ABSTRACT
        As electronically mediated communication becomes more
prevalent, print is regaining the original pictorial qualities which
graphemes (written signs) lost when primitive pictographs (or picture
writing) and ideographs (simplified graphemes used to communicate
ideas as well as to represent objects) evolved into first written,
then printed, texts of phonetic letters. Many distinctly modern
cultural texts use letters both as phonetic code and as a pictorial
element of visual design, thus combining the modes of signification
of phonetic and picture writing. Both pictographs and ideographs bear
a natural resemblance to their meanings, and have visual presence in
messages that are as much graphic designs as text. Modern
text-and-image messages, such as commercial promotions, merge
imagerial elements with print. Electronic media provide immediate and
vivid experiences which can be shared by groups, replacing solitary
reading with participation in a common symbolic environment, which
tends to break down social hierarchies and promote egalitarianism. On
the other hand, electronic media can overwhelm the sense of logical
process found in print, and encourage spontaneity at the expense of
reflection. A shift from print media to image-oriented media is not
necessarily imminent, but a communication technology in which print
is handled electronically, as screen images, may become an extension
of print media, requiring a new literacy which will not replace
print, but will accommodate and enrich it. (Three figures are
included and 21 notes are attached.) (MM)

TEXT AS IMAGE

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ABSTRACT

As electronically mediated communication becomes evermore prevalent, print is regaining the original pictorial qualities which graphemes (written signs) lost when primitive pictographs and ideographs evolved into first written, and then printed, texts of phonetic letters. This essay concludes that the literacy of the future will not ignore print, but will include it as part of a larger repertoire of ways to represent meaning.

This essay explores the place of print in a world of increasingly electronically mediated communication. That is a very large subject, and these remarks are meant to be suggestive, not definitive.

The standardized graphemes (letters) of a printed text are visually neutral;[1] they are not meaningful in themselves (which is why the same set of letters can represent many different languages). The phonetic graphemes of print (more exactly, strings of graphemes--words) have meaning only as arbitrary signifiers which, by general agreement, refer to certain abstractions.[2] The writing of pre-print cultures, however, has visual impact. In medieval illuminated manuscripts, design, color and the flourishes of a scribe's individual writing style make the text an object of visual interest, as well as a transparent vehicle of abstract meanings. The pre-phonetic picture writing of ancient civilizations uses graphemes which have natural, rather than arbitrary, relationships to their meanings. The graphemes look like what they mean.[3] The visual design of the grapheme is important because the relationship between grapheme and meaning is *iconic.* Reading a phonetic text requires translating cryptic code into abstract concepts; reading picture writing entails visualizing concrete situations.

Many distinctively modern cultural texts use letters both as phonetic code and as a pictorial element of visual design, thus combining the modes of signification of phonetic (arbitrary) and picture (iconic) writing. Just before the turn of the century, pictorial product advertisements came into vogue. During the aesthetic revolution of 1900-1920, print appeared in some paintings and collages. At the same time, imagism, a visual concept, became a new ideal for poetry. Text is clearly a design element in billboards and posters. Print has striking visual impact in some avante-garde neon sculpture, and in the architecture of neon signs. (Tom Wolfe, in the short story "Las Vegas (What?) Las Vegas (Can't hear you! Too noisy) Las Vegas!!!!,"[4] describes how the massive neon print shapes of casino signs form the skyline of Las Vegas.) Text is a graphic element of the layout design of America's most truly national newspaper, USA TODAY. On television, print is a part of the visual field of the screen in most commercial spots, and in news and sports graphics. In computerized desktop publishing, text and graphics are merged and processed in the same way, as screen images.

Early picture writing suggests a way of looking modern media artifacts in which letters are both text and image.

Early Writing

The earliest fragments we have of the picture writing from which

Sumerian cuneiform script developed date from about 3000 B. C.[5] The

graphemes are pictographs--each is a picture of (means) one or more

objects. Pictographs are not letters, but words which mean what they look

like, or something very close to it. A pictographic writing system is

limited. While it excels at vividly communicating a sense of material

objects and even situations, it cannot communicate ideas *per se.*

Pictographic writing cannot communicate abstractions because concepts

have no visual (iconic) form.

Picture writing has other problems, too. For one, pictographs are quite

complicated to draw. Over time, the Sumerian scribes simplified the forms

of their pictographs, with the result that they looked less and less like the

object(s) they represent.[6] Another problem was that early cuneiform

required a very great number of different graphemes. The number was

reduced and kept manageable by assigning to each pictograph a range of

meanings, and using various contextual elements to suggest the relevant

meaning.[7]

By 2500 B. C., the streamlining of early cuneiform picture writing

resulted in the "archaic' script,"[8] whose graphemes were stripped-down,

formalized schemate of their original pictographs. These simplified

graphemes were used to communicate ideas as well as to represent things,

and hence are called ideographs.[9] An ideograph's range of meaning, however,

is still limited by its image. For instance, ☼ as a pictograph can only

mean "sun." As an ideograph, context and/or auxiliary linguistic devices

suggest whether ☼ ought to be understood as "sun," "day," "hot," "bright,"

etc.

The change from pictographs to idergraphs is a major advance in writing.

But the change from ideographic to phonetic graphemes, which cuneiform

experienced about 1800 B. C., is much further-reaching still. By 1800 B. C.,

the original cuneiform pictographs, simplified still more, came to represent

not objects or ideas, but sounds. Graphemes which stand for sounds are

phonographs. Cuneiform became a six-vowel, 15-consonant phonetic

alphabet counterpart to modern English.[10] As a phonetic language system,

cuneiform's written words are connected to their meanings only by arbitrary

convention and general agreement, not by resemblance. The graphemes are

text, not image. (Much later, when phonetic graphemes came to be

reproduced uniformly in multiple copies by the printing press, the last

vestiges of visual presence, the eccentricities of individual handwriting styles, disappeared.)

Text and Image

Both pictographs and ideographs bear a natural resemblance to their meanings, but in different ways. A pictograph is a viridical image. An ideograph is a token or trace: the ideograph "☼" means bright in the sense of "bright like strong sunlight." Since their meanings arise from their appearance, communicating with these graphemes is as much drawing as it is writing. They are visual, graphic images.

Other aspects of ancient writing also suggest that pictographs and ideographs are as much images as they are text. At one point in the development of cuneiform, Sumerian scribes seem to have decided to hold their stone tablets sideways, at 90 degrees from their customary orientation. The scribes also rotated their graphemes 90 degrees,[11] suggesting that they believed in some organic connection between the images of ideographs and the material in which they were embedded. Egyptian hieroglyphs could be written in any direction—right to left, left to right, top to bottom or bottom to top. Hieroglyphs shaped like stick figures of men and women give the clue as to how to read the text: all the figures

face in one direction or another, and the reader knew to read toward the faces.[12] Hieroglyphs were sometimes used to decorate door frames with messages which either welcomed or warned visitors. Often, the same message was written down each side of the door frame with the two sets of letters mirror-imaged.[13] Of course, letters (phonographs or phonetic, arbitrary graphemes) rotated 90 or 180 degrees are never used; they would simply be wrong.

Framework for a Rough-and-Ready Aesthetic

The ways in which pictographs, ideographs and phonographs represent their meanings correspond to C. S. Pierce's ideas of iconic, indexical and arbitrary signification.[14] Pictographs and ideographs (iconic and indexical signifiers, respectively) have visual presence in messages that are as much graphic designs as text. For example, a low-angle point-of-view directed up to a lurid, blown-up image of, say, a hypodermic syringe might be, by both referential meaning and graphic impact, an effective cautionary message in an anti-drug campaign.

If a text block ("Just say No!") is substituted for the image of the syringe, a similar message results. This is in part because of the referential meanings of the words. But the text as image, as a design

element of a billboard, TV graphic, or whatever, also has the meanings of its

visual design. In this case, the looming presence of the message from a

low-angle view, and the strong colors, mean, "This is importantly

dangerous; pay attention!" In this way, even arbitrary phonetic graphen.es,

which do not have built-in visual similarities to their meanings, come to be

visually important in mixed-mode messages which combine iconic and/or

indexical signifiers with arbitrary ones. In such messages, text and image ·

are not separable; letters are graphics.

Text as graphic image calls for an aesthetic of how features of the

visual design of text contribute to meaning. This aesthetic might, for a

start, deconstruct the message of a visual field which includes letters in

terms of figure-ground relatior.ships, mass images, image and image-frame

interaction, color, and implied or explicit motion vectors. Because mixed-

mode, text-and-graphic messages signify their meanings in different,

reinforcing ways, they are probably more effective at communicating than

text or image alcne.

Text as Image: Exhibits

A close look at a few modern text-and-image messages will suggest

some of the ways in which imagerial elements merge with print Texts

rneant for children are a good stai ting place. Since kids constantly practice

decoding (understanding) novel aspects of their world, and since their

mastery of the arbitrary signs of language is only partial, many children's

texts use iconic and indexical signs. Figure 1, a McDonald's promotion aimed

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FIGURE 1 ABOUT HERE

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at kids, contains all three kinds of signification: pictographic, ideographic

and arbitrary. The young consumer is supposed to decode "👁〰U" as "I

see you." The 👁 is a pictograph, an iconic sign. The 〰 is an ideographic

indexical sign. The U, of course, is a phonetic grapheme; it is as much an

arbitrary sign as is "you." The visual field of Figure 1 is interesting, in

part, because of its mixture of sign types. Its fanciful, exotic iconic and

indexical signs command attention. Since the message contains pictographs

(pyramids, camels, the jazzed-up sphinx), it suggests a situation--ancient

Egyptian civilization--as well as an abstraction: the idea or utterance, "I

see you." The message is a more effective communication because it

combines different types of signs which reinforce one another

The commercial messages which are ubiquitous in our culture often aim

pictographic and ideographic signs at adults. The text at the top of Figure 2

FIGURE 2 ABOUT HERE

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asks a question which is answered not by the text below the picture, but by

the picture itself. The arbitrary and iconic graphemes below the picture are

crucial to the message; IKEA is a newcomer to this country, and potential

customers need to know what it is ("The furnishing store from Sweden") and

how to pronounce it: 👁️ah! (IKEA clearly wants its customers to enjoy

shopping. Perhaps the use of pictographs in place of letters is meant to

evoke a sense of childlike pleasure, as do the pictorial signs in Figure 1.)

The graphic which takes up most of the page answers, iconically and

indexically, the question above it. The iconic message, represented by a

couple dining, is that IKEA features an attractive restaurant. That message

is reiterated in the phonetic graphemes that spell out "Restaurant IKEA" and

in the indexical ideographs (utensils and plate, cup and saucer) behind the

dining couple. The iconic image of the diners is the most visually striking

element of the ad. It tacitly suggests, of course, that readers imagine

themselves dining at IKEA. But more than that, the diners define a Z-axis

channel which focuses the reader's attention on the arbitrary and indexical

message behind and between the couple. Since the diners are actively

conversing and paying attention to each other, their lines of sight imply

another visual vector between them. Call it the Y-axis vector. The reader's

attention becomes fixed on the spot where these two powerful, implied

vectors i:..ersect, just above the vase of flowers on the table. Hence, the

reader's gaze is directed to the Restaurant IKEA logo. In this way, the

reader is vicariously inserted into the scene, and vicariously partakes of the

pleasures of dining at Restaurant IKEA. This is hardly an effect that could

be acheived by print alone, or by pictorial images aione. The impact of the

ad arises from the imagerial aspects of its print components and the

meanings suggested by its pictorial elements.

In the two texts discussed above, print has importanc' as image because

of its placement, implied vectors and graphic context. In such texts, print

and image seem to carry roughly equal weight in communicating a message.

Some late nineteenth century pictorial advertisements and posters feature

text messages merely made attractive to the eye by visual elements (Figure

3). However, in many others, phonetic graphemes are integral to design For

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FIGURE 3 ABOUT HERE

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example, in Mucha's famous 1894 poster of Sarah Bernhardt,   the

lettering forms part of the poster's rich background. A revival of this

extreme imagerial approach to print occurred in the rock and roll subculture

of the 1960s, whose poster art is often difficult to read because its print is

so highly stylized and so intricately woven into the visual design.

In the first half of the twentieth century, serious avant-garde artists

discovered print as a design resource. Appolinaire, a spokesman for

innovative modern artists, described the process and effects of treating

print messages as a kind of "found art." Throughout history, new styles in

art have typically appeared first at the highest cultural levels of a society,

and then have filtered down to the common folk. Traditionally, artists have

looked to the aristocracy and/or to nature for their subjects. But in the

twentieth century, at least in America, aristocratic status is potentially

available to anyone, since social prominence can be bought for money.

Furthermore, modern artists and aesthetes live in a world of mass culture,

at a far remove from nature. Under these conditions, the print messages of

mass culture are raw material for serious modern artists such as Rauschenberg and Lichtenstein.

Since Gutenberg, printed texts have been two-dimensional. Phonetic graphemes are standardized marks on paper. Some early writing took the same form; pictographs and ideographs were drawn on a paper-like medium such as papyrus. But other ancient writing was done on clay or stone. Clay or stone tablet writing produces messages in *bas relief*. Both the texture of the graphemes themselves and the physical properties of the medium suggest three rather than two dimensions. Print used imagerially in modern serious and commercial art is also often a three-dimensional object. Even "flat" neon signs are composed, of course, of three-dimensional tubes. More impressive are free-standing neon sculptures which define a three-dimensional space. But perhaps the ultimate acheivements of neon art are very large, vividly colorful sign-sculptures which represent graphemes, icons and abstract designs that appear to *move* Size, color and motion transform letters into versatile elements of design. Ancient writing started with pictographs; modern neon "writing" uses pictographs, ideographs and phonographs to communicate on a grand, architectural scale.

Print in the form of neon architecture is usually commissioned by large

commercial interests. But a technology that transforms letters into colorful, moving images that communicate, both by reference and by their appearance, excitement, action, warmth and fun—such a technology is also available to individuals. Microcomputers used for desktop publishing produce arrangements of print, graphics, photographs, tables, charts, etc. All such forms of information have both referential meaning and presence as elements of visual design. Desktop publishing documents are composed on screen, and then transferred to hard copy. In this way, traditional print and electronic media come into a new symbiotic relationship which parallels the dual referential-and-aesthetic roles of the print and non-print images that make up a desktop publishing document. This phenomenon is far easier to demonstrate than to explain. Graphemes and graphics are both represented by patterns of white and black dots (pixels—i, e., "picture elements") on the computer screen. In the era of personal computing, print is no longer a privileged medium; rather, it is a subset of electronically-generated imagery.

Discussion and Speculations

The impact of electronic, image-oriented media on print is the subject of an ongoing debate, the terms of which were set by Marshall McLuhan[15]

Print, McLuhan claimed, encourages perspective, reflection, an appreciation of context, facility at coherent exposition and respect for logical argument. On the downside, McLuhan linked print to centralized political control, regimentation, the isolation of the individual (the "lonely crowd") and the unfortunate capacity to disassociate action from its consequences. In short, print both engenders and reflects the virtues and vices of industrialism. As McLuhan noted, the printed book the first mass-produced commodity; the printing press was the first assembly line.

Electronic media, on the other hand, provide immediate and vivid experiences which can be shared by groups. They replace the solitary activity of reading with participation in a common symbolic environment. That participation is enhanced by animated graphic, color and sound elements not available to print, and in the case of newer, interactive media, by an active, constantly refreshed dialogue over electronic channels. This tends to break down social hierarchy, promote egalitarianism and restore the organic connection between action and effect. The other side of this story is that the emotion-infused image montage of electronic media overwhelms the sense of logical process which underlies print, fragments historical continuity and encourages spontaniety at the expense of reflection.

McLuhan's work on media appeared at roughly the same time that television saturation was achieved in America, the late 1950s-early 1960s. In the one generation since then, the dominance of electronic media, from hi-fi stereo to microcomputers, has become unquestionable. McLuhan seems to have thought that a shift from print to electronic communication is an inevitable development for a society which has succeeded at industrialism, since change in such a culture is driven largely by technology.[16]

A number of writers after McLuhan have used his ideas, or ideas of the same sort, to prophesy a coming golden age in which, thanks to the technology of electricity, humankind will be at peace in a global village and at liberty to pursue all sorts of leisure-time interests through handy computer networks. Alvin Toffler, for instance, believes that "we stand on the edge of a new age of synthesis ... we have a destiny to create."[17]

But many think that, in the the Electronic Age, especially as manifested in television, our children will lose both traditional (print) literacy and moral sensibility. On this side of the debate, such recent bestsellers as The Closing of the American Mind[18] and Cultural Literacy: What Every American Needs to Know[19] decry what their authors see as an alarming ignorance of the heritage of print culture. Neil Postman's book, Amusing Ourselves to Death, is especially notable because he argues this case so well. Ironically,

Postman studied under McLuhan. But, re-casting McLuhan's ideas, he asserts that TV tends to degrade public discourse to the level of short-lived, entertaining images.

Both the futurists and the traditionalists see a connection between media and sensibility, and they share the expectation that a fundamental shift from print-oriented to image-oriented media is imminent. There are many indications that media and sensibility are connected. One is the Worff hypothesis' claim that the structure of language conditions how one construes the world—i.e., the medium is, in some part, the message, or, as Postman phrases it, "the medium is the metaphor."[20] Similarly, Kenneth Burke wrote that every "terminology" is not only "a *reflection* of reality," but also "a *selection* ... [and] a *deflection* of reality."[21] The idea that medium and message are interdependent is a premise of formalism, structuralist linguistics and criticism, and semiotics.

This essay questions the expectation that a *shift from* print media *to* image-oriented media is imminent. Until the telegraph, print media were necessarily dominant; they had no electronic competition. Although electronic media have become steadily more prominent, this growth may not mean that they are about to replace print. Rather, it seems that what may be coming is a communication technology in which print is handled

electronically, as screen images. Surveys regularly find that word

processing is the most popular use of personal computers. The power and

versatility *of small computers used* as writing machines

convincingly demonstrate that *microcomputers restore the*

imagerial dimensions of print .

Of course, a computer screen can present, along with text, all sorts of

representational and abstract images, schematic drawings, graphic

scientific and technical models, artwork and visual embellishments. In a

medium which processes both print and graphics as bit-map (pixel) images,

print itself becomes graphic image, a meaningful element of visual design

as well as a visually neutral vehicle of meaning. Both print and pictorial

images are included in a hybrid medium.

McLuhan, writing years before the appearance of small, affordable

computer/printer devices, saw television as the model of the image-

oriented media of the future. Postman, who writes twenty years later when

small-scale, decentralized desktop publishing by computer and type-set

quality printer is well-established, still sees the future of communication

in terms of the television model. But the television set may turn out to

have been a first, rudimentary step toward sophisticated small computers

capable of presenting and processing both print and audiovisual images for a wide variety of purposes, including entertainment. A more appropriate model for the dominant communication medium of the future might be that of a constellation of linked computers.

From a print-oriented point of view, such a medium is an *extension* of the typewriter insofar as it is used for efficient word processing. But, more importantly, it is an *expansion* of print in that it can set text in a visually meaningful context. From an image-oriented viewpoint, the computer medium is an *extension* with which visual designs can be quickly and easily composed and modified. It is an *expansion* in that it opens up the visual arts' repertoire of images to include letters which can be styled, as letters are in calligraphy. Such a medium requires a literacy larger than traditional print literacy because it calls for an artist's or designer's sensitivity to visual nuances. But this new literacy will not replace print; it will accommodate and enrich it.

ENDNOTES

[1] Neil Postman, Amusing Ourselves to Death: Public Discourse in the
Age of Show Business (New York: Penguin Books, 1985), p. 25.

[2] Ibid., p. 26.

[3] Samuel Noah Kramer, The Sumerians: Their History, Culture, and
Character (Chicago: The University of Chicago Press, 1963), p. 302.

[4] Tom Wolfe, "Las Vegas (What?) Las Vegas (Can't hear you! Too noisy)
Las Vegas!!!!" in The Kandy-Kolored Tangerine-Flake Streamline Baby (New
York: Farrar, Straus and Giroux, 1965).

[5] Kramer, The Sumerians, p. 302.

[6] Ibid.

[7] Ibid.

[8] Ibid., p. 306.

[9] University Museum of the University of Pennsylvania, Slide Set II:
The Story of Ancient and Primitive Writing and Recordkeeping (Philadelphia:
University of Pennsylvania, n. d.), 1.

[10] Kramer, The Sumerians, pp. 306-307.

[11] Ibid., p. 306.

[12] Joseph and Lenore Scott, Hieroglyphs for Fun (New York: Van
Nostrand Reinhold Co., 1974), p. 61.

[13] Ibid.

[14]Arthur Asa Berger, The Sage CommText Series, vol. 10: Media Analysis techniques, ed. F. Gerald Kline (Beverly Hills: Sage Publications, 1982), p. 15.

[15]Marshall McLuhan, Understanding Media (New York: The New American Library, Inc., 1964).

[16]Ibid., p. 20.

[17]Alvin Toffler, The Third Wave (New York: Bantam Books, 1980), p. 443.

[18]Allan Bloom, The Closing of the American Mind (New York: Simon and Schuster, 1987).

[19]E.D. Hirsch Jr., Cultural Literacy: What Every American Needs to Know (Boston: Houghton Mifflin Co., 1987).

[20]Postman, Amusing Ourselves to Death, p. 3.

[21]Kenneth Burke, Language as Symbolic Action: Essays on Life, Literature, and Method (Berkeley: University of California Press, 1966), p. 45 (emphases in original).

FIGURE 1

FIGURE 2

FIGURE 3