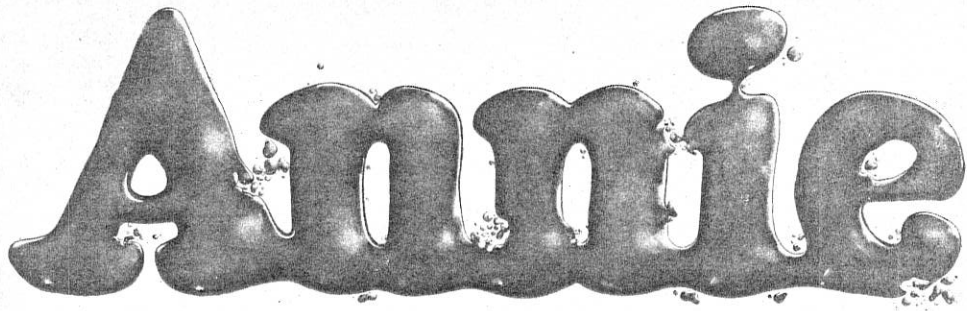


# VISIBLE LANGUAGE

The Journal for Research on the Visual Media of Language Expression

*Volume VI, Number 4, Autumn 1972*



Annie

Design a visual symbol for 'visible language'—  
Win a ten-year subscription to *Visible Language*!

To encourage designers—and would-be designers—to try Ed Bedno's program for developing visual symbols, we invite you to design a symbol for 'visible language'.

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## Cover: Words about Ed Ruscha

Reproduced on the cover is Ed Ruscha's oil painting *Annie, Poured from Maple Syrup*. The comments which follow have been excerpted from an article by David Bourdon in *Art International* XV/9 (November 20, 1971), pages 25–28, 38, and are reprinted here with kind permission.

Ed Ruscha is an engagingly eccentric Los Angeles artist who combines the obvious and forthright literalism of pop with the wry and incongruous juxtapositions of Surrealism. In both his work and personal manner, he appears to be a sort of cowboy Magritte gone Hollywood. He has produced a number of accomplished paintings, which are primarily fascinating for the unexpected morphological changes to which he subjects his otherwise commonplace images. But he is essentially a graphic artist who excels in matters of typography and layout. Consequently, much of his major work is in drawings, prints, and books. Among present-day artists, he has few peers at drawing. . . .

In most of his best work, typography is the subject matter. A single word is often the sole image, spelled out across the upper middle of the canvas. His involvement with words stems from a long-standing fascination with lettering and typography. His depicted words have unsystematically evolved from sign-like, literal renderings of existing type faces to imaginary letters, deceptively spelled out in ribbon-like strips of paper, or in illusionistic spurts of liquid. Typography, as it appears in newspaper headlines, magazine covers, ads, posters, billboards, traffic signs, film and TV titles, is among the most dominant features of the urban landscape, and plays such a large part in daily life as to go unnoticed. Since about 60 years ago, when the Cubist painters began providing large doses of reading matter through handpainted letters or collaged newsprint, countless artists have sought to extend the vocabulary of modern art by utilizing words in their work. But Ruscha's approach to the subject is extremely original. Unlike most artists who render their words flat Ruscha has given his words the illusion of three-dimensional physicality. And because of this he is closely related to Surrealism. . . .

Ruscha readily admits his Surrealist inclinations, but he points out that they stem from a shared sensibility and that he is not consciously imitative of the Surrealist masters, with whose work he was largely unfamiliar until after he had arrived at his present style. "It is the attitude that is similar," he says, "not the manifestation." Ruscha might never have suspected the myriad pictorial possibilities of words had he not seen the paintings with letters by Jasper Johns, whose early work he knew while still in school. "I went through a period of doing Jasper Johns paintings," says Ruscha. "Then when I got out of school, I refined it to almost pure typography. . . .

One of the attractions of working with letters is that they have no standard size. In the early '60s, when Ruscha was painting commonplace objects, such as food tins, comics books, and pencils, he frequently felt obliged to render them actual size, as if it were unethical to tamper with the specific dimensions of real objects. "I like to deal with objects," he says, "but I have to make them the same size that they are. I can't change their size. Words are the only thing that do not have a recognizable size, so I can operate in that world of 'no size'."

It was considered something of an esthetic coup in the early '60s that Johns had the ingenuity to paint an initially flat image, such as a letter or numeral, on a flat surface. Actually, Johns's use of words is not so unique, as practically every 20th-century artist, since Picasso and Braque, has rendered words flat. Considering all the metamorphoses that letters go through in everyday printing, from Times New Roman to Bodoni and Futura, it is surprising how little variety there is in the bulk of 20th-century art. Oddly enough, almost none of the many artists who used words—among them, Magritte, Miró, Motherwell, Dine, Rivers, Rauschenberg and Lichtenstein—thought of rendering them as three-dimensional physical objects. Ruscha is nearly unique in treating words as something other than flat symbols drawn on a flat surface. The only other artist who comes to mind who has given words a palpable physicality is Claes Oldenburg, who transformed flat letters into three-dimensional bas-reliefs in his *C-E-L-I-N-E, Backwards* (1959), in which the letters are shaped by painted newspapers over a wire frame, and *Soft Calendar for the Month of August* (1962), in which the painted canvas letters and numerals have been stuffed. Oldenburg's pieces are, of course, literally three-dimensional, while Ruscha's words are only illusionistically three-dimensional. But both artists are equally perverse in their treatment. Ruscha chooses particular words for their appearance, sound, or spelling. He claims no interest in their dictionary definitions, or the kinds of images and referential associations the words might suggest. There is no evident connection with concrete poetry, which seldom transcends arty layout. Ruscha's words are not conceptually provocative, as are the one-word

drawings of Walter De Maria, nor are they a vehicle for "pure" information, as Joseph Kosuth intended his photostated canvases of dictionary definitions to be. "I separate myself from the English definition of the word," says Ruscha. "Some of the words come out as though they are puns, but I am not interested in punning the word, or illustrating the word, although some of the things happen to feel or look that way." Ruscha generally prefers short words with a blunt or brusque sound, such as "chop," "egg," "honk," or "hey." He favors vivid nouns, adjectives and expletives, and he would probably choose "squirt" over "square." A knowledge of the English language is not a prerequisite to the enjoyment of Ruscha's work, because his words are designed primarily to be looked at, rather than read. His work is more visual than conceptual, because he obviously is more interested in the transformation of words into pictorial images than he is in making literary or intellectual allusions. . . .

[In the mid-sixties] Ruscha discovered an even more bizarre way to objectify words by spelling them out in illusionistic splashes of liquid. Exercising a dual perversity, he transforms words into three-dimensional physical objects—in this case, glistening splashes of cursive script—but in a state of such liquidity that they are apparently dissolving before our eyes. It is as if the spilled and still quivering liquid had miraculously half-gelled in the form of a word, and now threatened to evaporate in an equally strange fashion. One of the earliest examples of this series, *Annie, Poured from Maple Syrup* (1966), shows the word "Annie" in a rounded, fat-face type (similar to a comic strip logotype), with small bursting bubbles breaking away from the frayed edges of the letters, suggesting that the entire word is a syrupy bubble with a most extraordinary shape. The later words are "written" in a cursive script, in a liquid that is either clear, revealing the background color, or opaque, in a color that contrasts with the background. The *trompe-l'œil* liquids range from the viscous-looking to the thin and watery; but all the letters hold their shape, some in higher relief than others. . . . The liquid words give every appearance of having been spilled on a horizontal surface, because they have obviously been formed with the aid of gravity. By presenting them on a vertical plane, Ruscha makes it appear that, once formed, they are capable of defying gravity. At first, the words also appear to lie directly on the surface plane. But Ruscha deliberately shades the monochrome background to a darker value along the upper quarter of the canvas to break up and complicate the surface; so the surrounding field is really not being treated as a flat plane. Consequently, the words seem to be situated on a specific plane, but hovering before an atmospheric background. To counteract the impression of a sunset sky, Ruscha customarily selects background colors that do not evoke natural landscapes. . . .

Ruscha is a prolific printmaker and has produced a number of fine screenprints and lithographs. To my mind, his best prints rival in quality those of Johns, Lichtenstein, and sometimes Warhol. However, his most ambitious undertaking, a portfolio of six "organic" screenprints, titled *News, Mews, Pews, Brews, Stews & Dues* (1970), is anything but a howling success. Invited to make some prints for Editions Alecto, Ruscha went to London without any definite ideas but with "strong feelings for color substances." He was not sure he could print such substances with silkscreen, but, he says, "when I found out I could do it with silkscreen, I still wanted to maintain a definite quality control. The edges had to keep their sharpness, and some substances would not allow it." Some of the unlikely substances that he experimented with turned out to be unusable: cream left a slimy deposit, while tomato paste and mustard dried to gray dust. "I could not print carnations," he says, "because when we broke them up, they just turned to water. It was a nice color, but it squeezed right out on the silkscreen press. Iodine is beautiful but it creeps out all over the paper. The substance has to have either an oily base or a pasty kind of base that keeps hold of itself and is not too runny." Some of the substances that he found fit to print: red raspberries, canned baked beans, black caviar, chocolate syrup, axle grease, chutney, and daffodil stalks. The result of this eccentric research is six screenprints, each showing a single word in Old English type. As no color preservatives were added, some of the prints may eventually fade and decompose. "They may be a mess in some conditions," Ruscha concedes. Some of the colors have already changed. In "News", where the background was originally a pinkish color (red salmon roe), it is now bright yellow. And in "Mews", the red pasta sauce background has turned a rich creamy color, providing a paler background for the mauve letters (printed in blackcurrant pie filling over cherry pie filling over raw egg). "But I eliminated a lot of substances that would mould," he adds. "I set limitations for myself." . . .

Ruscha, it seems to me, is one of the very few artists of the pop school who approaches the inventiveness and wit of Lichtenstein, Oldenburg, and Warhol. His work does not properly belong to the mainstream of pop, but it helps establish and define an important aspect of the pop sensibility, that borderline area where pop merges into neo-Surrealism. Despite his eccentric experiments with unorthodox materials, he is essentially interesting for his original iconography, particularly for the highly imaginative way he pictorializes three-dimensional words. Ruscha's art is rich with unsuspected and often humorous images that, once he has brought them into existence, look as if they should have been there all along.

## Book Reviews

Frank Smith, *Understanding Reading: A Psycholinguistic Analysis of Reading and Learning to Read*. New York: Holt, Rinehart & Winston, 1971. xiv + 239 pages. \$4.95 paper.

Scientific research into the ergonomics of visual communication investigates the effectiveness of information display by assessing the performance of the human "receiver," and there are available hundreds of experimental reports describing comparisons of letterforms, textual layouts, symbol designs, map typographies, etc. Psychologists, ergonomists, designers, communications engineers, and lighting specialists are among those who have contributed to this field of enquiry. However, summaries of the research—such as those of Tinker (1963), Spencer (1968), or Foster (1971, 1972)—leave one questioning how far the results of any study can be generalized to other situations, and a feeling that the various experiments do not fit together to form an integrated system of knowledge. Recently, Donald Broadbent of the (British) Medical Research Council's Applied Psychology Research Unit has commented that "the best contribution to practical problems is to produce a general theory, which avoids the need for experiment in each specific situation" (1971, p. 16). Unfortunately, there is as yet no theory to account for the relationship between the printed stimulus and the human "receiver's" performance, no theory of legibility.

Before such a theory can be developed, we need as a basis a theoretical account of the reading process. It is, therefore, a pleasure to welcome Frank Smith's *Understanding Reading: A Psycholinguistic Analysis of Reading and Learning to Read*, which attempts to give an account of the reading process in the adult, and which has—at least potentially—considerable relevance for the designer, the ergonomist, the reading teacher, and all who are concerned with reading.

Smith provides a wide-ranging survey of topics relevant to an understanding of the adult's reading, including such areas as speech perception, linguistics, the anatomy of the visual system, eye movements, and information theory. The integration of seemingly disparate subjects is one of the most impressive aspects of the book.

To the present reviewer there are four major points that stand out in Smith's book. First, there are the distinctions drawn between the identification of letters, of words, and of meanings. Second, there is an account of the differences between skilled and unskilled reading, which is related to a consideration of the nature of learning to read. Third, there is the use of the concept of uncertainty reduction to integrate the many other topics discussed. Finally, there is an analysis of the relationship between speech and reading.

The first of these is particularly important. An assumption which underlies many discussions on printed communication concerns the relationship between letter-identification and word-identification, and between these and the reading of text. The problem of how these functions are related is particularly acute when one considers the teaching of reading. It often used to be assumed that the beginner must learn the names of the individual letters, and then learn to combine them to form words. This notion was strongly opposed by other writers, who maintained that since skilled readers do not read by a process of spelling out words, this cannot be the correct way to teach beginners to read. The problem is still relevant when designing material for skilled readers. Will it be easier to read text if the letters that make up the text are made highly discriminable? Or should the design concentrate on the word, rather than the letter? Or perhaps phrase-units should be the basic unit of text design? Some of the novel alphabet designs illustrated in Herbert Spencer's *The Visible Word* (1968) seem to assume that the letter is the basic unit; but systems such as "square span" typography use the phrase as their basis.

A large part of *Understanding Reading* is concerned with analyzing this problem. Smith proposes that we identify letters by analyzing the visual display and detecting critical features. We also identify words by testing the visual display to see if it contains certain critical features. In fluent reading, a similar process is carried out. The visual display is constant, whichever process the percipient is engaged in. What distinguishes letter, word, and meaning identification is the battery of tests carried out on the visual display. One of the major points that Smith makes is that words are not identified by a process of successively identifying constituent letters, and that reading is not dependent on successively identifying the words that make up the text.

Unfortunately, Smith is unable to specify the critical features of the visual display which are used in identifying letters, words, or meanings. He writes that "the features of particular letters must be in the actual ink marks on paper", but "it is a convenient fiction to regard them as properties of letters such as circles and lines and angles which are actually part of the

response" (p. 76). Later he asserts that "nobody knows what the distinctive features of letters are" (p. 120). Since it is the same visual information that is used in all three processes, it follows that the critical visual features utilized in reading cannot be specified. The fact that HORSE, horse, and HoRsE are identified as the "same" word shows that there is some flexibility in the system that tests for the presence of critical features. Smith emphasises that for fluent readers word identification does not necessitate letter identification, and meaning identification does not depend upon identifying all the words.

It is here that the difference between the skilled and unskilled reader lies, for the unskilled reader does have to "build up" words from their letters, and "build up" meanings by successively identifying all the words. The skilled reader is able to short-circuit these processes and go directly from the printed display to meaning without having to pass through any intermediate stages. He can do this because he has a store of knowledge—gained from his previous reading experience—of the orthographic, grammatic, and semantic conventions of language. As reading skill develops, the reader comes to rely less and less upon the printed visual display, more and more on his own knowledge and experience of what is likely to be there. Some of Smith's comments upon this point are somewhat startling: "reading should not be regarded primarily as a visual process" (p. 82), and "The amount of visual information required to identify a letter has relatively little to do with the physical characteristics of the actual stimulus but depends much more upon the reader's skill and the context in which the letter occurs. And precisely the same kind of argument applies to words" (pp. 141–2).

Smith describes letter, word, and meaning identification as processes of uncertainty reduction; the reader's uncertainty is lessened when he identifies a letter, word, or meaning. For the skilled reader there is less uncertainty when he is reading, because of his familiarity with the language. Consequently, he does not have to extract so much information from the visual display in order to understand it.

In discussing the similarities between speech and reading, Smith notes that the child learning the aural language is faced with discovering the significant differences between sounds, just as the child learning visual language is faced with discovering the significant differences between words. Listening involves acoustic feature analysis just as reading involves visual feature analysis. The fluent listener uses his knowledge of language in understanding what he hears in the same way that the fluent reader uses his knowledge of language in understanding what he sees. But, Smith emphasises, reading is not dependent upon speech—one does not have to translate the printed marks into "silent speech" in order to read. Indeed,

“spoken words in their physical manifestation are just as far removed from meaning as the marks on a printed page” (p. 207).

Like any stimulating discussion, Smith’s model raises rather than solves problems. We want to know what *are* the critical visual features used in identification, how are they different for the skilled and unskilled reader, how does the beginner come to learn them? How independent of the visual display does the skilled reader become, and how can the designer adjust the visual display so as to match the process the reader is employing? The model seems to devalue the role of the designer (if it is true that reading is not primarily a visual process), but it may be that we have here the beginning of a theory which will provide a rationale for questioning the use of horizontal lines of words in advanced reading.

Smith discusses many topics of interest to those concerned with language, particularly visible language. For example, there is a consideration of the studies which show that a greater number of letters can be identified after being flashed briefly when they form words than when they do not. This has sometimes been interpreted as indicating that words are identified by their outline or form. Smith argues strongly against such a view, maintaining that the experiment shows first that word identification is not made up of successive letter identifications, and secondly that the perceiver uses his existing knowledge of language to process the information in larger meaning units.

He suggests that proposals for modifying the alphabet are misguided, as a modified alphabet would lessen the amount of information available to the reader and a modified spelling system would be unable to deal with different dialects.

*Understanding Reading* is a readable and exciting book, describing a wide range of experimental work. In it, the author lays the basis for a clarification of many issues which were previously confused. In many ways, it demonstrates thinking similar to that underlying this journal, *Visible Language*; e.g., in the wide range of topics considered, the emphasis upon the integration of topics, the significance attached to the relationship

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Foster, J. J. (ed.) *Legibility Research Abstracts 1970*, and *Legibility Research Abstracts 1971*. London: Lund Humphries, 1971 and 1972.  
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Tinker, M. A. *The Legibility of Print*. Ames: Iowa State University Press, 1963.

between speaking/listening and writing/reading. *Understanding Reading* provides at least the foundation for a theory of legibility. It is to be hoped that investigators researching into aspects of visual language and communication will give it serious attention.

Jeremy J. Foster

Jeremy J. Foster is lecturer in psychology at the Institute of Technology, Bolton, Lancashire, England. As a research fellow in the Department of Social Studies at Manchester Polytechnic he has conducted a program of research into the legibility of print. He is editor of *Legibility Research Abstracts*, the second volume of which is in press.

John Gilliland, *Readability*. London: University of London Press, 1972. 127 pages. 80p.

This is one of a series of monographs sponsored by the United Kingdom Reading Association, and intended for teachers of reading. Gilliland interprets readability in a very wide sense, as the matching of the text to the reader. Consequently he includes under “readability” the style of the written text, the way it is presented in print (legibility), and the reader’s interest in the content of the text.

The greater part of the text is concerned with such matters as the relationship between the spoken and visual forms of language, and the influence of reader’s interest in reading. Gilliland also provides a brief summary of legibility research. He relies heavily on Miles A. Tinker’s work, but does direct the reader to more modern sources. A critical survey of techniques for measuring readability and an annotated bibliography of 16 items complete the volume. Although one might like to see a fuller coverage of some of these topics, one must be grateful to Gilliland for drawing the subject of legibility of print to the attention of teachers. One is pleased to see him suggesting that teachers should become more aware of the typography of children’s books, and—acting through their professional associations—“influence and improve the quality and suitability of the typefaces which children encounter” (p. 30).

J. J. Foster

## The Training Embodied in Written Language

We are led to the hypothesis that school affects grouping operations through the training embodied in the written language. This hypothesis has a good theoretical basis. The written language, as Lev S. Vygotskii points out, forces one to use language out of the immediate context of reference. The writer cannot use simple pointing, nor can he count on labeling that depends on the present context. Writing, then, is training in the use of linguistic contexts that are independent of immediate referents. Indeed, the linguistic independence of context achieved by certain grammatical modes appears to favor the development of the more self-contained superordinate structure used by the school children.

Note the recurrent theme that has been running through all our results: it is always schooling that makes qualitative differences in directions of growth. Wolof [Senegal's dominant ethnic group] children who have been to school are more different intellectually from unschooled children living in the same bush village than they are from city children in Mexico City or Brookline, Mass. Similar results demonstrating the huge impact of school have emerged from the Belgian Congo and from South Africa.

How, then, do school and language interrelate? We may hypothesize that French is a powerful factor in the cognitive growth of the children we have studied because it is a written language. All the languages features that we have discussed in relation to concept formation become necessary when one must communicate away from the context of immediate reference. And it is precisely in this respect that written language differs from spoken. . . .

When names—or symbols in general—no longer inhere in their referents, they must go somewhere; and the logical place is the psyche of the language user. Thus, the separation of word and thing demands a notion that words are in a person's head, not in his referents. Meaning varies with the particular speaker, and the notion of psychological relativity is born. Implicit in this notion is the distinctness of oneself and one's own point of view. Thus, the individual must conceptually separate himself from the group; he must become self-conscious, aware of having a particular slant on things, a certain individuality.

From "Work with the Wolof" by Patricia M. Greenfield & Jerome S. Bruner in *Psychology Today* (July 1971), pages 78-79.

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## Résumé des Articles

Traduction : Fernand Baudin

Lu en un clin d'oeil *par Philip B. Gough*

L'article porte sur deux points: (1) la série de faits perçus en une seconde de lecture et (2) sa relation avec l'apprentissage de la lecture. Lire implique la succession rapide d'opérations complexes: formation d'une "icône" visuelle, identification des lettres individuelles, rattachement au sens par transposition en phonèmes abstraits. Le tout avec une rapidité surprenante dans la coordination. Au premier abord l'enfant est dépourvu de tout "dispositif de lecture optique" (scanner) aussi bien que de "dispositif de "décodage" pour traduire systématiquement les signes en sons. Connaître le mécanisme qui guide les lettres vers les mots de notre dictionnaire mental, tel est le problème fondamental qui fait l'objet des recherches sur la lecture.

L'élément typographique dans le cubisme, 1911–1915, et les conséquences formelles et sémantiques *par Susan Marcus*

De 1911 à 1915, Braque et Picasso ont exploré les aspects formels de l'élément typographique. Ils faisaient intervenir les signes à deux dimensions que sont les lettres et les chiffres dans leur tentative en vue de rénover l'évocation d'objets à trois dimensions. C'est ainsi que l'élément typographique a contribué à l'évolution du collage en favorisant la substitution sur la toile d'objets réels à la place de symboles peints. L'idée de recourir à des formes typographiques pour représenter une notion parfaitement étrangère à ce signe entraîna des conséquences sémantiques qui furent examinées par les peintres. En utilisant des éléments typographiques, les cubistes montraient leur intérêt réel, qu'ils partageaient avec leurs contemporains, pour la littérature et les sciences.

Les nouvelles responsabilités du typographe *par G. W. Ovinck*

Au rythme actuel de la production audiovisuelle, nous allons dépasser le point de saturation. Le typographe doit aider à freiner la "pollution mentale". Il doit élargir sa compréhension à la fois des attitudes et réactions de ses lecteurs et de ses clients—tout en conservant sa part essentielle de typographe. Il doit devenir un informaticien, principalement en acquérant une formation plus générale et en développant son goût de la recherche. Le typographe ne remplit pas le rôle qui lui revient de droit dans l'évolution des techniques d'impression. Il doit assumer l'initiative dans le développement des nouveaux procédés en se fondant sur ses responsabilités en tant que représentant des lecteurs et de traditions immémoriales dans la communication.

La création programmée de symboles visuels *par Ed Bedno*

L'article décrit les étapes visuelles et verbales d'un programme qui permet de simuler les cheminements de la création graphique. Ce programme a guidé les élèves d'une école d'art dans l'élaboration de symboles visuels. Les résultats furent généralement de haute qualité. Ils donnent à penser que ce programme est une méthode efficace et rapide pour amener les élèves à prendre conscience des ressources de la création systématique.

## Kurzfassung der Beiträge

Übersetzung: Dirk Wendt

Eine Sekunde Lesen von *Philip B. Gough*

Zwei allgemeine Themen werden diskutiert: (1) die Folge von Ereignissen, die in einer Sekunde Lesen ablaufen, wobei Vermutungen angestellt werden über die Natur der Vorgänge, die sie miteinander verbinden, und (2) die Bedeutung dieser Beschreibung für das Lesen-Lernen. Zum Lesen gehört eine rasche Folge von verwickelten Ereignissen: Bildung eines visuellen Sinnbildes, buchstabenweises Erkennen und Verbindung mit der Bedeutung durch Umsetzung in eine abstrakte phonemische Darstellung—durchgeführt mit erstaunlicher Geschwindigkeit und Koordination mit unserem komplexen Informationsverarbeitungssystem. Bei den ersten Leseversuchen fehlen dem Kind die Buchstaben-Erkennungshilfen (die Abtastung) und Hilfsmittel, den einmal erkannten Buchstaben in eine systematische phonemische Repräsentation abzubilden (die Entschlüsselung). Die Spezifikation von Mechanismen, durch welche Buchstaben in Stichwörter für unser geistiges Lexikon abgebildet werden, sind das grundlegende Problem der Lese-Forschung.

Das typographische Element im Kubismus, 1911–1915: Seine formalen und semantischen Implikationen von *Susan Marcus*

Zwischen 1911 und 1915 experimentierten Braque und Picasso an formalen Bedeutungsgeladenen typographischen Elementen. Die zweidimensionale Eigenschaft der alphabetischen und numerischen Symbole kommen dem Versuch der Künstler entgegen, neue Wege der Abbildung dreidimensionaler Gegenstände in den Grenzen der Leinwand zu finden. Das typographische Element half bei der Entwicklung der Collage, indem es dazu anregte, gemalte Symbole durch tatsächlich auf die Leinwand geklebte Objekte zu ersetzen. Der Gedanke an eine Buchstaben-, Worte- und Zahlen-Form als ein Zeichen, das einen Begriff darstellt, zu dem das Zeichen keine physische Ähnlichkeit hat, führte auch zu semantischen Folgerungen, die diese Künstler untersuchten.

Bei ihrer Arbeit mit typographischen Elementen zeigten die Kubisten ein allgemeines Interesse, das sie mit ihren Zeitgenossen in Literatur und Wissenschaft teilten.

Die Verantwortung des typographischen Entwerfers im Wandel von *G. W. Ovinik*

Bei unserem gegenwärtigen audio-visuellen Angebot sind unsere Sinnesorgane reizüberflutet. Der typographische Entwerfer muß helfen, die "geistige Umweltverschmutzung" einzudämmen, indem er auf weniger und besser gestaltete Drucksachen hin arbeitet. Er muß sein Verständnis erweitern, sowohl für die Haltung und Reaktion des Lesers wie des Auftraggebers—wobei er gleichzeitig einen eigenständigen Beitrag als graphischer Entwerfer beisteuern muß. Er muß sich zu einem allgemeinen "Informator" entwickeln, hauptsächlich durch erweiterte Ausbildung und Kenntnis und Anwendung von Forschungsergebnissen. Der typographische Entwerfer spielt nicht die ihm angemessene Rolle in der Entwicklung der neuen Drucktechniken. Aufgrund seines Verantwortungsbewußtseins muß er als Interessenvertreter des Lesers und aufgrund der uralten Tradition der graphischen Kommunikation die Führung bei einer anpassungsfähigen Entwicklung der neuen Techniken gewinnen.

Ein Programm zur Entwicklung visueller Symbole von *Ed Bedno*

Es wird eine programmierte Prozedur aus einzelnen visuellen und verbalen Schritten vorgestellt, welche die schöpferischen Vorgänge beim visuellen Entwerfen simulieren soll. Das Programm wurde von Studenten einer Kunstschule als Leitschnur zum Entwerfen von visuellen Symbolen benutzt. Das resultierende Niveau der Leistung war allgemein ziemlich hoch. Die Ergebnisse deuten an, daß dieses Programm eine beschleunigte und wirksame Methode ist, um die Studenten auf die Möglichkeit bewußter Kreativität aufmerksam zu machen.

## Resumen de los Artículos

Traducción: Tony Evora

Un Segundo de Lectura por *Philip B. Gough*

Dos tópicos generales son discutidos: (1) la secuencia de eventos que acontecen durante un segundo de lectura, sugiriendo la naturaleza de los procesos que los unen, y (2) la relación de esta descripción con el aprendizaje de la lectura. La acción de leer implica una rápida sucesión de intrincados procesos en la formación de la imagen visual, en la identificación letra por letra, y en la asociación con su significado a través de la transposición en representación abstracta del fonema, llevada a cabo con inaudita rapidez y coordinación por nuestro complejo sistema de procesamiento de la información. Al abordar la lectura por vez primera, el niño carece de un plan para el reconocimiento de los caracteres (*scanner*), así como del equipo para convertir dichos caracteres, una vez identificados, en un sistema de representaciones fonéticas (*decoder*). Los mecanismos mediante los cuales las letras son proyectadas como entradas en nuestro vocabulario mental constituyen los problemas fundamentales en la investigación de la lectura.

El Elemento Tipográfico en el Cubismo, 1911–1915: Implicaciones Formales y Semánticas por *Susan Marcus*

Entre 1911 y 1915 Braque y Picasso experimentaron con consideraciones formales de elementos tipográficos. La calidad bidimensional de los símbolos alfabéticos y numéricos se tornaron en complemento de los intentos de estos artistas por tratar de hallar nuevos medios de representar objetos tridimensionales dentro del formato del lienzo. El elemento tipográfico contribuyó en la evolución del *collage* al alentar la suplantación de símbolos pictóricos por objetos reales pegados al lienzo. La idea de letras, palabras y números como signos representativos de un concepto con el cual dichos signos no guardan relación física alguna, también presenta implicaciones semánticas que estos artistas exploraron. Al trabajar con ele-

mentos tipográficos, los Cubistas reconocieron un interés común compartido por sus contemporáneos en la literatura y en las ciencias.

Las Cambiantes Responsabilidades del Diseñador Tipográfico por *G. W. Ovinik*

Con el actual nivel de producción audiovisual nos estamos enfrentando ya a una sobrecarga sensorial. El diseñador tipográfico debe contribuir a reducir esta 'contaminación mental', insistiendo en menos y mejor diseñados impresos. Debe ampliar su comprensión tanto de las actitudes y reacciones de sus lectores como de sus clientes, manteniendo a la vez su propia contribución como diseñador gráfico. Debe desarrollarse como un 'informador', mediante la ampliación de su propia educación, así como plantearse una exigente actitud investigativa. El diseñador tipográfico no está jugando su verdadero papel en el desarrollo de la nueva tecnología de las artes gráficas. Debe alcanzar una posición orientadora a fin de lograr un desarrollo más flexible de los nuevos procesos, basándose en su responsabilidad como representante del lector, así como en las viejas tradiciones de la comunicación visual.

Un Programa para Desarrollar Símbolos Visuales por *Ed Bedno*

Un procedimiento programado con discretos aspectos verbales y visuales fue empleado para simular los procesos creativos involucrados en el diseño visual. El programa fue usado por estudiantes de una escuela de diseño como guía para la creación de símbolos visuales. El nivel de ejecución fue, en general, bastante alto. Los resultados obtenidos tienden a indicar que este procedimiento es un método acelerado y eficiente para ampliar la conciencia del alumno en cuanto a las posibilidades de una creatividad consciente.

## The Authors

Philip B. Gough is professor of psychology at the University of Texas (Austin, Texas 78712). Since receiving his Ph.D. from the University of Minnesota, he has taught psycholinguistics at Minnesota, UCLA, and Indiana University. Dr. Gough's research on comprehension is supported by the National Science Foundation; currently, he is trying to find out how long it takes to understand a word.

Susan Marcus (5y Magic Apartments, Faculty Road, Princeton, N.J. 08540) recently received her Master's degree from the Institute of Fine Arts of New York University. Her article on the capital frieze at Chartres Cathedral and its theological ramifications will appear in *Recherches de théologie ancienne et médiévale*. She also served as researcher for the major exhibition *European and American Painting and Sculpture: from Princeton Alumni Collections* at the Princeton University Art Museum, and contributed an essay on American artists between the two World Wars to the catalogue.

G. W. Ovink (Cliostraat 3, Amsterdam Zuid, Holland) is art consultant for Tetterode-Nederland and extra-ordinary professor at the University of Amsterdam in history and aesthetics of the art of printing and allied trades. He has published many articles and several books on the theory and history of types and typography; he has lectured widely in Europe, in the United States, and in South Africa. Dr. Ovink is a board member of the Association Typographique Internationale and is on the advisory board of this journal.

Ed Bedno is chairman of the Department of Communication Arts and Design at Virginia Commonwealth University (Richmond, Va. 23220). He was formerly assistant professor in visual design at the Institute of Design, Chicago, and has been a design consultant to many major publishing and pharmaceutical houses. He is currently involved in the research and design of educational materials and has been represented in most regional and national design exhibits and publications.

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*Visible Language*, Volume VI, 1972. Published quarterly  
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