TYPE & IMAGE

The Language of Graphic Design

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assistance is required, the services of a competent professional person should be sought.

For my children,
Andrew Philip Meggs and
Elizabeth Wilson Meggs

Acknowledgments

Introduction

What is the essence of graphic design? How do graphic designers solve problems, organize space, and imbue their work with those visual and symbolic qualities that enable it to convey visual and verbal information with expression and clarity? The extraordinary flowering of graphic design in our time—as a potent means of communication and a major component of our visual culture—increases the need for designers, clients, and students to comprehend its essence.

Traditionally, graphic designers looked to architecture or painting for their model. Certainly, a universal language of form is common to all visual disciplines, and in some historical periods the various design arts have shared styles. Too much dependence upon other arts—or even on the universal language of form—is unsatisfactory, however, because graphic design has unique purposes and visual properties.

Graphic design is a hybrid discipline. Diverse elements, including signs, symbols, words, and pictures, are collected and assembled into a total message. The dual nature of these graphic elements as both communicative sign and visual form provides endless fascination and potential for invention and combination. Although all the visual arts share properties of either two- or three-dimensional space, graphic space has a special character born from its communicative function.

Perhaps the most important thing that graphic design does is give communications resonance, a richness of tone that heightens the expressive power of the page. It transcends the dry conveyance of information, intensifies the message, and enriches the audience's experience. Resonance helps the designer realize clear public goals: to instruct, to delight, and to motivate.

Most designers speak of their activities as a problem-solving process because designers seek solutions to public communications problems. Approaches to problem solving vary, based on the problem at hand and the working methods of the designer. At a time when Western nations are evolving from industrial to information cultures, a comprehensive understanding of our communicative forms and graphic design becomes increasingly critical. I interrupted all other activities for a half-year to study the nature of graphic design; this book is the result.
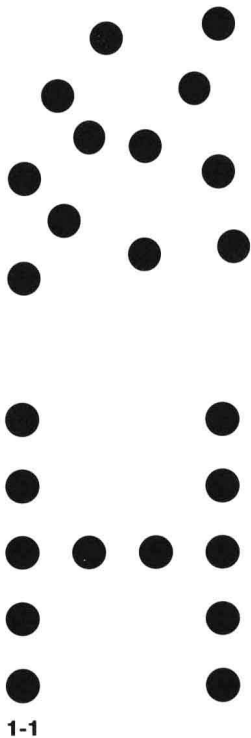
Contents

Chapter One: The Elements of Graphic Design

The general public does not understand graphic design and art direction. Designers tell the story of a graphic designer trying to explain this job to Grandmother. The designer shows Grandmother a recent project and says, "You were asking me about what I do, Grandmother. I'm a graphic designer, and I designed this."

Pointing to the photograph in the design, the grandmother asks, "Did you draw that picture?"

"No, Grandmother, it's a photograph. I didn't draw it, but I planned it, chose the photographer, helped select the models, assisted in setting it up, art directed the shooting session, chose which shot to use, and cropped the picture."

"Did you write what it says, then?"

"Well, no," the designer replies. "But I did brainstorm with the copywriter to develop the concept."

"Oh, I see. Then you did letter these big words?" asks the grandmother, pointing to the headline.

"Uh, no, a typesetter set the copywriter's words in type, but I specified the typefaces and sizes to be used," responds the designer.

"Well, did you draw this little picture down in the corner?"

"No, but I selected the illustrator, told her what needed to be drawn, and decided where to put it and how big to make it."

"Oh. Well, did you draw this little, what do you call it, a trademark?"

"Uh, no. A design firm that specializes in visual identification programs designed it for the client."

The grandmother is somewhat confused about just what it is that her grandchild does and why credit is claimed for all these other people's work.

The designer's task

The conceptual nature of the graphic design process generates public confusion about the designer's task. The designer combines graphic materials—words, pictures, and other graphic elements—to construct a visual communications *gestalt*. This German word does not have a direct English translation. It means a configuration or structure with properties not derivable from the sum of its individual parts. Figure **1-1** demonstrates this principle. The first set of twelve dots, randomly placed, has no meaning or content beyond the phenomenon of twelve dots printed on the page. By contrast, the second set of twelve dots has been consciously structured into a visual configuration with meaning as a common sign: the letter *H* from the Roman alphabet. In one sense, the letter *H* is not present, but the human eye perceives the dots, and the human mind connects them into a recognizable pattern—the structure of a letterform. In the first configuration, the viewer sees a random dispersion of parts; in the second, the viewer sees the whole.

Organizing these dots into a simple visual gestalt is symbolic of the graphic design process: The designer combines visual signs, symbols, and images into a visual-verbal gestalt that the audience can understand. The graphic designer is simultaneously message maker and form builder. This complex task involves forming an intricate communications message while building a cohesive composition that gains order and clarity from the relationships between the elements.

Another aspect of the designer's task is to infuse content with resonance. A term borrowed from music, *resonance* means the reverberation or echo, a subtle quality of tone or timbre. A violin prized for its resonance creates music with a richness of tone that heightens the expressiveness of sound. Graphic designers bring a resonance to visual communications through, for example, the use of scale and contrast, cropping of images, and choice of typefaces and colors.

1-1
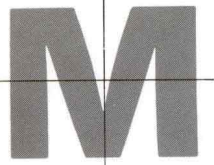
A line of type moves to the right.

1-2

1-3
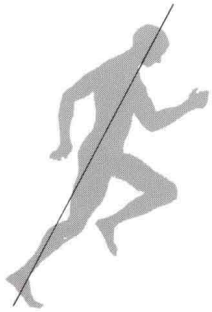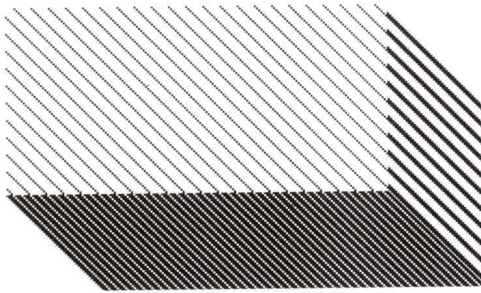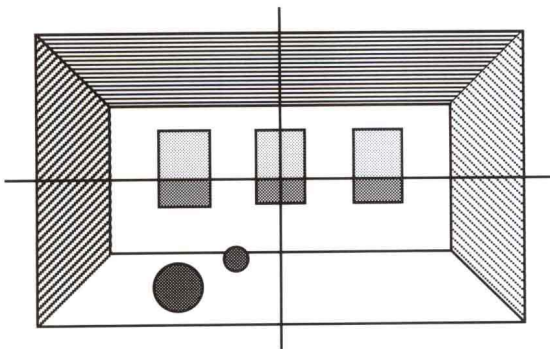
The dual life of a graphic form

Almost every graphic form—from a small period at the end of a sentence to the most complex color photograph—has a dual existence: It is an optical phenomenon with visual properties, and it is a communicative signal that functions with other signals to form a message.

The three forms in figure **1-2** illustrate that each has a center located at the point where its horizontal and vertical axes intersect. Even organic forms and forms placed into an unstable spatial dynamic have centers. Perceptual energy is generated by forms in graphic space. Even the static, perfectly balanced letterform *M* in figure **1-2** has energy that is generated by its light-and-dark contrast with the white page. In addition to the *energy of contrast,* which can be produced by contrasts of color, value, or texture between the figure and its ground, a form gains energy from its implied movement and direction. The *M* is static because its horizontal and vertical axes are equal and divide the form into four nearly equal and symmetrical quadrants. The line of type has a long horizontal movement, which propels the viewer's eye toward the right. Some forms radiate energy, and others are passive. Even though the running silhouette has vigorous energy and movement, it maintains equilibrium because its parts are balanced around its axes. These three forms maintain a flat, two-dimensional relationship with the page.

Forms can produce illusions of movement behind the flat page away from the viewer or projected forward from the surface. The perspective diagram demonstrates an *illusion of spatial depth,* a sense of three-dimensional space on the flat surface, and the box suggests projection forward in space toward the viewer. In the last two examples, the implied axes of the forms also move backward and forward in space.

In addition to their optical and perceptual life, graphic forms have symbolic life as signs, symbols, and images that combine with one another to convey a message to the viewer. This communicative role can occur only within a culture, for signals transmit information according to a predetermined system or code. Chinese calligraphy and the English alphabet, for example, are prearranged systems that are understandable only
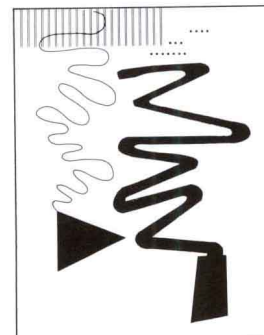
1-4

to people who have learned the language.

The dual role of graphic forms is clearly illustrated in Paul Rand's cover for the Spring 1943 issue of *Direction* (fig. **1-3**), a writers' magazine. Two analyses of this cover—as visual design and as graphic communication—clearly demonstrate this duality.

The visual composition can be seen and evaluated almost as an abstract painting (fig. **1-4**). A triangle and a rectangle are placed in a dynamic relationship to each other. Each has an internal, lighter form that creates a pull or tension within the larger form. The darker area of the rectangle duplicates the shape of the triangle and forms a relationship between them. The bold calligraphic line establishes a relationship to the triangle, which seems to pull the gesture toward it almost as though there is a magnetic attraction. Then the gesture moves away to form an angle that echoes the sides of the triangle. A line germinates from each shape. These lines of contrasting weight weave and pull through the space. They divide the white background into three open planes that move and flow with the rhythm of the lines. The lines seem alternately to attract and repel each other as they move through the space. The masthead above is stable, in contrast to the dynamic movement and energy of tilted shapes and flowing lines. Its placement parallels the horizontal edges of the page and unifies them with it. An active yet balanced composition is formed.

A separate analysis approaches the same phenomenon as communication. The masthead tells us that this is *Direction* magazine, and the gestured script below it indicates that this is the first issue of volume 6, published in the spring of 1943. Because *Direction* was a magazine for writers, the triangular photograph of a pen point was interpreted by its readers as a symbol for writers. In the 1980s, the rectangular photograph of a smokestack would be interpreted as a symbol for industrial pollution, but in the early 1940s it was a symbol for heavy industry. The pen point draws an ink line through space to signify the writer's output, and the smokestack produces a bold brush stroke representing smoke as a symbol for industrial production. Inside, *Direction* subscribers learned that a contest for writing by workers in war industry was to be held. The placement of the photographs and the contrast between the lines suggest tension, rather than order and unity, and imply that perhaps discomfort or a difficult adjustment exists for creative writers who are working within war industry.

This magazine cover, produced more than four decades ago by a young designer not yet thirty, clearly demonstrates the important dual role of the graphic designer as message maker and form builder.

Information and communication

Information is knowledge about facts and events, and communication is the transfer of information between people. We live in a world of communication, constantly sending and receiving messages, gathering and disseminating information. With the development of twentieth-century communications technology, a theory of communications or information transmission has evolved. Its central premise is that information can be studied and measured very much like physical quantities such as mass and energy. Shannon and Weaver's basic theory of communication[1] is based on a general communications system (fig. **1-5**) with the following components:

An *information source* that produces the message or raw information to be transmitted

A *transmitter* or *encoder* that transforms this information into a form, called a *signal,* that is suitable for the channel

A *channel* upon which the encoded signal is transmitted to the receiving point. Distortion or interference, such as static in radio reception or "snow" in television, is called *noise,* represented on the diagram by the *noise source.*

The *receiver* or *decoder,* which translates the received signal back into the original message or an approximation of it

The *recipient* or *destination,* which receives the decoded message.

Basic information theory is based on an elemental signal called a *bit* or *binary digit,* the smallest unit of information in a computer or other electronic communication system. A bit consists of one of the two units of the binary code, either one or zero. By reducing the communications process to this elementary level, Shannon and Weaver opened remarkable doors for the development of communications technology. Computers, video recorders, and cellular telephones are examples of technological systems that deliver information by digital technology. Basic information theory addresses the method of communication but not the content or purpose of communication; therefore, it is inadequate to explain communicative art forms including literature, music, or graphic design. Human communication can be subjective, expressive, and aesthetic, but basic information theory is cast in the cold, impersonal logic of the machine. The audience and the complex and rich nuances of graphic signals are aspects of graphic design that are beyond its scope.

Information Source

▼

Transmitter (Encoder)

▼

Signal (in channel)

◀ Noise Source

▼

Receiver (Decoder)

▼

Recipient (Destination)

1-5

The audience

Complex symbol-making activity dates back at least 300,000 years—the approximate date of the earliest known example of intentional use of symbolism in engraving—to an ox rib found in France that is marked with festooned double-arcs.[2] Early visual language includes: *pictographs,* elemental pictures representing objects; *ideograms,* which signify concepts or ideas rather than specific objects; and *petroglyphs,* which are carved into rock. Figure **1-6**, a rubbing by Rob Carter from a petroglyph carved by Paiute Indians in Grand Wash Canyon, Utah, depicts pictographs of a standing man, a horseman, and a bison. Collectively, these pictographs signify the concept of a hunt, which moves into the realm of the ideogram. From these simple origins, cultures have evolved collective and complex systems of signs and symbols that enable its members to communicate. The ability of the audience to decode and understand a graphic design becomes a major limitation governing its form and content. Milton Glaser observed that "the reason new forms usually don't emerge from the design activity . . . is that design is in many ways a vernacular language. Design-related work assumes that the audience addressed has an *a priori* understanding of the vocabulary," and it "conveys information based on the audience's previous understanding."[3] The audience's language and level of *visual literacy,* which means skill in comprehending and using visual forms, must be taken into account if the designer is to communicate successfully.

A vocabulary develops through trial-and-error experience as a young child learns to talk, to understand the culture's visual language system, such as our alphabet, and to read by using this sign system as a visual equivalent of verbal language. American college students who worked in health-care outreach programs in Nepal observed how the audience's limited visual literacy prevented effective communication. Rural villagers were shown a three-foot-tall illustration of a fly in health-care

presentations explaining how a fly deposits infectious bacteria on food. Hopes that the villagers would adopt recommended sanitation procedures were dashed when the villagers left the meetings chuckling that they did not need to worry. After all, their village had no giant three-foot flies, only little tiny ones.[4] Culturally, the villagers had not learned to read pictures and did not comprehend the large illustration as an enlarged image of the common fly. The communicators were naive because they did not know that the intended audience lacked the ability to decode the message.

Within each culture's shared signs and experiences, each individual has a personal "reality world" shaped by unique experiences and learning. This has been illustrated by the example of a man, woman, and child looking at the same street scene. Each perceives it in a slightly different way, consciously perceiving and understanding totally different details of the whole.[5] The woman might notice new dresses in the windows of a fashion boutique, while the child does not even notice this store but observes the antics of a small dog unseen by the woman. Two people reading the same magazine article glean totally different information. Individual experiences shape attitudes and perceptions and create a diverse and pluralistic society. Economic status, ethnic and religious background, social background, and age group all form tribes within our culture. Different tribes respond to different graphic approaches, and graphic style can even be an important means of tribal identification. Graphic approaches used on a Frank Sinatra recording would be totally inappropriate for the audience for a heavy metal rock recording, and vice versa.

1-6
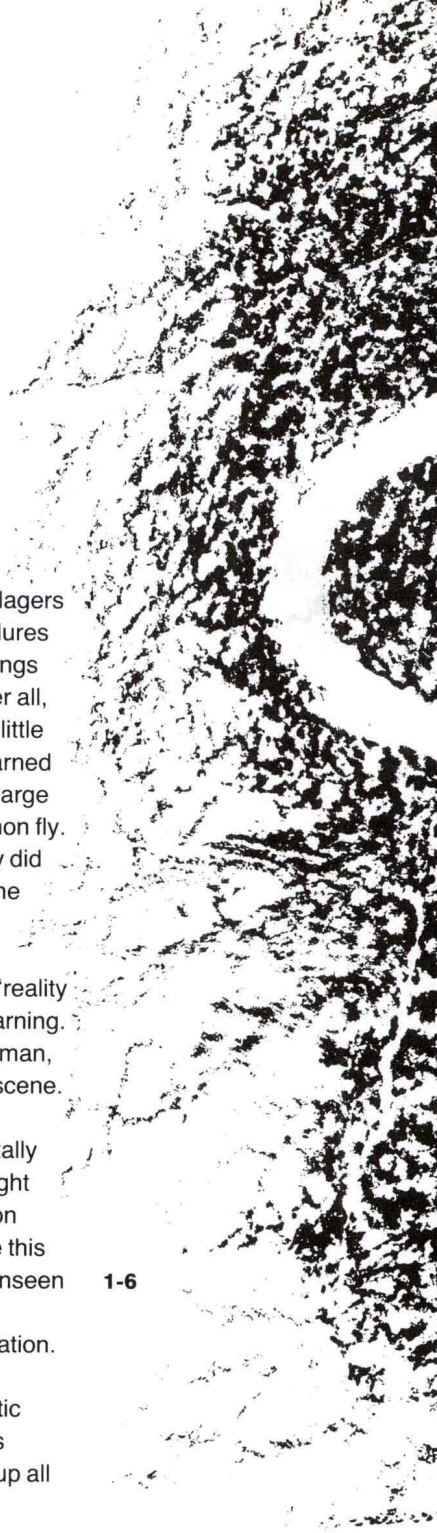
The graphic signal

An important attempt to develop a theory of graphic design as communication was made by Crawford Dunn, who defined three distinct modes of communicative signals and coined a name for each.[6]

Alphasignal is the hard data or primary facts and figures of a communication. *Alpha* is the first letter of the Greek alphabet; it denotes that which is first or primary. Dunn believes that telephone directory listings, stock market quotations, and computer display data are all pure alphasignal. "Alphasignal, then we may say, carries the objective part of the message, without inflecting, without emphasizing, without editorializing, without reinforcing, without propagandizing, maximizing or minimizing—in short, without rhetoric." [7] Alphasignal is the content of the stated message. In figure **1-7** (top), the word *stop* represents the alphasignal of the traffic sign.

Parasignal designates a mode of signal that travels alongside or at the side of the alphasignal to amplify and support it. On a stop sign, the red color and octagonal shape have become accepted through traditional usage as parasignals that support and enhance the alphasignal. Dunn points to the elegant script type and fine engraved printing used on wedding invitations as an example of parasignal, noting that alphasignal alone could be conveyed by typewriter output reproduced by a fast, inexpensive printing service.

Infrasignal is information underlying or beneath the message that can betray the sender. Dunn uses an excuse note forged by a schoolboy who played hooky to define this term. "With effort, he negotiates the alphasignal of the correctly spelled words and—almost—manages the parasignal of his penmanship. A certain unmistakably puerile quality in his handwriting informs the teacher that the note

is counterfeit." [8] If a planned community installed traffic signs as shown in figure **1-7** (bottom), motorists would know that they were not "official" traffic signs erected by the highway department and might even ignore them. The color is appropriate parasignal; however, the heart shape and script letterforms convey an entirely different meaning. Infrasignal should not be confused with noise, Dunn cautions, for noise is an environmental element or systemic defect that occurs after the message has left the sender and interferes with clear communication between the sender and receiver. Infrasignal is a mode of the signal that is conveyed by the sender along with the alphasignal and parasignal.

Dunn's theory is one useful approach to analyzing and understanding the complexity of graphic forms. Another approach is the philosophy of semiotics,[9] which is a general theory of signs and sign-using behavior.

Signs and their use

A *sign* is a mark or language unit that stands for or denotes another thing. The plus sign for addition, the letter *A* for a specific spoken sound, the word *apple,* and a simple pictograph of an apple are all signs. A sign and its object have a simple connection. They form a pair, bonded by a direct one-to-one relationship. A three-way relationship exists between the signified, the signifier, and the interpreter. The *signified* is the thing that is represented (an apple). The *signifier* is the sign that represents it (the word *apple* or a pictograph of an apple). The *interpreter* is the person who perceives and interprets the sign.

The interpretation of a sign is impacted by the context in which it is used, its relationships to other signs, and its environment. This is demonstrated by three uses of the same red circle. It is the sign of Japan: the country, the people, and their culture are all signified by this simple sign (fig. **1-8**).
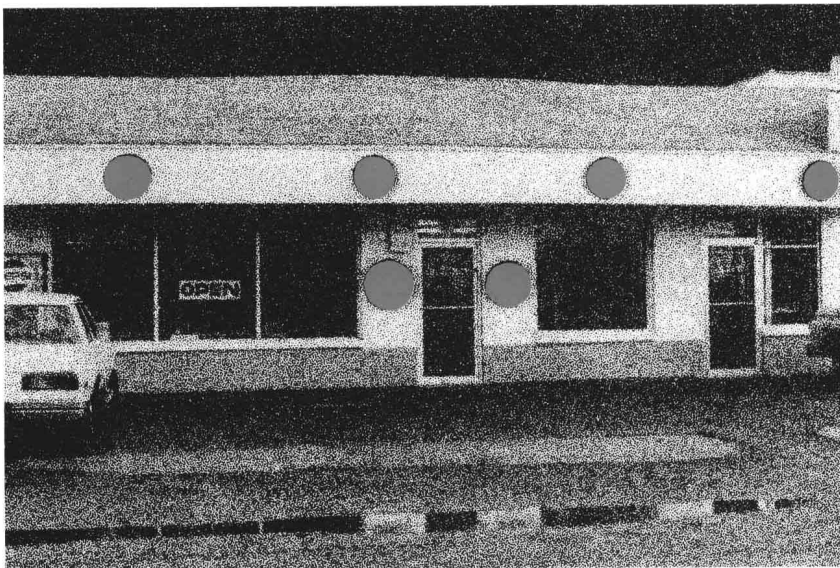
In South Carolina, where a state law prevents liquor stores from erecting signs announcing their products, such stores are identified by large red circles or dots painted on the buildings (fig. **1-9**).
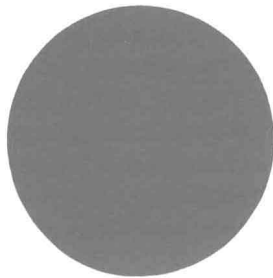

1-7
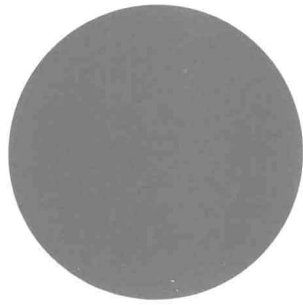
1-8

1-9

After Prohibition ended in 1933, a woman in Charleston, South Carolina, was opening a liquor store and hired a painter to paint the building white. After he finished, they were looking at the freshly painted store. The woman stated that she thought it was ridiculous that the state would not allow her to erect a sign and wondered aloud if she could do anything to identify her business. At that moment, the painter lit a cigarette, looked at the red circle on his Lucky Strike package, and suggested that he could paint a big red circle on the building. Soon other stores copied this practice, and a symbolic convention was established. This episode reveals several truths about visual signs. They are often arbitrary, having their meaning assigned by a deliberate decision. Signs can convey their message to only those individuals who have learned the sign or the sign system. A person from the Orient visiting South Carolina might presume that the liquor store was a Japanese facility if he or she had not yet learned that big red circles signified the sale of alcoholic beverages there.

The ability of words to direct the viewer toward the appropriate meaning of a sign or visual form is demonstrated by figure **1-10,** designed by the Russian constructivist El Lissitzky to illustrate a poem by Vladimir Mayakovsky. In this poem, entitled "An Extraordinary Adventure which Befell Vladimir Mayakovsky in a Summer Cottage," the sun visits a desolate Mayakovsky in his cottage for tea and conversation one hot July afternoon. The large red circle signifies the visiting luminary. This layout is from the 1923 book *For the Voice,* noted for Lissitzky's ground-breaking use of elementary geometric elements as illustrations. He assigned them meanings that expressed the subjects of Mayakovsky's poems.

1-10

Signs can be categorized by types, and one philosopher developed a complex system of sixty-six classes. Signs used in graphic communications normally fall within four basic categories.

An *icon* resembles the thing it represents. A pictorial representation, a photograph, an architect's model of a building, or a star chart are all icons, because they imitate or copy aspects of their subject. Figure **1-11** is an icon representing a bird.

An *index* has a factual or causal connection that points toward its object. Wet streets are a sign that it has rained recently. Smoke signifies a fire. Figure **1-12** is an icon of a nest, but it is also an index signifying bird, because the viewer thinks of a bird upon seeing this image.

A *symbol* has an arbitrary relationship between the signifier and the thing signified. The interpreter understands the symbol through previous knowledge and experience. Spoken or written words are symbols. In figure **1-13,** the word *bird* functions as a symbol. Its designation is arbitrary, for there is no reason for this word to represent a bird instead of a vegetable or a fruit.

A *metasymbol* is a symbol whose meaning transcends the tangible realm of simple one-to-one relationships. History, culture, and tradition all play a role in creating metasymbols, such as the dove with an olive branch as a symbol for peace (fig. **1-14**). For certain audiences, religious and magical signs and symbols take on these properties. The Christian cross and the Hindu mandala are graphic signals possessing this transcendental quality for followers of these religions.

The interpreter brings this expanded meaning to the symbol, as is dramatically demonstrated by the swastika (fig. **1-15**). This symbol has been found in ancient Europe, Asia, and America. In the ancient world it was called *crux gammata* because it is made up of four gammas, the third letter of the Greek alphabet. It is believed to have been a mystic symbol for the sun or fire and, by extension, life. During the early Christian era, it was marked on many tombs as a camouflaged version of the Christian cross. This form was chosen by the Nazi Party in Germany as its official insignia in 1935 under the mistaken belief that it was an ancient Nordic symbol. The swastika's symbolic meaning is now locked into a signification of Nazi Germany, Adolf Hitler, and the Holocaust.
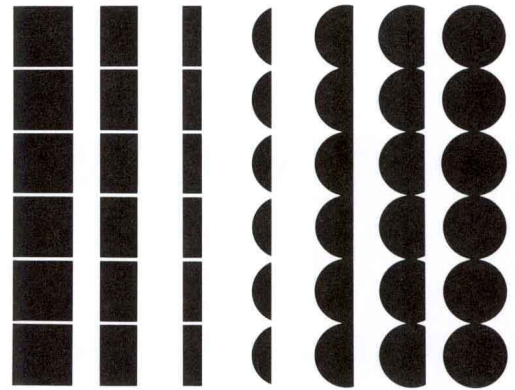

1-11

1-12

1-13

1-14

1-16
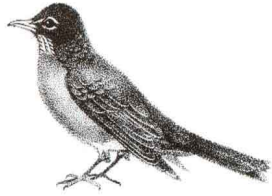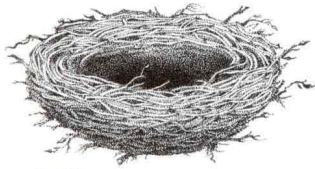
Graphic designers use signs and symbols as powerful vehicles for communication. Elemental forms can be combined to signify content. To illustrate the title of the article "The Times They Are A'Changin'," Dietmar Winkler used a sequence of squares that contract, followed by semicircles that grow into full circles (fig. **1-16**) to give visual form to a concept—change over a period of time.

A letterform, the sign for a speech sound, can be adopted by a graphic designer to signify something else. Lorraine Louie designated the letter *Q* as a sign for a magazine of new American writing, *The Quarterly* (fig. **1-17**). The size, style, and position of the letterform are a constant, but its color, the other forms, and the numeral designating the issue number change with each issue. Readers of this periodical learn this designation rather quickly.

1-15

THE QUARTERLY

SPRING 1987

Q.¹
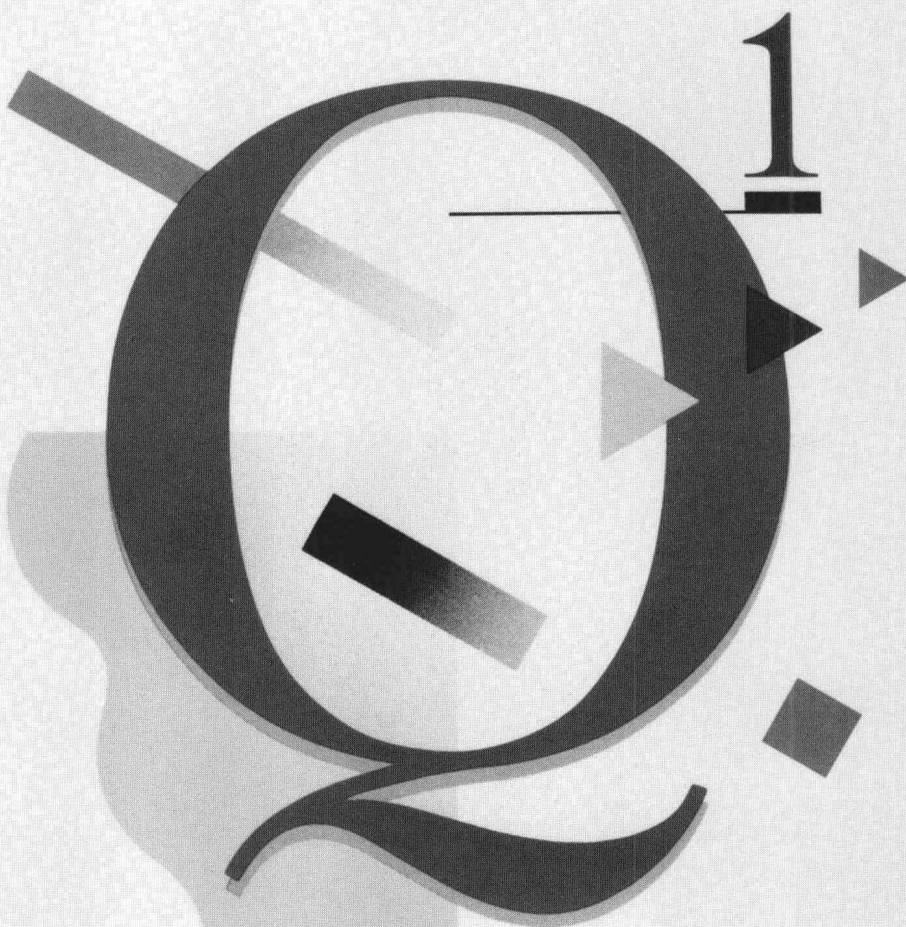
THE MAGAZINE OF NEW

AMERICAN WRITING

Elemental signs can present messages with immediacy and impact. In a folder informing Holiday Inns, Inc., employees that their contributions to higher education would be matched by their employer (fig. **1-18**), Jacklin Pinsler used a pictographic apple, which is a culturally conditioned sign for education ("An apple for the teacher . . ."), with an equal sign on the cover. The equal sign points toward the interior of the folder to prompt the reader to open it and discover that one apple equals two apples. This provocative equation inspires one to read further and learn about the process for multiplying contributions.

Color can carry strong symbolic connotations. Enormous flexibility exists in the meaning of colors. Depending on its context and relationships with other signs, symbols, and images, the color red can connote love, anger, blood, revolution, danger, or Santa Claus. In figure **1-18**, it serves two functions. The red reinforces the signification of apples, and its striking contrast to the black background and white torn-edge contour creates strong visual impact.

Holiday
Inns,
Inc.
Partner Program
Contributions
Information
and
Procedures

"The grand
result
of schooling is
a mind with
just vision to
discern, with
free force to do..."
Carlyle

1-18