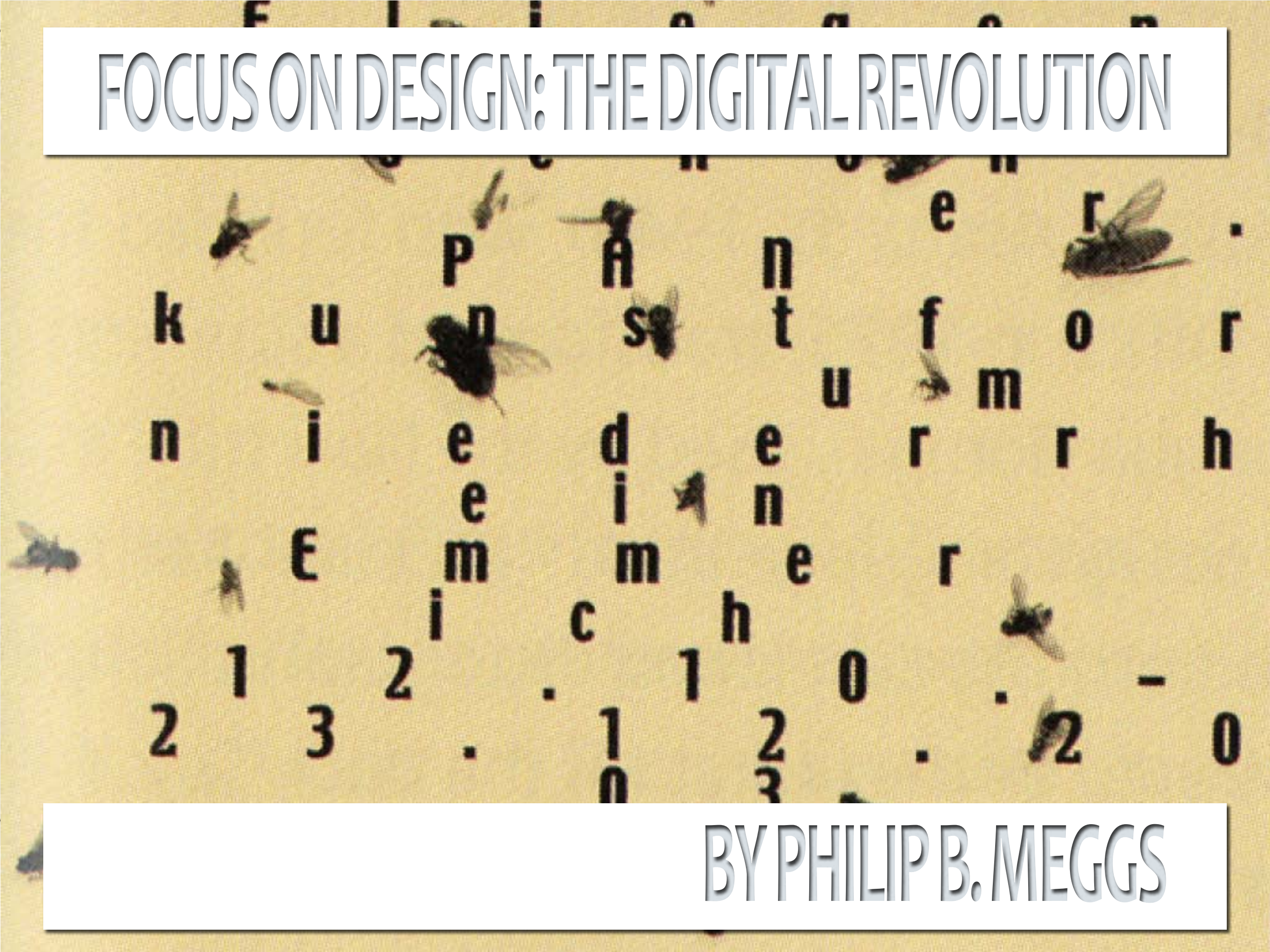


# FOCUS ON DESIGN: THE DIGITAL REVOLUTION



BY PHILIP B. MEGGS



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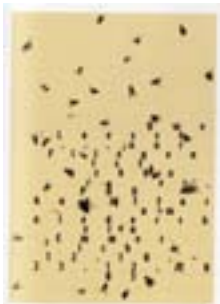
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**Front Cover, cropped image**

Uwe Loesch, "Fly By," poster, 2003. A poster for an exhibition of Loesch's own designs curiously mingles flies with the typography.

# THE DIGITAL REVOLUTION

During the last quarter of the twentieth century, electronic and computer technology advanced at an extraordinary pace, transforming many areas of human activity. Graphic design was irrevocably changed by digital computer hardware and software and the explosive growth of the Internet. The Industrial Revolution had fragmented the process of creating and printing graphic communications into a series of specialized steps. After phototype became prevalent during the 1960s, skilled specialists included graphic designers, who created page layouts; typesetters, who operated text and display typesetting equipment; production artists, who pasted all of the elements into position on boards; camera operators, who made photographic negatives of the paste-ups, art and photographs; strippers, who assembled these negatives together; platemakers, who prepared the printing plates; and press operators, who ran the printing presses. By the 1990s digital technology enables one person operating a desktop computer to control most – or even all – of these functions. New photo-optical printing machines used computer-controlled lasers to photosensitize printing drums, making short-run and even individualized full-color press sheets possible.

In spite of strong initial resistance by many designers, the new technology improved rapidly, inviting widespread acceptance. Computer users were empowered by greater control over the design and production process. Digital technology and advanced software also expanded the creative potential of graphic design by making possible an unprecedented manipulation of color, form, space and imagery.

The growth of cable and satellite television in the last quarter of the century expanded the number of broadcast channels, inspired creative and technical advances in broadcast and motion graphics, and paved the way for consumers to embrace the power and flexibility of the Internet. The rapid development of the Internet and the World Wide Web during the 1990s transformed the way people communicate and access information, generating a revolution surpassing even Gutenberg in its magnitude. By the early twenty-first century, many people had become dependent on the Internet for access to both information and entertainment, a phenomenon that has affected all aspects of society and culture. Technology has transformed the era of corporate communications for mass audience into a period of decentralized media offering near limitless options for individuals. Computer graphics experimentation churned through modern and post-modern design ideas, retro revivals, eccentric work, and explored electronic techniques to create a period of pluralism and diversity in design.

By providing designers with new processes and capabilities, new technology often enabled them to create unprecedented images and forms. While many designers rejected and decried digital technology during its infancy and called designers who did explore it “the new primitives,” others embraced it as an innovative tool capable of expanding the scope of design possibilities and the very nature of the design process.

# PIONEERS OF DIGITAL DESIGN:

## April Greiman

A pioneer in digital graphic design, April Greiman explored the visual properties of bitmapped fonts, the layering and overlapping of computer-screen information, the synthesis of video and print, and the tactile patterns and shapes made possible by the new technology. In her first graphic design using Macintosh output, bitmapped type and computer-generated textures were Photostatted to a large size and pasted up through conventional typesetting.

When asked to design an issue of Design Quarterly magazine for the Walker Art Center in Minneapolis, Greiman created a single-sheet magazine with a 61 cm by 183 cm digital collage executed entirely on the Macintosh computer. She explored capturing images from video and digitizing them, layering images in space, and integrating words and pictures into a single computer file.

*“take on the challenge of continuing forward  
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As computers and their software became more powerful, a new spatial elasticity became possible in typography and imagery. In 1988 Greiman expressed an obligation to “take on the challenge of continuing forward toward a new landscape of communications. To use these tools to imitate what we already know and think is a pity”. In addition to using the new technology to make decisions about type and layout, she said, “I think there has to be another layer applied here. And that’s about ideas.”

# PIONEERS OF DIGITAL DESIGN:

## Katherine McCoy

Many art school and university design-education programs became important centers for redefining graphic design through theoretical discourse and experimentation with computer technology. The design department at Michigan's Cranbrook Academy of Art, where graphic designer Katherine McCoy cochaired the design department with her husband, product designer Michael McCoy, from 1971 until 1995, became a magnet for people interested in pushing the boundaries of design. Then a small graduate school with 150 students in nine departments, Cranbrook has long emphasized experimentation while rejecting a uniform philosophy or methodology. The faculty believed students should find their own directions while interacting with others engaged in similar searches. McCoy likened Cranbrook to "a tribal community, intense and immersive," where she functioned as a "parade director and referee."

During McCoy's twenty-four years at Cranbrook, the program evolved from a rational, systematic approach to design problem solving influenced by the International Typographic Style, through an approach that questioned the expressive limits of this style, into one where complexity and layering, vernacular and premodern forms, and the validity of normative rules and conventions were explored. McCoy's posters challenged norms of college recruiting materials and demonstrated a complexity of form and meaning. Breaking away from prevailing notions of simple, reductive communications, McCoy overlaid different levels of visual and verbal messages, requiring her audience to decipher them.

# PIONEERS OF DIGITAL DESIGN:

## David Carson

New developments migrated from personal exploration and design education to the mainstream as editorial designers for specialized magazines applied computer experimentation to their pages. David Carson, a former professional surfer and school teacher, turned to editorial design in the 1980s. Carson eschewed grid formats, information hierarchy, and consistent layout or typographic patterns; instead, he chose to explore the expressive possibilities of each subject and each page or spread, rejecting conventional notions of typographic syntax and imagery. As art director and designer for Transworld Skateboarding (1983-87), Musician (1988), Surfer (1991-92) and Ray Gun (1992-1996), Carson flouted design conventions. His revolutionary layouts included page numbers set in large display type, and normally diminutive picture captions enlarged into prominent design elements. Carson often letterspaced his article titles erratically across images or arranged them in expressive rather than normative sequences. He also required his reader to decipher his messages by slicing away parts of letters. Carson's text type often challenged the fundamental criteria for legibility. He explored reverse leading, extreme forced justification, text columns jammed together with no gutter, text columns the width of a page (and, on at least one occasion, a double-page spread), text with minimal value contrast between type and the image or color underneath, and text columns set in curved or irregular shapes. White display type placed over text covered some of the words, but the text could still be understood. Writing and subject matter receive Carson's careful attention, for his designs emerge from the meaning of the words, or comment on the subject, as he seeks to bring the layout into harmony.

Unconventional treatment of images included 'unnatural' cropping to express content. Although he was viewed as the epitome of the computer revolution, Ray Gun, was the first magazine Carson sent to the printer as electronic files. Before that he had generated elements by computer, then prepared camera-ready art on boards.

Carson became quite controversial during the early 1990's. He inspired young designers while angering others who believed he was crossing the line between order and chaos. Carson's typography was decried and denounced, but as he and others pushed their work to the edge of illegibility, designers discovered many readers were more resilient than they had assumed, and noted that messages were often read under less than ideal circumstances. Film and video techniques informed Carson's magazine designers, for the hierarchical and regularized structure of page design yielded in his work to a shifting,

kinetic spatial environment where type and image overlap, fade, and blur. Disparate visual and verbal elements jostle and collide in space the way sound and image bump and shove in film and video. Carson consciously made his pages cinematic by letting articles and headlines flow from spread to spread and by wrapping pictures around the edge of the page onto the other side.

During Carson's tenure as art director of Ray Gun magazine he provided a rare open forum for major illustrators and photographers while introducing new artists and

*"His revolutionary layouts included page numbers set in large display type, and normally diminutive picture captions enlarged into prominent design elements."*

turning a half-dozen pages over to readers to display their illustrations for song lyrics. This populist gesture recurred as zines, self-published personal magazines using desktop-publishing software and cheap printing or copier reproduction, began appearing in magazine racks. Carson left Ray Gun in 1996 and applied his approach to print and other media communications for mass-media advertisers such as Coca-Cola and Nike. He believes one should not mistake legibility for communication, because while many highly legible traditional printed messages offer little visual appeal to readers, more expressionist designs can attract and engage them.

# PIONEERS OF DIGITAL DESIGN:

## Fred Woodward

After art-directing Texas Monthly and Regardie's, Fred Woodward became art director of the semimonthly rock-and-roll magazine Rolling Stone in 1987; Gail Anderson became deputy art director later than year. As intuitive designers, Woodward and Anderson tried to match typefaces and images to the content. Rolling Stone's tradition of editorial and graphic excellence

The magazine had a Phototypesetter and hundreds of typefaces; Woodward added to this stock and made audacious typography a hallmark of his work. A breakthrough design used large-scale type and a full-page photograph to make a strong visual statement about singer Sinead O'Connor. This layout changed the look and feel of Rolling Stone, for Wood-

Although the magazine converted to Macintosh computers in the early 1990s, Woodward sought a handmade look. Rolling Stone used a wide range of fonts, freely exploiting not only digital manipulation but calligraphy, handlettering, found type, and graphic entropy achieved by running type through a copier many times. When Woodward said he preferred never to

dated to its 1967 inception, so pressure to compete with this legacy prevailed. A turning point occurred when Woodward reinstated the Oxford rules (one name used for multiple-line thick-and-thin borders) found in the magazine's earlier periods. He felt these borders gave him great license, almost as though anything he put within them would look like Rolling Stone.

ward felt challenged to build on it. Text pages were punctuated by expansive double-page opening spreads juxtaposing full-page portraits opposite title pages dominated by display type; frequently these had little or no text. Content was expressed through unexpected selection, scale and placement of type.

use a typeface more than once he was expressing an interest in dynamic change, and in creating a publication that constantly reinvented its design in response to content. His layouts demonstrate how the typeface, its treatment, the color palette, and the image all emerged from associations with the article topic.



# PIONEERS OF DIGITAL DESIGN:

## Matthew Carter

From 1955 until 1957, London-born Matthew Carter learned to cut punches for metal type by hand at the type foundry of the Enschede printing house in the Netherlands. For over forty years Carter designed scores of typefaces, as typographic technology evolved from metal type to phototype, then digital type. During an association with Linotype from 1965 to 1981, Carter's designs included the ubiquitous Bell Centennial (1978), created for early high-speed digital and cathode ray tube technology). It was designed for outstanding legibility in telephone directories using small type on coarse newsprint. After cofounding and directing the type-design activities of the Bitstream digital foundry from 1981 to 1992, Carter formed Carter & Cone Type of Cambridge, Massachusetts.

Carter designs outstanding fonts based on earlier models. Galliard, issued in four weights with italics, is a masterful adaptation of a sixteenth-century design by Robert Granjon. Mantinia is a titling face inspired by painted and engraved capital letters by the Renaissance painter Andrea Mantegna. Sophia is an original display typeface inspired by hybrid alphabets of capitals, Greek letterforms, and uncials from sixth-century revivals of William Caslon's text types, his vigorous and somewhat eccentric display types had not been redesigned for digital typesetting until Carter released his Big Caslong CC>

Standardization and interchangeable parts became the norm of the Industrial Revolution; in typography this conformity was realized through repetition of letterform parts and redundant layout formats. The digital revolution ushered in an era of individualization, flexibility and customization.

*"The digital revolution ushered in an era of individualization, flexibility and customization."*

Matthew Carter's typeface Walker, designed for the Walker Art Center, provides a stunning example of expanding typographic possibilities. Sturdy sans-serif capitals have a series of five add-on serifs called "snap-on (nee Deputy) serifs" by Carter, that can be attached at will to the vertical strokes of each letter; further, these are available in a variety of widths. Carter also designed a series of ruled lines running over, under, or both under and over the letters, linking their forms into a dynamic unity. Of the basic letterforms,

Carter said, "I think of them rather like store window mannequins with good bone structure on which to hang many different kinds of clothing." Ligatures and alternate characters complete a character set, permitting the Walker Art Center to modulate forms to suit the message at hand. The type-

face, or rather its function through various permutations, becomes the corporate identity. Laurie Haycock Makela, Walker's design director from 1991 until 1996, and Matt Eller, a senior designer who became design director in 1996, used the Walker system to achieve a freedom of typographic expression appropriate to a center for art, design and performance.



# PIONEERS OF DIGITAL DESIGN:

## Gitte Kath

In addition to being a poster artist and textile designer, Gitte Kath is scenographer and director at the Mill Theatre in Haderslev, Denmark. Except for a few posters for organizations such as Amnesty International, the Paralympics in Sydney, Australia, and the Umbrella Theatre in Copenhagen, Kath has created most of her posters for the Mill Theatre. Intensely meditative, the posters usually take several months to produce. Her design process involves collecting material, photographing it, and then introducing paint and text, the latter often her own handwriting or enlarged typewritten letters. Many of these visual elements reflect the transitory nature of life, and she has sometimes used a worn and discolored wall in her home as a

*“Kath approaches her posters more as a painter than as a graphic designer”*

background for the photographed objects. Kath approaches her posters more as a painter than as a graphic designer – they relate both to traditional still-life painting and twentieth-century assemblage. Although imbued with a poetic resonance that alludes to the essence of her subjects, her uncompromising approach inevitably requires a dialogue with the viewer.

# CONTEMPORARY DIGITAL DESIGNERS:

## Japan

Conceptualism, a common attribute of Japanese graphic design, is profusely present in the complex designs of Nakajima. Laden with ambiguities, his elegant posters consist of highly abstract minimalistic and direct images of color and light. His painterly and harmonious use of space is created by blending digital imagery, linear moiré patterns, flat planes of color and bold typography. In "I am Walking," a large poster in nine sections, Nakajima subtly guides the reader through the text of a poem about walking in a forest.

Makoto Saito is active as a design director, architecture designer, and graphic designer. Armed with a fecund imagination, he orchestrates an arcane symbolic content that follows no previous models. Serendipity plays a prominent role as he discovers his solutions during the creative process. His 1988 poster for Alpha Cubic Co., Ltd., consists of an intricately reconstructed face. With no text other than the name of the company, it proves to be both a quandary and source of intrigue for the onlooker. It is a mistake to read too much into Saito's pieces. He once stated: "Ten people looking at one of my posters can imagine ten different things." So far, Saito refuses to use a computer, saying "No matter how fast a computer can work, my imagination is much faster." Saito's 1999 poster "Sunrise Sunset" is an elegant and touching tribute to the late Yusaku Kamekura.

Shin Matsunaga presents commonplace objects as fresh, rich and unexpected images. Using simple geometric elements he endows his images with vibrant color and a balance, warmth, and softness that seems almost spiritual. His 2002 poster for the JAGDA Members' Poster Exhibition uses the familiar rising sun theme as a central element.

The application of layers of ethereal light is a recurring design device in posters by the Tokyo graphic designer Mitsuo Katsui. As with Matsunaga, the familiar circular shape is used in his majestic 1998 poster, "En homage a Yusaku Kamekura," a design fully worthy of its subject.

# CONTEMPORARY DIGITAL DESIGNERS:

## Northern Europe

**N**iklaus Troxler was introduced to graphic design while working as a typographic apprentice. He went on to receive formal training at the Art School of Lucerne from 1967 until 1971. He worked as an art director for Hollenstein Creation in Paris before starting his own graphic design studio in Willisau, Switzerland, in 1973. An avid jazz fan, he has created many posters for jazz concerts and festivals. Equally at home with typographic and illustrative interpretations, Troxler is without exception one of the leading forces in poster design today.

**B**eginning his graphic design training with Earnst Keller and Johannes Itten at the Kunstgewerbeschule in Zurich, Karl Dominic Geissbuhler completed his graphic art studies at the Kunsthochule in Berlin. After working as an art director for a German advertising agency, he became a freelance graphic designer. During his long career Geissbuhler has designed over 200 posters for such clients as British Airways and the Zurich Opera House, where he has also created notable stage designs for seasonal festivals of music and theatre. As demonstrated by his posters 'Maria Stuarda,' Geissbuhler is a master of understatement. In the same vein Uwe Loesch, a native of Desden, Germany, provides the viewer with few clues to the meaning of his minimalist and arcane messages. The Berlin/Hamburg graphic designer Holger Matthies delights in presenting ordinary objects and situations in unusual ways: tomatoes become sunglasses.

**T**he Parisian Philippe Apeloig was educated at the Ecole Supérieure des Arts Appliqués and the Ecole Nationale Supérieure des Arts Décoratifs. He then worked as an intern for Total Design in Amsterdam, an experience that greatly enhanced his interest in typography. In 1985 he began working as a designer

for the Musée d'Orsay in Paris, and in 1988 he worked and studied in Los Angeles with April Greiman. After returning to Paris, Apeloig began his own studio and became the art director for Jardins des modes. In 1997 he became a design consultant for the Louvre Museum, where he is currently the art director. Whether image-based or typographic, Apeloig's designs are dominated by an expressive and decisive use of typography that not only provides information but also functions as a visual pun.



# CONTEMPORARY DIGITAL DESIGNERS:

## The Middle East

**T**he Middle East deserves far more attention than space will allow in this volume. The Israeli graphic designer David Tartakover studied at the Bezalel Academy of Art and Design in Jerusalem before graduating from the London College of Printing in 1968. Since 1976 he has served as senior lecturer in the visual communication department at the Bezalel Academy of Art and Design and has been a frequent speaker at professional seminars and art colleges throughout Israel and overseas. Since 1975, he has operated his own studio in Tel Aviv, specializing in visual communications on cultural themes.

**G**raphic Design in Iran has developed an increasingly idiosyncratic flavor. The typographic expressive posters of the Iranian Graphic designer Reza Abedini reflect both his training in graphic design and his later education as a painter. Often combining Farsi with English or French, his posters radiate a graceful elegance. As with his prize-winning poster for the film *Reves de sable*, his type and image frequently become one and the same.

# CONTEMPORARY DIGITAL DESIGNERS:

## Mexico

A number of Mexican designers, including Felix Beltran, were born in other countries. A native of Havana, Cuba, Beltran went to the United States in 1956 to study painting and graphic design at the School of Visual Arts, the Art Students League, the American School of Art, and the Pratt Institute. In 1962 he returned to Cuba, where he designed a series of social and political posters about the Cuban revolution, indigenous art, public safety, and the new economy. For the past fifteen years Beltran has lived in Mexico where he works as principle designer for the Beltran-Asociados Studio. With its architectural, structural framework, Beltran's graphic design follows the traditions of the international style.

Although from Mexico, Luis Almeida's background is international, having studied architecture at the Universidad Nacional Autonoma de Mexico, industrial design at the University of Florence, Italy, and semiotics at the Sorbonne in Paris. He works primarily as an editorial designer for the magazines Saver-Ver and Artes de Mexico and the journals El nacional and La Cronica. As demonstrated by his poster "Cervantes XXXII", honoring the Spanish author Miguel de Cervantes, Almeida's designs are often direct and confrontational.

Like Almeida, German Montalvo received a European education, studying at the National Institute of the Fine Arts and the Scuola del Libro, Societa Umanitaria, both in Milan, Italy. His designs for the Fondo de Cultura Economica, the National University of Mexico City, the National Institute of the Fine Arts, and the Ceintro Cultural Arte Contemporaneo have placed him in the mainstream of Mexican graphic design. As indicated by his poster celebrating the poet Jose Gorostiza, Montalvo is clearly in the Polish poster tradition.

Gabriela Rodriguez studied graphic design at the Escuela de Diseno del Instituto Nacional de Bellas Artes. As a graphic designer, she works mainly on children's books, magazines, posters, and contemporary art catalogues. Her whimsical designs, like Montalvo's, are inspired by Polish poster designers such as Roman Cieslewicz. The work of independent graphic designer Alejandro Magallanes also has roots in the Polish conceptual realm. With overtones of surrealism, he employs collage and freehand drawing with wit and intellectual prowess.

# EPILOGUE

At the time of this writing, human affairs are undergoing a new revolution comparable to the industrial revolution that launched the machine age. Electronic circuitry, microprocessors, and computer-generated imagery threaten to radically alter our culture's images, communications processes, and the very nature of work itself. Graphic design, like many other spheres of activity, is experiencing profound changes. The graphic design community is responding to this new age of electronic circuitry by an involvement in media graphics, systems design, and computer graphics.

The tools—as has happened so often in the past—are changing with the relentless advance of technology, but the essence of graphic design remains unchanged. That essence is to give order to information, form to ideas, and expression and feeling to artifacts that document human experience.

The need for clear and imaginative visual communications to relate people to their cultural, economic, and social lives has never been greater. As shapers of messages and images, graphic designers have an obligation to contribute meaningfully to a public understanding of environmental and social issues. Graphic designers have a responsibility to adapt new technology and to express their zeitgeist by inventing new forms and new ways of expressing ideas. The poster and the book, vital communications tools of the industrial revolution, will continue in the new age of electronic technology as art forms, and graphic designers will help to define and extend each new generation of electronic media.



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