributed an important statement about typography, describing it as "a tool of communication. It must be communication in its most intense form. The emphasis must be on absolute clarity.... Legibility—communication must never be impaired by *a priori* esthetics. Letters must never be forced into a preconceived framework, for instance a square." In graphic design, he advocated "an uninhibited use of all linear directions (therefore not only horizontal articulation). We use all typefaces, type sizes, geometric forms, colors, etc. We want to create a new language of typography whose elasticity, variability, and freshness of typographical composition [are] exclusively dictated by the inner law of expression and the optical effect." (Fig. 16-7)

In 1922 and 1923, Moholy-Nagy ordered three paintings from a sign company. These were executed from his graph-paper layouts in colors selected from the firm's porcelain-enamel color chart, in keeping with his theory that the essence of art and design was the concept, not the execution, and that the two could be separated. Moholy-Nagy acted on this belief beginning in 1929, when he retained an assistant, Gyorgy Kepes (1906–2002), to complete the execution of his commissions. Kepes would later be known as the founder of the Center for Advanced Visual Studies at the Massachusetts Institute of Technology, an association designed to promote creative collaboration between artists and scientists.

Moholy-Nagy's passion for typography and photography inspired a Bauhaus interest in visual communications and led to important experiments in the unification of these two arts. He saw graphic design, particularly the poster, as evolving toward the *typophoto*. He called this objective integration of word and image to communicate a message with immediacy "the new visual literature." Moholy-Nagy's 1923 Pneumatik poster (Fig. 16–8) is an experimental typophoto. In that year he wrote that photography's objective presentation of facts could free the viewer from depending on another person's interpretation. He saw photography influencing poster design—which demands instantaneous communication—by techniques of enlargement, distortion, dropouts, double exposures, and montage. In typography he advocated emphatic contrasts and bold use of color. Absolute clarity of communication without preconceived aesthetic notions was stressed.

As a photographer, Moholy-Nagy used the camera as a tool for design. Conventional compositional ideas yielded to unexpected organization, primarily through the use of light (and sometimes shadows) to design the space. The normal viewpoint was replaced by worm's-eye, bird's-eye, extreme close-up, and angled viewpoints. An application of the new language of vision to forms seen in the world characterizes his regular photographic work. Texture, light and dark interplay, and repetition are qualities of such works as *Chairs at Margate* (Fig. 16–9). In his growing enthusiasm for photography, Moholy-Nagy antagonized the Bauhaus painters by proclaiming the ultimate victory of photography over painting.

In 1922 he began to experiment with photograms; the following year he began to make photomontages, which he called *photoplastics*. Moholy-Nagy believed the photogram, because it allowed an artist to capture a patterned interplay of light and dark on a sheet of light-sensitive paper without a camera,

represented the essence of photography (Fig. 16–10). The objects he used to create photograms were chosen for their light-modulating properties, and any reference to the objects forming the black, white, and gray patterns or to the external world vanished in an expression of abstract pattern. Moholy-Nagy saw his photoplastics (Fig. 16–11) not just as the results of a collage technique but as manifestations of a process for arriving at a new expression that could become both more creative and more functional than straightforward imitative photography. Photoplastics could be humorous, visionary, moving, or insightful, and usually had drawn additions, complex associations, and unexpected juxtapositions.

The Bauhaus at Dessau

Tension between the Bauhaus and the government in Weimar had existed from the beginning; it intensified when a new, more conservative regime came to power and tried to impose unacceptable conditions on the school. On 26 December 1924, the director and masters all signed a letter of resignation, effective 1 April 1925, when their contracts expired. Two weeks later, the students signed a letter to the government informing it that they would leave with the masters. Gropius and Dessau mayor Dr. Fritz Hesse negotiated moving the Bauhaus to this small provincial town. In April 1925, some of the equipment was moved with faculty and students from Weimar to Dessau, and work began immediately in temporary facilities. A new building complex was designed and occupied in the fall of 1926 (Fig. 16–12), and the curriculum was reorganized.

During the Dessau period (1925–32) the Bauhaus identity and philosophy came to full fruition. The De Stijl (Fig. 16–13) and constructivist underpinnings were obvious, but the Bauhaus did not merely copy these movements. Rather, it developed clearly understood formal principles that could be applied intelligently to design problems. The Bauhaus Corporation, a business organization, was created to handle the sale of workshop prototypes to industry. Abundant ideas flowed from the Bauhaus to influence twentieth-century life: designs for furniture and other products, functional architecture, environmental spaces (Fig. 16–14), and typography. The masters were now called professors, and the medieval master/journeyman/apprentice system was abandoned. In 1926 the Bauhaus was renamed Hochschule für Gestaltung (High School for Form), and the influential *Bauhaus* magazine (Fig. 16–15) began publication.

16–8. Laszlo Moholy-Nagy, typophoto poster for tires, 1923. Letterforms, photography, and design elements are integrated into an immediate and unified communication.

16–9. Laszlo Moholy-Nagy, Chairs at Margate, 1935. The juxtaposition of two images creates a contrast of pattern and texture and introduces a process of change into the two-dimensional image.

16–10. Laszlo Moholy-Nagy, Photogram, 1922. Light itself becomes a malleable medium for generation design and form.

16–11. Laszlo Moholy-Nagy, The World Foundation, 1927. In this satirical photoplastic, Moholy-Nagy shows “quack-clacking super-geese [pelicans]” observing “the simplicity of the world constructed as a leg show.”

16–12. Walter Gropius, Dessau Bauhaus building, 1925–26. This architectural landmark has a series of parts—workshop (shown here), classroom, dormitory, and administrative structures—unified into a whole.

16–13. Herbert Bayer, symbol for the Kraus stained-glass workshop, 1923. A square is divided by a horizontal line into two rectangles. The top rectangle has the three-to-five ratio of the golden mean. Each rectangle formed is then divided with a vertical to form a square and a smaller rectangle. A harmony of proportion and balance is achieved by minimal means with the obvious influence of De Stijl.

This magazine, and the series of fourteen *Bauhausbücher* (Bauhaus books, Fig. 16–16), became important vehicles for disseminating advanced ideas about art theory and its application to architecture and

design. Kandinsky, Klee, Gropius, Mondrian, Moholy-Nagy, and Van Doesburg (see Fig. 15–43) were editors or authors of volumes in the series. Moholy-Nagy designed twelve of the books and eight of the jackets (Fig. 16–17). The jacket for book 12 was printed on translucent tracing paper. It presented Gropius's modular housing proposals for industrial fabrication to combine economy with social purpose and structural functionalism with aesthetic concerns. Properties of modern architecture were expressed on book 14's jacket by a photograph of typography printed on glass whose shadow falls onto a red plane.

16–14. Herbert Bayer, proposed streetcar station and newsstand, 1924. A concise modular unit, designed for economical mass production, combines an open waiting area, newsstand, and rooftop advertising panels.

16–15. Herbert Bayer, cover for Bauhaus magazine, 1928. A page of typography joins the designer's tools and basic geometric forms in a photographic still life. Composed before a camera instead of at a drawing board, this cover achieves a rare integration of type and image.

16–16. Laszlo Moholy-Nagy, brochure cover for the series of fourteen Bauhaus books, 1929. Two photoprints of metal type are collaged together to create an unusual spatial configuration. Colored ink is printed on the upper numeral 14.

16–17. Laszlo Moholy-Nagy, dust jackets for four Bauhaus books, 1924–30. Jackets for volumes 5 and 10 evidence close ties with De Stijl; 12 and 14 represent modern architecture.

16–18. Herbert Bayer, banknote for the State Bank of Thuringia, 1923. Germany's rampant postwar inflation necessitated large-denomination banknotes. Black type overprints a red triangle, lines, and a textural repetition of the denominations.

Five former students were appointed masters, including Josef Albers (1888–1976), who taught a systematic preliminary course investigating the constructive qualities of materials; Marcel Breuer (1902–81), the head of the furniture workshop, who invented tubular-steel furniture; and Herbert Bayer, who became professor of the newly added typography and graphic design workshop. In Weimar, Gropius had observed Bayer's interest in graphics and encouraged it with periodic assignments (Fig. 16–18; see also Fig. 16–5), so Bayer's typographic preoccupation preceded the move to Dessau.

In addition to soliciting printing orders from Dessau businesses to help balance the Bauhaus budget, Bayer's workshop made striking typographic design innovations along functional and constructivist lines. Sans-serif fonts were used almost exclusively, and Bayer designed a universal type that reduced the alphabet to clear, simple, and rationally constructed forms (Fig. 16–19). This was consistent with Gropius's advocacy of form following function. Bayer omitted capital letters, arguing that the two alphabets (capitals and lowercase) are incompatible in design, with two totally different signs (i.e., capital *A* and small *a*) expressing the same spoken sound. He experimented with flush-left, ragged-right typesetting without justification, which is the squaring or flushing of both left and right edges of a type column by adding word or letter spacing. Extreme contrasts of type size and weight were used to establish a visual hierarchy of emphasis determined by an objective assessment of the relative importance of the words. Bars, rules, points, and squares were used to subdivide the space, unify diverse elements, lead the viewer's eye across a page, and call attention to important elements. Elementary forms and the use of black with one bright, pure hue were favored. Open composition on an implied grid and a system of sizes for type, rules, and pictorial images brought unity to the designs. Dynamic composition with strong horizontals and verticals (and, on occasion, diagonals) characterize Bayer's Bauhaus period.

These properties are clearly seen in Bayer's poster for Kandinsky's sixtieth birthday exhibition (Fig. 16–20). A visual hierarchy developed from a careful analysis of content, permitting a functional sequence of information. Careful horizontal and vertical alignments were made, then the entire contents rotated diagonally to achieve a dynamic yet balanced architectural structure. With the text controlled by a seven-

column grid, Bayer's poster for a 1927 exhibition of European arts and crafts is even more architectural in its organization (Fig. 16–21).

The final years of the Bauhaus

In 1928 Walter Gropius resigned his post to resume private architectural practice. At the same time, Bayer and Moholy-Nagy both left for Berlin, where graphic design and typography figured prominently in the activities of each. Former student Joost Schmidt (1893–1948) followed Bayer as master of the typography and graphic-design workshop (Fig. 16–21). He moved away from strict constructivist ideas and stocked the workshop with a larger variety of type fonts. Exhibition design (Fig. 16–22) was outstanding under Schmidt, who brought unity to this form through standardized panels and grid-system organization. The directorship of the Bauhaus was assumed by Hannes Meyer (1889–1954), a Swiss architect with strong socialist beliefs, who had been hired to set up the architectural program in 1927. By 1930 conflicts with the municipal authorities forced Meyer's resignation. Ludwig Mies van der Rohe (1886–1969), a prominent Berlin architect whose design dictum "less is more" became a major tenet of twentieth-century design, became director.

16–19. Herbert Bayer, universal alphabet, 1925. This experiment in reducing the alphabet to one set of geometrically constructed characters maximizes differences between letters for greater legibility. The lower letterforms show different weights. Later variations include the bold, condensed, typewriter, and handwriting styles shown here.

16–20. Herbert Bayer, exhibition poster, 1926. Type and image are arranged in a functional progression of size and weight from the most important information to supporting details.

16–21. Herbert Bayer, "Europäisches Kunstgewerbe 1927" (European Arts and Crafts 1927), poster, 1927.

16–22. Joost Schmidt, Bauhaus magazine cover, 1929. This format allows effective use of varying image size and shape in the lower two-thirds of the cover.

16–23. Jan Tschichold, hand-lettered advertisement for the Leipzig Trade Fair, 1922. Symmetry and historical letterforms characterize Tschichold's youthful work.

In 1931 the Nazi party dominated the Dessau City Council; it canceled Bauhaus faculty contracts in 1932. Mies van der Rohe tried to run the Bauhaus from an empty telephone factory in Berlin-Steglitz, but Nazi harassment made continuance untenable. The Gestapo demanded the removal of "cultural Bolsheviks" from the school, with Nazi sympathizers as replacements. The faculty voted to dissolve the Bauhaus, and it closed on 10 August 1933, with a notice to students that faculty would be available for consultation if needed. Thus ended one of the most important design schools of the twentieth century. The growing cloud of Nazi persecution led many Bauhaus faculty members to join the flight of intellectuals and artists to America. In 1937 Gropius and Marcel Breuer were teaching architecture at Harvard University, and Moholy-Nagy established the New Bauhaus (now the Institute of Design) in Chicago. A year later, Herbert Bayer began the American phase of his design career. This transatlantic exodus influenced the course of American design after World War II.

The accomplishments and influences of the Bauhaus transcend its fourteen-year life, thirty-three faculty members, and about 1,250 students. It created a viable, modern design movement spanning architecture, product design, and visual communications. A modernist approach to visual education was developed, and the faculty's class-preparation and teaching methods made a major contribution to visual theory. In dissolving fine and applied art boundaries, the Bauhaus tried to bring art

into a close relationship with life by way of design, which was seen as a vehicle for social change and cultural revitalization.

In a 1961 prose poem entitled “homage to gropius,” Herbert Bayer wrote:

for the future
the bauhaus gave us assurance
in facing the perplexities
of work;
it gave us the know-how to
work.
a foundation in the crafts,
an invaluable heritage of timeless principles
as applied to the
creative process.
it expressed again that we are
not to impose aesthetics
on the things we use, to the
structures we live in,
but that purpose and form must
be seen as one.
that direction emerges when one
considers
concrete demands,
special conditions, inherent
character
of a given problem.
but never losing perspective
that one is, after all,
an artist.
the bauhaus existed for a short
span of time
but the potentials,
inherent in its principles
have only begun to be realized.
its sources of design remain
forever full
of changing possibilities.

Jan Tschichold and die neue Typographie (the new typography)

Much of the creative innovation in graphic design during the first decades of the century occurred as part of the modern-art movements and at the Bauhaus, but these explorations toward a new approach to graphic design were often seen and understood only by a limited audience outside the mainstream of society. The person who applied these new design approaches to everyday design problems and explained them to a wide audience of printers, typesetters, and designers was Jan Tschichold (1902–74). The son of a designer and sign painter in Leipzig, Germany, Tschichold developed an early interest in calligraphy, studied at the

Leipzig Academy, and joined the design staff of Insel Verlag as a traditional calligrapher (Fig. 16–23). In August 1923, twenty-one-year-old Tschichold attended the first Bauhaus exhibition in Weimar and was deeply impressed. He rapidly assimilated the new design concepts of the Bauhaus and the Russian constructivists into his work (Fig. 16–24) and became a practitioner of the new typography. For the October 1925 issue of *Typographische Mitteilungen* (typographic impartations), Tschichold designed a twenty-four-page insert entitled “Elementare Typographie” (Figs. 16–25, 16–26, and 16–27), which explained and demonstrated asymmetrical typography to printers, typesetters, and designers. It was printed in red and black and featured avant-garde work along with Tschichold’s lucid commentary. Much German printing at this point still used medieval textura and symmetrical layout. Tschichold’s insert was a revelation and generated much enthusiasm for the new approach.

16–24. Jan Tschichold, display poster for a publisher, 1924. One of the Tschichold’s earliest attempts to apply modern design principles, printed in black and gold, proclaims, “Books by Philobiblon are available here in Warsaw.”

16–25. Jan Tschichold, cover for “Elementare Typographie” insert, 1925. A sparse, open functionalism is achieved.

16–26. Jan Tschichold, pages from “Elementare Typographie,” 1925. Bold rules punctuate the space, and Tschichold’s essay explains the new approach.

16–27. Jan Tschichold, pages from “Elementare Typographie,” 1925. Illustrated by Lissitzky’s work, Russian constructivist design is explained.

16–28. Jan Tschichold, brochure for his book *Die neue Typographie*, 1928. This brochure functions as a remarkable didactic example of the principles Tschichold was advocating.

His 1928 book, *Die neue Typographie*, vigorously advocated the new ideas. Disgusted with “degenerate typefaces and arrangements,” he sought to wipe the slate clean and find a new asymmetrical typography to express the spirit, life, and visual sensibility of the day. His objective was functional design by the most straightforward means. Tschichold declared the aim of every typographic work to be the delivery of a message in the shortest, most efficient manner. He emphasized the nature of machine composition and its impact on the design process and product.

Tschichold’s brochure for the book illustrates this radical new typography (Fig. 16–28), which rejected decoration in

16–29. Jan Tschichold, advertisement, 1932. Asymmetrical balance, a grid system, and a sequential progression of type weight and size determined by the words’ importance to the overall message are aspects of this design.

16–30. Jan Tschichold, cinema poster for *Die Hose* (The Trousers), 1927. The space is divided into dynamic red and white planes, with forms aligned and balanced on a diagonal axis.

16–31. Jan Tschichold, poster for *Der Berufsphotograph* (The Professional Photographer), 1938.

16–32. Jan Tschichold, exhibition poster for *Konstruktivism* (Constructivism), 1937. Black type and a sand-colored circle are used to achieve an economy of means and perfection of balance appropriate to the subject.

favor of rational design planned for communicative function. Functionalism, however, is not completely synonymous with the new typography; Tschichold observed that although plain utilitarianism

and modern design had much in common, the modern movement sought spiritual content and a beauty more closely bound to the materials used, “but whose horizons lie far beyond.”

A dynamic force should be present in each design, he argued, for type should be set in motion rather than at rest. Symmetrical organization was artificial because it placed pure form before the meaning of the words. Tschichold favored headlines flush to the left margin, with uneven line lengths. He believed a kinetic asymmetrical design of contrasting elements expressed the new age of the machine. Types should be elementary in form without embellishment; thus, sans-serif type, in a range of weights (light, medium, bold, extra-bold, italic) and proportions (condensed, normal, expanded), was declared to be the modern type. Its wide range of value and texture in the black-and-white scale allowed the expressive, abstract image sought by modern design. Stripped of unessential elements, sans-serif type reduced the alphabet to its basic elementary shapes. Designs were based on an underlying horizontal and vertical structure. Spatial intervals were seen as important design elements, with white space given a new role as a structural component. Rules, bars, and boxes were often used for structure, balance, and emphasis. The precision and objectivity of photography were preferred for illustration. Tschichold showed how the modern-art movement could relate to graphic design by synthesizing his practical understanding of typography and its traditions with the new experiments. The essence of the new typography was clarity, not simply beauty; its objective was to develop form from the functions of the text. Tschichold’s own prolific design practice set the standard for the new approach in books, job printing, advertisements (Fig. 16–29), and posters (Figs. 16–30, 16–31, and 16–32).

In March 1933, armed Nazis entered Tschichold’s flat in Munich and arrested him and his wife. Accused of being a “cultural Bolshevik” and creating “un-German” typography, he was denied his teaching position in Munich. After six weeks of “protective custody” Tschichold was released; he quickly took his wife and four year-old son to Basel, Switzerland, where he worked primarily as a book designer. In Switzerland, Tschichold began to turn away from the new typography and to use roman, Egyptian, and script styles in his designs. The new typography had been a reaction against the chaos and anarchy in German (and Swiss) typography around 1923, and he now felt that it had reached a point where further development was not possible.

In 1946 he wrote that the new typography’s “impatient attitude conforms to the German bent for the absolute, and its military will to regulate and its claim to absolute power reflect those fearful components of the German character [that] set loose Hitler’s power and the Second World War.” Tschichold began to feel that graphic designers should work in a humanist tradition that spans the ages and draws from the knowledge and accomplishments of master typographers of the past. He continued to feel that the new typography was suitable for publicizing industrial products and communication about contemporary painting and architecture, but also believed it was folly to use it for a book of baroque poetry, for example, and he called reading long pages of sans serif “genuine torture.”

During the 1940s, particularly with his 1947–49 work as a typographer for Penguin Books in London, Tschichold led an international revival of traditional typography (Fig. 16–33). After World War II, he believed designers should draw upon the whole history of design to create solutions expressing content (Fig. 16–34). While much of his later work used symmetrical organization and classical serif type styles, he advocated freedom of thought and artistic expression. He even endorsed the occasional use of ornamental typography as having “a refreshing effect, like a flower in rocky terrain.” He observed that perhaps a person must first lose his freedom (as he had) before one could discover its true value.

Tschichold continued to design and write in Switzerland until his death in 1974. Because he saw the value of the new typography as an attempt at purification, clarity, and simplicity of means, he was able to bring typographic expression to fruition for the twentieth century. His revival of classical typography restored the humanist tradition of book design, and he made an indelible mark on graphic design.

Typeface design in the first half of the twentieth century

The passion for the new typography created a spate of sans-serif styles during the 1920s. An earlier sans serif, Johnston's Railway Type (see Fig. 12–50), inspired the Gill Sans series (Fig. 16–35), which was designed by Edward Johnston's friend and former student, Eric Gill (1882–1940), and issued between 1928 and 1930. This type family, which eventually included fourteen styles, does not have an extremely mechanical appearance because its proportions stem from the roman tradition.

An architectural apprentice dropout tutored by Johnston at the turn of the century, Eric Gill was a complex and colorful figure who defies categorization in the history of graphic design. His activities encompassed stonemasonry, inscription carving for monuments, sculpture, wood engraving, typeface design, lettering, book design, and extensive writing. His 1913 conversion to Catholicism intensified his belief that work has spiritual value and that the artist and craftsman serve a human need for beauty and dignity. Around 1925, in spite of his earlier polemics against machine manufacture, he was persuaded by Stanley Morison (1889–1967) of the Monotype Corporation to accept the challenge of type design. His first type, Perpetua, is an antique roman face inspired by the inscription on Trajan's column but subtly redesigned to accommodate the needs of typesetting and printing. Gill's embrace of historical influences—including the Trajan capitals, letters used in medieval manuscripts and the incunabula, Baskerville, and Caslon—threatened to make him a historicist, but his highly original vision and opinions enabled him to transcend these influences in much of his work. His work for *The Four Gospels* (Fig. 16–36) demonstrates this synthesis of old and new. The Golden Cockerel type that Gill created for this book is a revitalized roman incorporating both Old Style and Transitional qualities. His woodcut illustrations have an archaic, almost medieval quality. However, his total design integration of illustration, capitals, headings, and text into a dynamic whole is strikingly modern.

In his highly personal and poetic little volume *Essay on Typography* (Fig. 16–37), Gill first advanced the concept of unequal line lengths in text type. He argued that the uneven word spacing of justified lines posed greater legibility and design problems than the use of equal word spacing and a ragged-right margin. From late 1928 until his death, he worked at Hague and Gill, Printers, using a handpress, hand-set type, handmade paper, and types he designed exclusively for the press. This was not, however, a private press in the Arts and Crafts tradition, for Gill said a private press “prints solely what it chooses to print, whereas a public press prints what its customers demand of it.”

Beginning with Bayer's universal alphabet (see Fig. 16–19) and Jakob Erbar's c. 1925 typeface Erbar, many geometrically constructed sans-serif typefaces were designed during the 1920s. Futura (Figs. 16–38 and 16–39) was designed by Paul Renner (1878–1956) for the Bauer foundry in Germany. Futura had fifteen alphabets, including four italics and two unusual display fonts, and became the most widely used geometric sans-serif family. As a teacher and designer, Renner fought tirelessly for the notion that designers should not merely preserve their inheritance and pass it on to the next generation unchanged; rather, each generation should try to solve inherited problems and attempt to create a contemporary form true to its own time. Even the mystical medievalist Rudolf Koch (see Fig. 10–35) designed a very popular geometric sans-serif typeface, Kabel (Fig. 16–40), which was enlivened by unexpected design subtleties.

Morison, typographic adviser to the British Monotype Corporation and the Cambridge University Press, supervised the design of a major twentieth-century newspaper and magazine typeface commissioned by the *Times* of London in 1931. Named Times New Roman (Fig. 16–41), this typeface—with short ascenders and descenders and sharp, small serifs—was introduced in the 3 October 1932 edition of London's newspaper of record. The typographic appearance of one of the world's preeminent newspapers was radically changed

16–33. Jan Tschichold, brochure cover for *The Pelican History of Art*, 1947. The classical symmetry of this design has a power and subtlety rivaling Roman inscriptions and the best work of Baskerville and Bodoni.

16–34. Jan Tschichold, paperback book cover, 1950. This series format evokes designs and prints of Shakespeare's era.

16–35. Eric Gill, the Gill Sans type family, 1928–30. This family has been widely used, especially in England.

16–36. Eric Gill, page from *The Four Gospels*, 1931. Descending type sizes, all capitals on opening lines, unjustified right margins, and initial capitals integrated with illustrations are forged into a unified whole.

16–37. Eric Gill, page from *Essay on Typography*, 1931. Gill spoke of industrialism, humanism, letterforms, and legibility, while demonstrating his belief in unjustified typography.

16–38. Paul Renner, folder for Futura, 1927. This early version of Futura was more abstract than the fonts released in America. The structural relationships in this layout typify the new typography.

16–39. Paul Renner, Futura typefaces, 1927–30. The extensive range of sizes and weights provided vigorous contrasts for printers and designers who adopted the new typography.

16–40. Rudolf Koch, Kabel light, c. 1928. A series of ads introduced Kabel's range of weights to German designers and printers.

16–41. Stanley Morison (typographic adviser), the *London Times*, 3 October 1932. Even the 120-year-old masthead fell victim to the redesign that introduced Times New Roman.

16–42. Otto Neurath and the Vienna Method, "Geburten und Sterbefälle in Wien" (Births and Deaths in Vienna) chart, c. 1928. Neurath called the Isotype a "language picture" that enabled the reader to make connections. The impact of World War I on mortality and births is dramatically evident.

16–43. Gerd Arntz and Otto Neurath, "Gesellschaftsgliederung in Wien" (Social Stratification in Vienna) chart, 1930.

16–44. Henry C. Beck, map for the London Underground, 1933. By depicting a schematic concept of the subway lines rather than a conventional map, Beck simplified the communication of information for the subway rider.

overnight, and the traditionally conservative readers warmly applauded the legibility and clarity of the new typeface. Times New Roman became one of the most widely used typefaces of the twentieth century. Its popularity has been attributed to its legibility, handsome visual qualities, and the economy achieved by moderately condensed letterforms. By making the stems and curves slightly thicker than in most roman-style letterforms, the designers gave Times New Roman a touch of the robust color that is associated with Caslon type.

The Isotype movement

The important movement toward developing a "world language without words" began in the 1920s, continued into the 1940s, and still has important influences today. The Isotype concept involves the use of elementary pictographs to convey information. The originator of this effort was Vienna sociologist Otto Neurath (1882–1945). As a child, Neurath marveled at the way ideas and factual information could be conveyed by visual means. Egyptian wall frescoes in a Vienna Museum and diagrams and illustrations in his father's books fired his imagination. Neurath felt that the social and economic changes following World War I demanded clear communication to assist public understanding of important social issues

relating to housing, health, and economics. A system of elementary pictographs to present complex data, particularly statistical data, was developed (Fig. 16–42). His charts were completely functional and shorn of decorative qualities. Neurath had ties with the new typography movement, for Tschichold assisted him and his collaborators briefly in the late 1920s, and Renner's new Futura typeface was adopted for Isotype designs immediately after it became available.

Originally called the Vienna Method, the name Isotype (International System of Typographic Picture Education) was selected after Neurath moved to Holland in 1934. The Transformation Team, headed by scientist and mathematician Marie Reidermeister (1898–1959), converted verbal and numerical data compiled by statisticians and researchers into layout form. These layouts were handed over to graphic artists for final execution. One problem was the need to produce large quantities of symbols for charts. Initially the pictographs were individually drawn or cut from paper. After woodcut artist Gerd Arntz (1900–88), whose constructivist-inspired prints included archetypal geometric figures, joined the group in 1928, he designed most of the pictographs (Fig. 16–43).

Often reduced to as little as one-half-centimeter tall, these pictographs were designed to express subtleties such as a drunken man, an unemployed man, or an emigrant man in charts and diagrams. Arntz cut the pictographs on linoleum blocks, after which they were printed on a letterpress and then pasted into the finished artwork. An inventory of 1,140 pictographs was designed by 1940, when the Isotype group fled to England. Pictographs were now duplicated by means of type-high letterpress line blocks. Because of their Germanic background, Neurath and Reidermeister were interned briefly, then were allowed to resume their work in England. In 1942 they were married.

Important among Neurath's many assistants was Rudolf Modley (1906–76), who came to America during the 1930s and established Pictorial Statistics, Inc., which later became the Pictographic Corporation. This organization became the North American branch of the Isotype movement. Modley believed a symbol should follow principles of good design, be effective in both large and small sizes, have unique characteristics to distinguish it from all other symbols, be interesting, function well as a statistical unit for counting, and work in outline or in silhouette.

The Isotype group's contribution to visual communications is the set of conventions they developed to formalize the use of pictorial language. This includes a pictorial syntax (a system of connecting images to create an ordered structure and meaning) and the design of simplified pictographs. The impact of their work on post–World War II graphic design includes research toward the development of universal visual-language systems and the extensive use of pictographs in signage and information systems.

The prototype for the modern map

The London Underground also sponsored a major graphic design innovation when it made a trial printing of a new subway system map (Fig. 16–44) in 1933. Draftsman Henry C. Beck (1903–74) submitted an unsolicited design proposal that replaced geographic fidelity with a diagrammatic interpretation. The central portion of the map, showing complex interchanges between routes, was enlarged in proportion to outlying areas. Meandering geographic lines were drawn on a grid of horizontals, verticals, and forty-five-degree diagonals. Bright color coding identified and separated the routes. Although cautious about the value of Beck's proposal, the publicity department printed the trial run and invited public response. When the public found the new map extremely functional, it was developed and employed throughout the system. In preparing the camera-ready art for the first trial printing of his map, Beck hand-lettered over 2,400 characters in Johnston's Railway Type! Beck's development and revisions of the London Underground maps over twenty-seven years made a significant contribution to the visual presentation of diagrams and networks, for his discoveries inspired many variations around the world.

Independent voices in the Netherlands

In the Netherlands, several designers were influenced by the modern movements and the new typography, but they were very personal and original in their visions. The Dutch designer Piet Zwart (1885–1977) created a synthesis from two apparently contradictory influences: the Dada movement's playful vitality and De Stijl's functionalism and formal clarity. By the time Zwart began graphic design projects at age thirty-six, he had trained as an architect, designed furniture and interiors, and worked in Jan Wils's (1891–1972) architectural office. Zwart's interior designs moved toward functionalism and clarity of form after his communication with de Stijl began in 1919; however, he never joined the movement, because although he agreed with its basic philosophy, he found it too dogmatic and restrictive.

By happenstance, in the early 1920s Zwart received his first typographic commissions (Fig. 16–45) from Laga, a flooring manufacturer. As his work evolved, he rejected both traditional symmetrical layout and De Stijl's insistence on strict horizontals and verticals. After making a rough layout, Zwart ordered words, rules, and symbols from a typesetter and playfully manipulated them on the surface to develop the design. The fluid nature of collage technique joined with a conscious concern for functional communication. Zwart designed the space as a "field of tension" brought alive by rhythmic composition, vigorous contrasts of size and weight, and a dynamic interplay between typographic form and the background page (Figs. 16–46 and 16–47). Zwart's catalogue designs for N. V. Nederlandsche Kabelfabriek (NKF) (Dutch Cable Manufactory) have a dynamic spatial integration of type and images (Figs. 16–48 and 16–49).

Rejecting the dull grayness of conventional typography, Zwart created dynamic and arresting layouts. He fractured tradition by taking a new look at the material from which graphic designs are made. With no formal training in typography or printing, he was uninhibited by rules and methods of traditional professional practice. The need for typography to be in harmony with its era and available production methods was an important concern for Zwart. Realizing that twentieth-century mass printing made typographic design an important and influential cultural force, he had a strong sense of social responsibility and concern for the reader. Zwart considered t

16–45. Piet Zwart, advertisement for the Laga Company, 1923. The influence of De Stijl principles is evident in Zwart's earliest graphics.

16–46. Piet Zwart, folder, 1924. Order is achieved in a complex communication by the rhythmic repetition of diagonals, words, letters, rules, and the dingbat hand.

16–47. Piet Zwart, advertisement for the NKF cableworks, 1926. Structured on dynamic verticals, this design is an example of how Zwart, functioning as his own copywriter, developed simultaneous visual and verbal solutions to the client's communication problem.

16–48. Piet Zwart. Pages from the NKF cableworks catalogue, 1928. Equilibrium is achieved by a yellow circle balancing a red wedge crossing the blue halftone of the NKF plant area, overprinted by the red, becomes a purple halftone on a red background.

16–49. Piet Zwart, pages from the NKF cableworks catalogue, 1928. This layout demonstrates Zwart's use of photographs as compositional shapes.

he function of time as an aspect of the reader's experience as he planned his page designs; he recognized that twentieth-century citizens were inundated with communications and could not afford the luxury of wading through masses of reading matter. Brief slogans with large letters in bold type and diagonal lines were used to attract the attention of the reader (Fig. 16–50), who could quickly grasp the main idea or content. Explanatory matter was organized to make it easy to isolate essential information from secondary material.

Zwart's activities over a long and illustrious career included photography, product and interior design, and teaching. Zwart once called himself a *typotekt*. This play on words, which expresses his position as an architect who had become a typographic designer, has a deeper meaning, for it also expresses the working process of the new typography. The way that Zwart (as well as Lissitzky, Bayer, and Tschichold) constructed a design from the material of the typecase is analogous to the manner in which an architect's design is constructed from glass, steel, and concrete. His personal logo (Fig. 16–51) is a visual/verbal pun, for the Dutch word *zwart* means "black."

The end of 1933 witnessed a change in Zwart's work, as he became more involved with teaching and industrial and interior design. After twelve years of ascendancy in graphic design, he never again attained the level of his earlier achievements. Yet during that period, he ranked among the modern masters of this profession.

Another Dutch artist, Hendrik N. Werkman (1882–1945) of Groningen, is noted for his experimentation with type, ink, and ink rollers for purely artistic expression. After his large printing company foundered in 1923 as a result of his indifference toward business matters and the economic situation in Europe following World War I, Werkman established a small job-printing firm in an attic space above a warehouse. Beginning in 1923 he used type, rules, printing ink, brayers, and a small press to produce monoprints which he referred to as *druksels* (prints). In September 1923 he began publication of *The Next Call*, a small magazine of typographic experiments and texts (Figs. 16–52, 16–53, and 16–54). The printing press became a layout pad as Werkman composed wood type, wood blocks, and even parts of an old lock directly on the letterpress bed. He loved printing and took joy in beautiful paper, wood textures, and the unique qualities of each nicked and dented piece of wood type. His process of building a design from ready-made components can be compared to the creative process of the Dadaists, particularly in collage. Like Lissitzky, Werkman explored type as concrete visual form as well as alphabet communication. A few days before the city of Groningen was liberated by the Canadian army in April 1945, Werkman was executed by the Nazis. After his arrest, much of his work was confiscated and taken to the headquarters of the Security Police, and it was destroyed when the building burned during the fighting.

16–50. Piet Zwart, pages from the English-language NKF cableworks catalogue, 1926. Repetition and contrast reinforce the verbal message.

16–51. Piet Zwart, personal logo, 1927.

16–52. H. N. Werkman, page 1 of *The Next Call*, no. 2, October 6, 1923. The impression from a lock plate from the side of a door suggests an upper-case E.

16–53. H. N. Werkman, pages 2 and 3 of *The Next Call*, no. 4, January 24, 1924. Printed to commemorate Lenin soon after his death, the columns of Os and Ms suggest soldiers guarding a casket.

16–54. H. N. Werkman, pages 4 and 5 of *The Next Call*, no. 4.

16–55. Paul Schuitema, brochure cover for the Berkel Model Z scales, before 1929. Arrows moving from the large word ZOO (meaning “So”) create a double headline: “So clear—every dash 5 grams” and “So small—20 centimeters [wide].” This brochure was printed by letterpress from typographic material assembled on the press bed from Schuitema’s layout.

Another important Dutch graphic constructivist designer from the province of Groningen, Paul Schuitema (1897–1973), was educated as a painter during World War I and then turned to graphic design in the early 1920s. Schuitema’s most important clients were the P. van Berkel Meat Company, the Van Berkel Patent Scale and Cutting Machine Factory, and the printer C. Chevalier, all three based in Rotterdam. He designed the Van Berkel trademark, as well as brochures, advertisements, stationery, and exhibitions. Over the next five years his work for this company would open new vistas in advertising typography (Fig. 16–55). Other clients included the Dutch PTT (Post, Telephone and Telegraph) (Fig. 16–56). He made significant use of overprinting and organized his space with rigorous horizontal, vertical, and diagonal movements. Objective photography was integrated with typography as part of a total structure. For thirty years Schuitema taught at the Koninklijke Academie van Beeldende Kunsten (Royal Academy of Fine Arts) at The Hague, where he inspired several generations of designers.

16–56. Paul Schuitema, “Koopt A.N.V.V. Postzegels, Steunt het werk der Alg. Ned. Ver. Voor Vreemdelingen verkeer, een landsbelang,” poster, 1932. The text promotes the sale of postage stamps in support of Dutch tourism.

16–57. Willem Sandberg, page from *Experimenta typographica*, 1956. To illustrate the utility of jugs, Sandberg transformed the u in Kruges (jugs) into a vessel filled with blue letters.

16–58. Willem Sandberg, page from *Experimenta typographica*, 1956. Sandberg’s sensitive exploration of the negative space between letterforms became enormously influential with a generation of designers.

16–59. Willem Sandberg, cover for *Museum journal voor moderne kunst*, 1963. Sandberg designed contrasts between scale (large/small), color (red/blue/white), and edge (torn/sharp).

16–60. Willem Sandberg, Cover for *Nu (Now)*, 1959.

16–61. Willem Sandberg, pages from *Nu (Now)*, 1959.

Willem Sandberg (1897–1984), director of the Stedelijk Museum in Amsterdam from 1945 until 1963, emerged as a highly original practitioner of the new typography after World War II. During the war, while hiding and working for the Resistance, he created his *experimenta typographica*, a series of probing typographic experiments in form and space that was finally published in the mid-1950s (Figs. 16–57 and 16–58) and inspired his later work. Sandberg was an explorer; his text settings were often completely unjustified, and sentence fragments were arranged freely on the page, with ultrabold or delicate script introduced for accent or emphasis. He rejected symmetry and liked bright primary colors and strong contrasts, as well as muted hues and subtle juxtapositions. Crisp sans-serif type was combined with large

torn paper collage letterforms with rough edges. Exhibition catalogue text was often printed on coarse brown paper, in contrast to the coated enamel pages interspersed for halftones.

In the *Museum journal voor moderne kunst* (Museum Journal of Modern Art) cover (Fig. 16–59), contrasts of scale, color, and edge are used in a seemingly casual but highly structured layout. The white negative areas around the *m* and *j* interact dynamically with the red letters. The torn edges contrast with the crisp type and sharp-edged blue bar, which has an *E* torn from it. In the 1957 cover for the Stedelijk Museum's library catalogue, the first six letters of the word *bibliotheek* (library) are also made from torn paper, denoting a fascination with serendipity inherited from Werkman. Sandberg's work demonstrates that many of the underlying design ideas of the new typography remained vital after World War II (Figs. 16–60 and 16–61).

New approaches to photography

The new typography emphasized objective communication and was concerned with machine production. The camera was seen as a vital tool for image making. Much of the photography used in conjunction with the new typography was straightforward and neutral. The role of photography as a graphic communications tool was expanded by Swiss designer/photographer Herbert Matter (1907–84). While studying painting in Paris under Léger, Matter became interested in photography and design. In the early 1930s he worked with the Deberny and Peignot type foundry as a photographer and typographic designer; also, he assisted Cassandre in poster design. At age twenty-five Matter returned to his native Switzerland and began to design posters for the Swiss National Tourist Office. Matter thoroughly understood modernism's new approaches to visual organization and its techniques, such as collage and montage. Like Laszlo Moholy-Nagy, Matter applied this knowledge to photography and graphic design. His posters of the 1930s use montage, dynamic scale changes, and an effective integration of typography and illustration. Photographic images become pictorial symbols removed from their naturalistic environments and linked together in unexpected ways.

Matter pioneered extreme contrasts of scale and the integration of black-and-white photography, signs, and color areas (Fig. 16–62). In his travel poster proclaiming that all roads lead to Switzerland, three levels of photographic information combine in a majestic expression of space (Fig. 16–63). In the foreground, a cobblestone road photographed from ground level thrusts back into the space. Its motion is stopped by a ridge bearing the famous Swiss roadway that twists and winds over the mountains. Finally, a majestic mountain peak soars up against the blue sky. A tourism poster for Pontresina (Fig. 16–64) uses uncommon camera angles and an extreme scale change from the large head to the small skier.

Another Swiss graphic designer showing great expertise in the use of photography in graphic design during the 1930s was Walter Herdeg (1908–95) of Zurich. In publicity materials for Swiss resorts, Herdeg achieved design vitality through the selection and cropping of photographic images. In designs for the St. Moritz ski resort (Fig. 16–65), Herdeg created a graphic unity through the consistent application of a stylized sun symbol and a logotype derived from handwriting. During World War II, Herdeg launched a bimonthly international graphic design magazine entitled *Graphis*. For forty-two years and 246 issues, he published, edited, and designed this publication, which sparked an unprecedented dialogue among graphic designers throughout the world.

16–63. Herbert Matter, Swiss tourism poster, 1935. The photographic montage has a graphic vigor signifying the spatial experience of mountain height.

16–64. Herbert Matter, poster for Pontresina, 1935. High and low camera angles accompany dramatic scale contrasts.

16–65. Walter Herdeg, poster for St. Moritz, 1936. Light and shadow create a lively composition conveying the thrills of skiing. St. Moritz's sun trademark becomes part of the photograph.

The new language of form began in Russia and Holland, crystallized at the Bauhaus, and found one of its most articulate spokesmen in Jan Tschichold. The rational and scientific sensibilities of the twentieth century gained graphic expression. The new typography enabled designers of vision to develop functional and expressive visual communications, and it continued to be an important influence well into the late twentieth century.