

VISIBLE LANGUAGE

The Journal for Research on the Visual Media of Language Expression

Volume VIII, Number 3, Summer 1974 ISSN 0022-2224

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Visible Language, Volume VIII, Number 3, Summer 1974. Published quarterly (Winter, Spring, Summer, and Autumn) by The MIT Press, Cambridge, Mass. 02142. Copyright © 1974 by *Visible Language*.

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Business correspondence about subscriptions, advertising, and related matters should be addressed to Visible Language, The MIT Press Journals Department, 28 Carleton Street, Cambridge, Mass. USA 02142. Telephone: 617/253-2889. Foreign subscribers may write to Betty Barker, The MIT Press, 126 Buckingham Palace Road, London SW1W 9SD, England.

Subscription Rates for the Current Volume

Quarterly per year for individuals \$11.00 £4.50

Quarterly per year for institutions \$16.00 £6.55

Foreign subscribers should add \$1.00 postage.

All subscriptions will be entered on a calendar-year basis beginning with the Winter issue. In other words, subscriptions received at any time during the year will receive all four Journal numbers for that year. No half-year subscriptions are available. No payments for future volumes will be accepted. *All orders must be prepaid.*

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Concrete Poetry: A Study in Metaphor

Abbie W. Beiman

Various characteristics of concrete poetry have been examined but little attention has been focused on this art form's contribution to literature. Indeed, the concrete poem exemplifies a dramatic variation in the most basic element of poetry: figurative language. Traditionally, figurative language has established a relationship between the tangible objects around man and the intangibles which he seeks to know. The most common form of such figurative yokings has been the metaphor, a trope that creates a tension between the similarities and dissimilarities of the juxtaposed elements. With concrete poetry the focus of that trope is no longer just the abstract and spiritual leg of the metaphor, but the sensory perception of the literal and concrete as well.

Critics have attempted to define concrete poetry,¹ place it in an international context,² discuss its historical influences,³ isolate its typographical innovations,⁴ and judge its impact on the world of art.⁵ Yet very few have judged it as literature,⁶ and no one has discussed in depth its contribution to the genre to which it has been assigned: poetry. The very basis of poetic style is figurative language, language manipulated in such a way as to inspire connotations and associations not inherent in the literal word definition. One of the most important manifestations of this style—metaphor—traditionally has been used to establish a relationship between two things by using a word or words figuratively instead of literally.

Metaphor, unlike other tropes such as simile, directs the reader to a *sense* of the relationship—not to an exact term—and thereby allows the reader to supply an image from his own experience. In that way it transcends denotative meanings inherent in any term and allows the reader to supply the connotations most immediate to him. Hence the successful metaphor is not only immediate but personal to the individual involved in its figurative ambiguity. Because of this power to inspire personal associations, metaphor can be used to present

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phenomena not named in common language or used to replace worn out labels of a decadent language.

The twentieth century's obsession with the impotency of its own verbal power has inspired the poet to manipulate this metaphoric power in new and different ways. In the present century this linguistic technique must communicate the figurative meaning by manipulating the literal object and it must enrich the poetic structure by demanding the reader's inference. Of course metaphor has traditionally been used in this way. In addition to such standard usage however, metaphor must now function as vital language once did, and that is to present the literal images and to serve as signs for the concrete "things" that words once symbolized.

Perhaps most important about this interaction of terms and reader inference is the broad scope of meaning possible. Metaphor does not suffer from the fixity and the limitation of a direct verbal statement. That is not to say that metaphor is a chaotic conglomeration of terms, images, and meanings definable only by the individual reader's perception and experience. On the contrary, metaphor not only orders poetic communication by providing a structure in which language is enriched with multiple meanings, but also provides a relationship among the medium in the poem, the poet's intention, and the reader's perception.

Metaphor has always been based on either common characteristics in each of its two terms or similar attitudes to each of the terms, while it has maintained the dissimilar elements of the two and created a tension between the similarities and dissimilarities of the juxtaposed elements. For this reason, it traditionally has functioned as a tool that could elucidate without equating, limit without confining, and elaborate without inflating. Most importantly, it has provided a way in which the unknown and intangible could be experienced through the known and tangible. To this end, many poets in the past artistically manipulated the external, real world in order to understand or communicate the internal, spiritual, or abstract. They used concrete, tangible "vehicles"—the familiar leg of the metaphor—to elucidate abstract, intangible "tenors"—the more abstract and complex leg of the metaphor.⁷

With the advent of concrete poetry has come a new focus for the metaphor: the reader is no longer directed to the absolute, abstract

meaning beyond words, but instead, he is directed to the finite presence of the word itself, the concrete object being described, or the immediate experience being communicated. In effect, this “concrete metaphor” redefines a figureative relationship in literal terms. The world, as such poetic metaphors present it, is a finite entity composed of sensorily perceivable objects, tangible things, and knowable facts. This new focus on reality as subject is communicated by metaphors that also emphasize the real and the object rather than the spiritual and abstract. The new use of metaphor involves a transformation of the metaphoric terms. Rather than a concrete vehicle focusing attention on ultimate meaning in an abstract tenor as one might find in poetry by Shakespeare, Donne, or Keats, the abstraction in concrete poetry is often only secondary to the visual, concrete presentation.

In his introduction to the Chicago Review’s *Anthology of Concretism* (1970), Peter Michelson stresses that concrete poetry is “poetry of material,” and sees it at its best as “a visual metaphor of modern sensibility”:

Its first physical appearance gives coherence to, provides a center for, and thus defines, the page. Soon, however it takes over the page—dominating it with shape, shade, and even the tease of imagery, symbolism, and other “literary” paraphernalia. But no sooner is it “master” than it explodes, moving our consciousness beyond the edge of the book, ending one step short of its logical conclusion—the denial of not only the arbitrary authority of *page* but of all perceptive possibility. The “charitable” ending is the ultimate artistic statement, the artist controlling reality for his own purposes, intimidated neither by logic nor metaphysics, responsible rather to his own sense of reality than to rules of validity.⁸

What the poet then seeks to do, by presenting language visually, or by stressing in page placement, repetition, or variation, the sound sense of language, is to represent metaphorically the interaction of art object and the individual’s perceptions. The very letters of the poem itself serve as the metaphoric vehicle for a tenor that is nothing more than perceiver participation in the language itself. Disparate realms such as printed page and reader response are forced into a metaphoric union that elucidates the concrete reality of both the material and the personal response to it. This personal response is the only “meaning” the concrete poem as metaphor has. The perceiver must interact with

the linguistic sign (or signs) on the page to form the meaning of the metaphor/poem. The result is certainly not merely abstract reference in the tenor nor greater meaning in the poem. It is, rather, a concrete experience based on material (vehicle) and participation/response (tenor). The focus of the metaphor could not be more "concrete."

Yet, the linguistic or nonlinguistic sign on the page is not just visual representation manipulated as an exhibit, sign, or symbol for some more complex verbal meaning or referent abstraction. It is, however, visual representation that clearly presents a fusion of, rather than one portion of, the visual-verbal interaction.⁹ Nor is that linguistic sign devoid of all spiritual content. As Eugen Gomringer, the acknowledged father of concretism, notes, "Even in its most primitive usage, language serves a spiritual use." Yet Gomringer's spirituality (and that spirituality found in most concrete poetry) is based on the concrete particulars of language. The multiple spiritual reverberations of a linguistic element, letter, syllable, or word are indeed important, but they are important as inherent parts in a form that is, above all else, physically real to the senses of the perceiver.¹⁰

The terms proposed for this artistic phenomenon range from "concrete poetry" to "pattern poems," "ideograms," "calligrams," "iconographs," and even "word-imagery." A second American concretist and critic, Richard Kostelanetz, has proposed two major genres in this "word-imagery" form: "imaged words and worded images." In the first, the word is the base and language is "enhanced through *pictorial* means." In the second, the image is the base and is "embellished by the language which forms it."¹¹ In both genres a tension is produced between the similarities and dissimilarities of verbal and visual perception. The perceiver is responding to two stimuli, linguistic (word meaning) and gestalt (word appearance). Though both aspects of the word have been apparent since the poem appeared on the printed page, both have not been emphasized as an interactional force. In the concrete poem the products of linguistic meaning, visual shape, and often, word-sound are not tangential aspects of language, but are the poem. In this way metaphor has become a tool of both form and content, and, in concrete poetry, is the one traditional technique atraditionally used to equate form and content, and to juxtapose poet, poem, and reader. The concrete poem is precisely that metaphor with a concrete vehicle (the lin-

guistic sign) and a concrete tenor (the perceivers'—poet's and reader's—response).

Not only is the concrete poem a metaphor for this relationship, but for others as well. Interactions may occur between visual and verbal, aural and visual, kinetic and visual, kinetic and verbal, word and blank, typography and space, color and figure until the poem becomes a multiplicity of vehicles and tenors, demanding a multiplicity of perceiver perspectives. For this reason Mike Weaver has defined metaphor in the concrete poem as “purely plastic.”¹² The poem then can move in many directions at once. This multiplicity and often simultaneity of movement demand an ordering principle to replace discursive grammar and linear progression. Apollinaire once proposed that the new art would require “our intelligence to accustom itself to understand synthetico—ideographically instead of analytic—discursively.”¹³ Weaver has also stated that the concrete poem that is based on movement (“kinetic” poem) replaces discursive grammar with a “serial method.”¹⁴ The perceiver moves from letters, words, or phrases in an order that in the end produces the same total number of combinations experienced by any other perceiver. The order of the perceptions is unimportant. Because minimally the stimuli are verbal and spatial, the order and response must minimally be dual. The simultaneous occurrence of verbal and nonverbal communication is experienced in this way. The Brazilian concretists, the Noigandres group, have proposed that a “verbivocovisual” order replaces discursive syntax and provides this very simultaneity.¹⁵

Each of these poet-critics is attempting to explain why the poem communicates in the absence of traditional syntactic order and presence of fused sensory stimuli. The concrete poem affects several senses at once without relying on logical or rational connectives. The relationships between letters, words, or signs in the poem and the senses that respond to them are not inherent in the page: the perceiver must forge the bond. Here again metaphor is crucial, because unlike clear syntactic communication or direct image description, metaphor requires participation in the tension between similarity and dissimilarity in the vehicle/tenor combination. The concrete poem therefore *requires* the perceiver's participation to complete the poem/metaphor. When Eugen Gomringer defined his concrete “constellation,” he defined the reader's role:

The constellation, the word group, replaces the verse. Instead of syntax it is sufficient to allow two, three, or more words to achieve their full effect. They seem on the surface without interrelation and sprinkled at random by a careless hand, but looked at more closely, they become the center of a field of force and define a certain scope. In finding, selecting, and putting down these words [the poet] creates “thought-objects” and leaves the task of association to the reader, who becomes a collaborator and, in a sense, the completer of the poem.¹⁶

This active participation is crucial to the success of the poetic metaphor. Haroldo de Campos’ concrete poem titled “Alea I—Semantic Variations” is a series of adjectives and nouns listed and merged until the parts of speech and the poetic process are one. In a corner of the page/poem are instructions for the reader to extend the variations of the poem at his pleasure. When “reading” Gerhard Rühm’s poem “bleiben,” the perceiver encounters a white page with a large black square on it. Diagonally across the square stretches one white line, and near the base of that line, in white handschrift, is the word “bleiben” (German for “to remain” or “to stay”). In perusing the page the reader’s eyes have completed the “meaning” of the vehicle, and have continued to stay with and follow that white line.

Mary Ellen Solt has noted the importance of this fine white line and the solid black page on which it appears. According to Solt, the stark presentation of the message to “stick with it” is far more spiritually profound than any sermon on the subject.¹⁷ Rühm is indeed successful in integrating the visual and conceptual impact. He does this by merging the stark physical presence of the visual stimuli with the abstract meaning of white line, blank page, and verb form. Both physical presence and spiritual reference coalesce in the concrete visual/verbal vehicle placed before the reader.

An American, Carl Fernbach-Flarsheim, extends the space of his reader’s role to three dimensions. One of his poems is a piece of white paper folded double with edges to the right. Opened like a greeting card, the right-hand page of the poem is an exercise for non-verbal sensory participation in the poem. The left-hand page is the secondary focus of the eyes as they glance at the “greeting card” and define the limits of that experience—limits bounded only by the sky and the filter through which it is perceived. The poem ultimately means nothing until the reader completes the vehicle by participating

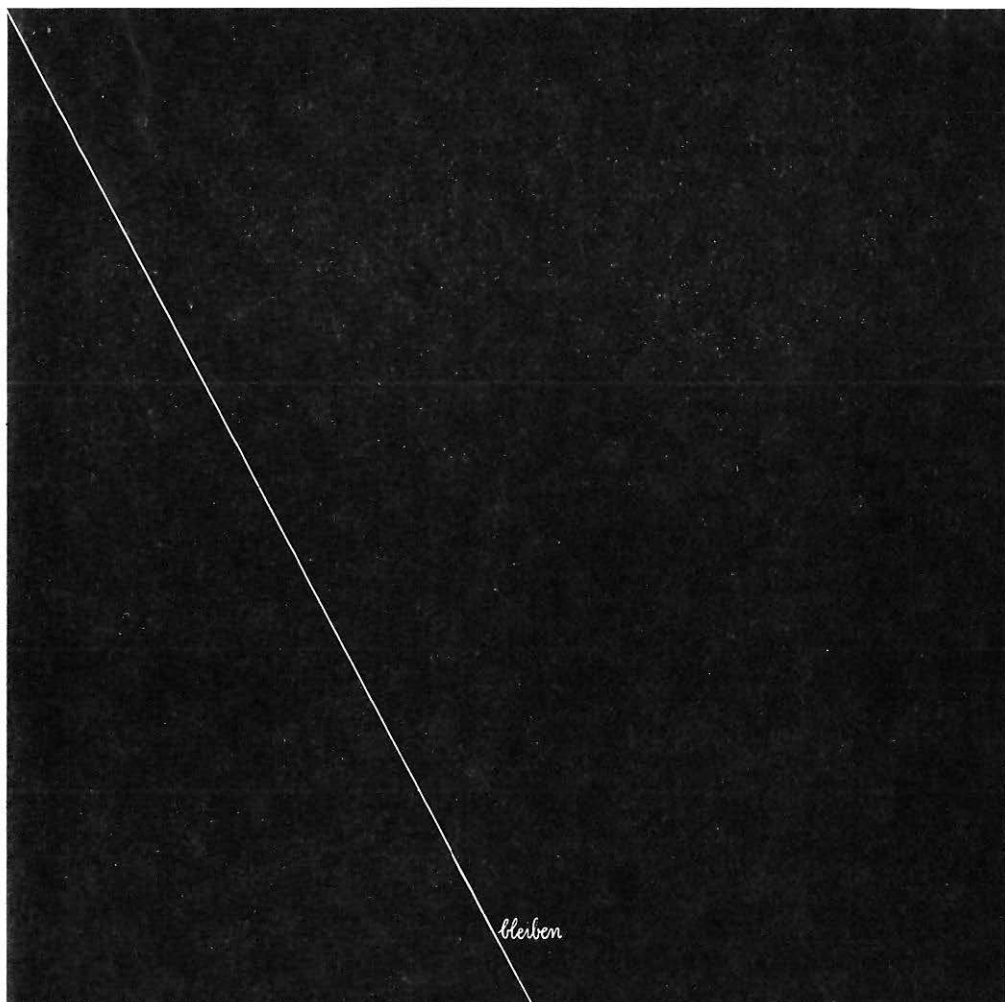
THE UNSURPASSABLE the laudable the notable the adorable
the grandiose the fabulous the phenomenal the colossal
the formidable the astonishing the miraculous the marvellous
the generous the excels the portentous the stunning
the spectacular the sumptuous the faerifying the faery
the supereminent the venerable the supersacred the supercelestial
the unpolluted the uncorrupted the inviolate the intrepid

THE UNSHITPASTABLE the lowbabble the nauseable the malodorable
the ganglious the flatulous the fetoranimal the cutarsadical
the fornicable the astinking the iratulous the matrocituous
the degenerous the insect the pustiferous the stomafuching
the tentacular the suppurous the faecifying the fevery
the supermuckent the veneravid the suprasacral the supersyphilable
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FEWERDOLR
FOWLREDER
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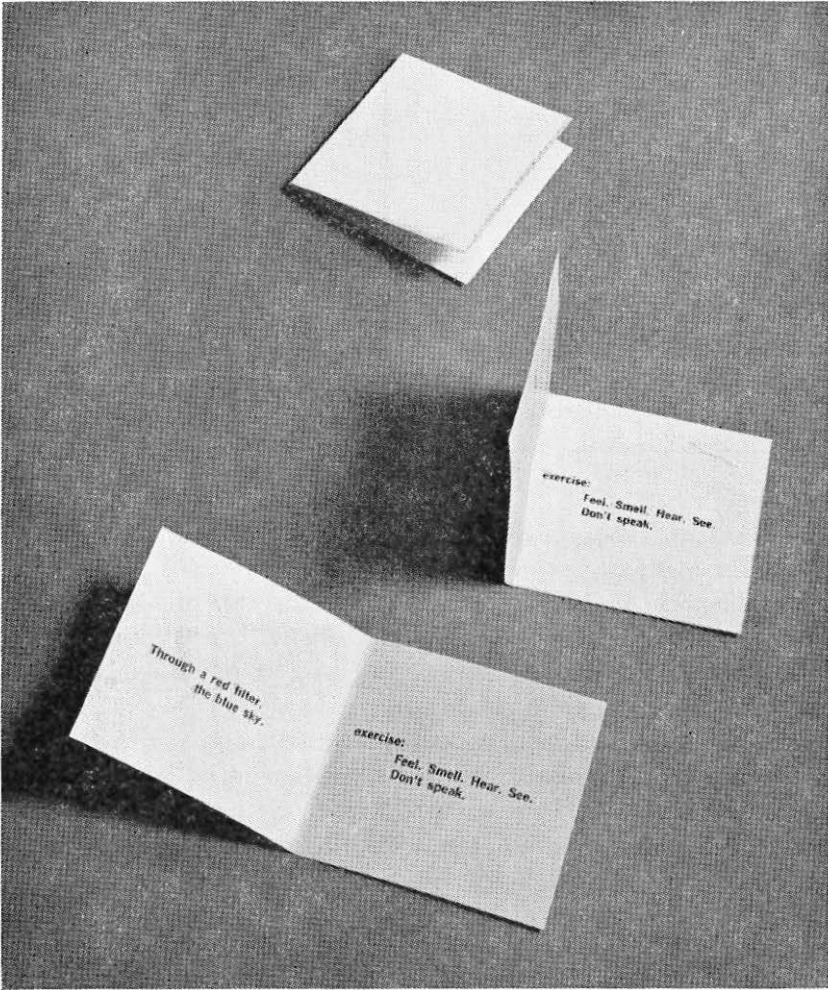
program do it yourself
the reader (operator)
may go on at pleasure
doing new semantic variations
within the given parameter

Haroldo de Campos. "Alea I—Semantic Variations" (translation Edwin Morgan). Reprinted from *Concrete Poetry: A World View*, Mary Ellen Solt, ed. Copyright © 1970 by Indiana University Press, Bloomington. Poems are reprinted by permission of the publisher.

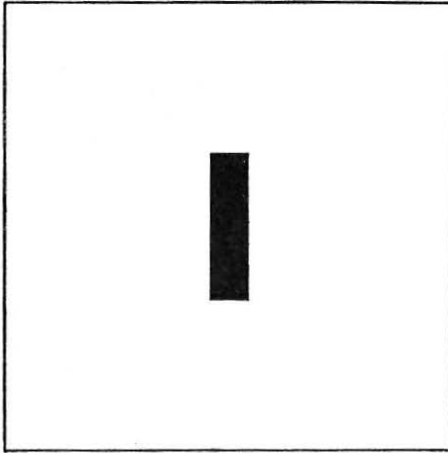


Gerhard Rühm. "bleiben." Reprinted from Solt.

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Carl Fernbach-Flarsheim. "exercise." Reprinted from Solt.



Décio Pignatari. "Life."
Reprinted from Solt.
See discussion on page 217.
The poem continues on
six alternate pages and
should be viewed by letting
the pages fall in succession,
one on top of the other.

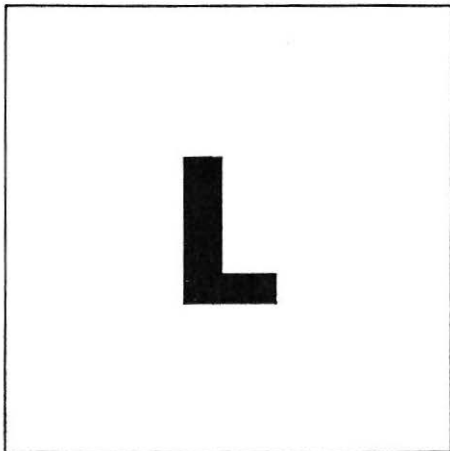
in the exercise. His perceptions are the tenor, the meaning, the focus of the poem/metaphor—experiencing with all senses a blue-red sky.

Yet the poem need not be such a dramatic exercise to involve the reader in the metaphorical process. Emmett Williams¹⁸ accomplishes this involvement by the simple presentation of permutational word evolution, as seen in the example from his novel, *The Clouds*. Although Williams explains the poem as an "eye-and-ear test," the procedure is the epitome of the sensory, concrete metaphor: one stimulus, perception, or thing is a vehicle for another equally concrete stimulus, perception, or thing. In this poem, sound metaphorically becomes sense, and sense becomes sound—both through visual and linguistic perception.

In the concrete poem there is also a metaphor within the greater metaphor. The words or letters manipulated in a concrete poem do not function merely as traditional linguistic symbols. A word such as "table" does not just stand for an object, table. Instead, the referent of the word is often the word's component parts—its appearance, progression, or sound. In effect, the word may refer to itself as linguistic symbol while it also functions as a metaphor for a visual, kinetic, or phonic realm of perception in which the poet places it. In traditional poetry the word and the metaphor have only the referential value ascribed to them by linguistic denotations and connotations. In concrete poetry the word and the thing signified are one.

SENSE SOUND
SONSE SEUND
SOUSE SENND
SOUNE SENSD
SOUND SENSE

Emmett Williams. A section of text from his unpublished novel, *The Clouds*.
Reprinted from Williams.



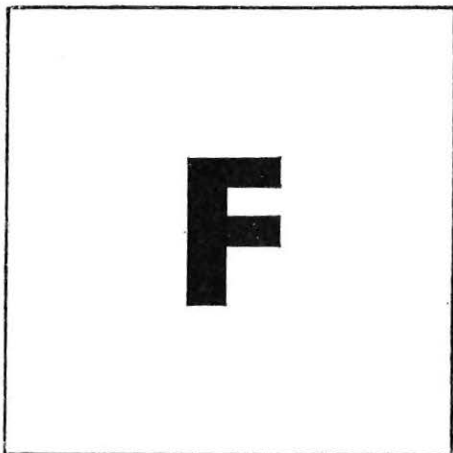
The image on the page is not a representation of something found as real in the external world, so the phenomenon on the page is not just an image. That word on the page has reference not only to verbal associations but to physical shape, syllabic sound, and progression of letters. The object on the page (letter, syllable, or word) functions as verbal vehicle with a visual and/or auditory tenor and as visual and/or auditory vehicle with a verbal tenor. The poem and its parts are an object, a poetic reality that refers back to itself: the poem (letters, syllables, or words on a page) is a metaphor for the properties which make it a multi-faceted perceptual phenomenon.

Two German concretists provide examples. Max Bense's "homage to mathematics" is a series of German and English words ranging from "rock," "arms," and "lid"—to "ear," "sand," "year," and "nothing." The poet sees his poem as a "set of words" rather than a set of things and further explains: "It seems reasonable to say that in this kind of poetry words are not pretexts for objects so much as objects are pretexts for words. . . . It is poetry on a level of meta-language, poetry in a world of its own."¹⁹

The world that such poems create and refer to is further defined by Heinz Gappmayr: "The new poetry does not describe a situation outside of language, but refers to itself, to its concepts, and to the connection between these concepts and the signs necessary to its conveyance."²⁰ In Gappmayr's poem "alles," the "all" of letters and

sog wand jagd sein
 fisch strich tang nichts
 tag stroh herbst glanz jod
 haus sand bild jahr
 spur schritt rost meer krebs
 tritt last laut mohn
 flut schiff fall wind netz
 holz rot ist strand bar duft knie
 stein kiel hals salz
 blick gras kiel fuss ziel
 halt mund schlag weg
 arm rock scham mond see
 ohr schlaf mond glas
 strumpf traum nacht
 lid haut

Max Bense. "set of words (homage to mathematics)." Reprinted from *Anthology of Concrete Poetry*, Emmett Williams, ed. Copyright © 1967 by Something Else Press, Barton, Vermont. Poems are reprinted by permission of the publisher.



a l l e s

sind

(sind)

~~sind~~

"sind"

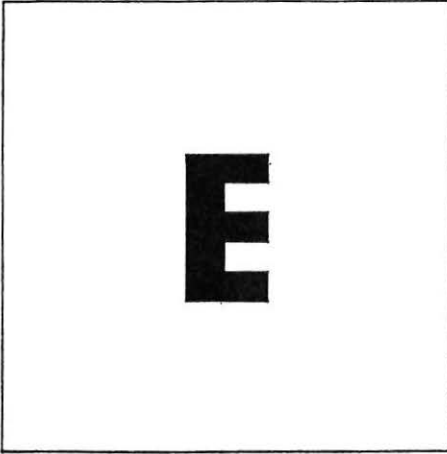
ABOVE

Heinz Gappmayr. "sind." Reprinted from Williams.

OPPOSITE

Heinz Gappmayr. "alles." Reprinted from Williams.

space of the first version interact with the "all" in one place. The first encompasses much space (all), and the second brings many things together (all). Both versions elucidate and make concrete the word meaning by juxtaposing the linguistic meaning (encompassing much space into one area) and the visual appearance (encompassing much space and complete totality). The space, linguistic meaning, and broad vowel sound are interactional vehicles and tenors for one another. Gappmayr is more obvious in this attempt at interaction in a poem "sind" (the first and third person plural present indicative of the German verb "sein," to be). The poet explains: "The text is a fixed connection between thought and physical reality, a unity of concept and sign, and each change of the sign (size, placement, etc.) and its material condition (color, typeface, paper) changes the concept."²¹ One might transpose Gappmayr's explanation: The text



OPPOSITE
José Paulo Paes.
"Anatomia da musa."
Reprinted from Solt.

is a fixed metaphor between thought and physical reality, a unity (and similarity) of concept and sign, and each change (or dissimilarity) in the presentation of the sign and its material condition changes the relationship of vehicle to tenor, the meaning of the word as sign and concept.

In more conventional concrete poems the form in which the word is presented becomes the metaphoric vehicle for the semantic meanings or associations with the word content. In effect, the visual functions as vehicle for the verbal. The seventeenth-century shape poems by George Herbert and the twentieth-century Calligrams of Apollinaire are forerunners of this usage. Apollinaire's "Il Pleut" (It's Raining) forces words into a visual configuration resembling streams of rain, while he uses rain as a traditional metaphor for voices, droplets as encounters, clouds as universal cities of sound, and finally, rain as the externalization of emotion.²² A one-word concrete poem by Aram Saroyan places the words "eye to eye" in that very eye to eye relationship by deleting the "to" and merging the final "e" of the first word with the initial "e" of the latter word. This poem is a simplified version of the visual-verbal metaphor, while Jose Paulo Paes' "Anatomy of the muse" is a more complex presentation. In Paes' poem a woman-dressmaker's form is verbally labeled. The form is a graphic metaphor for the concrete poet's muse: a headless, non-intellectual creature with a bawdy respect for word play. The quota-

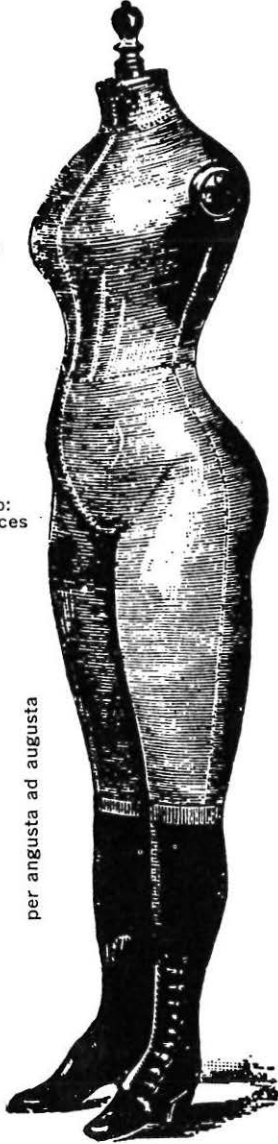
capitis diminutio:
area non aedificandi

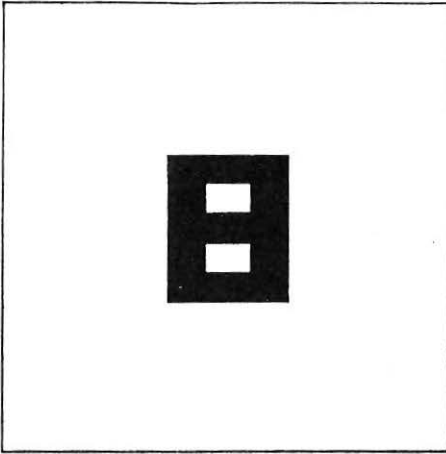
abusus non tollit usum:
ad usum delphini

multum in parvo:
in hoc signo vinces

mutatis mutandis:
modus in rebus!

per angusta ad augusta





tions are linguistic metaphors for the way that muse works: randomly selecting material from literature, history, and life. The smaller image of the same dress form captioned “all rights reserved” mimics the poem’s very existence: Even the technological advances that have placed poetry on the printed page are now part of the reference and meaning of that very metaphor/poem.

The pages themselves become important metaphoric vehicles in Emmett Williams’ book-length, kinetic poem, “Sweethearts.”²³ The poem is preceded by the poet’s instructions for its use (opposite page). The poem is “about” the linguistic meaning of the elements which comprise the long original word. Words such as “he” and “she” are introduced on separate pages, placed in closer proximity on several succeeding pages, and finally metamorphosed to “we.” The poem is “about” the sounds in the original word and in component words. Vowel sounds proliferate and indicate emotion once “he” and “she” become “we.” The poem is “about” the shifting of letters on each page and the movement of the greater figure (composed of letters) as the reader rapidly flips the pages. A sense of growth from small to large, distant to close, and component part to integral whole is conveyed by the kinetic flow of moving pages. “Sweethearts” is a metaphor for the very letters and poetic techniques that comprise it. And it is metaphor for all the linguistic connotations inherent in the meaning of the word “sweetheart” and in the intimate relationship,

instructions for use

the structural and textural characteristics of this erotic poem cycle derive from the 11 letters of the word *sweethearts*

unluckily for the poet 3 of these 11 letters are es and 2 others each occur twice so that there are only 7 different ones for word building from these letters are extracted all the words that make the poem the position of each letter on the page is determined by its place in the word *sweethearts*

no single poem can be more than 11 letters wide or 11 letters deep

in addition to the word poems there are kinetic metaphors also constructed from the 11 letters of *sweethearts*

these sections can be animated by flipping the pages fast enough to achieve a primitive cinematic effect the words and the kinetic visual metaphors work hand in hand to express what the poem is all about the author feels that this fusion is best achieved by beginning the book where in the west books traditionally end

emmett williams

new york city

july august 1966

both physical and spiritual, of one element to another. It is the epitome of the successful concrete poem which defies the limits of traditional linguistic meaning while it establishes valid “meaning” in its own component parts. Ultimately, it is metaphor turned in on itself to communicate metaphor. The poem combines visual, audial, kinetic, and linguistic meaning while the letters, sounds, syllables, and words function as the metaphoric vehicles for one another. The sweetheart metaphor does not contain one single vehicle which elucidates some tenor or abstract love relationship: the sweetheart metaphor, however, does contain, in its own parts, multiple specific vehicles with visual and audial value (“he,” “she,” “we,” “sweet,” eeeeeee, etc.) that facilitate the concrete perception of one another and the greater word. Meaning then resides in the concrete, specific parts of the word, rather than in any abstract word reference.



Because this “meaning” shifts with the cinematic flipping and perception of each new vehicular letter, Emmett Williams calls the process “kinetic metaphors.”

In contrast to the fluidity and multiplicity of such kinetic metaphors one finds, in concrete poetry, some of the most mathematically sparse metaphors of all times:

mist
mountain
butterfly
mountain
butterfly
missed
butterfly
meets
mountain

This poem, composed by Eugen Gomringer in 1955,²⁴ consists of five different words in three sets of three. “Butterfly” and “mountain” are constant in each set while one word progresses from “mist” to “missed” and finally to “meets.” This progression establishes a metaphorical relationship between the other two objects in the poem and transforms those two objects into elements of a shifting, kinetic

interaction. The changing term in each set is the metaphorical force behind this shifting scene. In stanza one, indistinct relationship is shrouded in "mist"; in stanza two, a definite but disjoint relationship is established in "missed"; and in stanza three, a definitive union is accomplished in "meets." The constant first letters of the three stanzas function as common aural and visual stimuli for the reader. The metaphor (word/ vehicle as linguistic meaning and aural-visual constant) is only completed by the perceiver's addition of a tenor. The concrete things (mountain, butterfly, and force) are alive for the poet—and enough for his share of the poem.

A second example of this sparse metaphor may be found in Décio Pignatari's "Life" poem. On succeeding pages the visual images build from a simple line to the Chinese Ideogram for sun to an entire verbal meaning. The metaphor grows by images of accretion: the linguistic signs increase in complexity of individual visual stimulation and in semantic meaning as the accumulated letters begin to form a word. The poem bursts into "Life" in the final ideogram which includes all the earlier visual lines as well as the meaning of all the letters read together. The vehicle and tenor are interchangeable: the letters gradually direct the reader to the ideogram and the ideogram adds to the meaning of the composite letters. A tension exists between the similarities and dissimilarities of the two metaphoric feet: one basically verbal and English, the other basically visual and Chinese. Yet each foot is as real, concrete, and understandable as the other. Because the properties of each foot extend, enhance, and reinforce the properties of the other (the sun is life-giving energy—life depends on the sun; and the letters placed simultaneously in the same place will produce the Chinese character—the lines of the character taken separately will form the letters), that tension is exploited if not resolved.

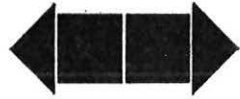
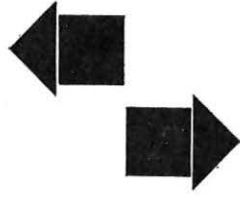
The most sparse of the concrete metaphors, and the most mechanic, is the computer poem. Fernbach-Flarsheim has produced poems written in Fortran. His poem, "Random Generator Program," is written as a computer input tape to which the machine, rather than perceiver, must respond. The result is mechanized metaphor. What the computer produces is its response to the similarities and dissimilarities in the two types of language used to address the machine. Fernbach-Flarsheim's "poem" does seem to strain the limits of the

genre's definition, but even the more traditional Brazilian concretists termed the poem a "mechanism regulating itself: feedback" and a machine that produces a "poem-product: useful object."²⁵

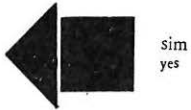
This mechanistic tendency is taken to an extreme in the most revolutionary concrete poems in which metaphor is nonverbal. The vehicle becomes pure energy for a tenor that is itself pure tension between energies. Luiz Ángelo Pinto, a Brazilian, along with Décio Pignatari, has launched "semiotic poetry" or "code poems" in which non-linguistic signs must function as vehicles for communication and perception. Contradictions and dissimilarities such as those found in the mutually exclusive terms "yes" and "no" are resolved and the signs totally merged because the perceiver has no word associations (of mutual exclusion) to the non-linguistic signs. If traditional metaphors could forge new relationships by yoking disparates, the concrete poem/metaphor extends this to its logical extreme. The sign metaphor can yoke disparates in a union that merges the dissimilar and similar by combining shape or unifying directional force (see the last two "lines" of the poem). Both vehicle and tenor are reciprocal forces that influence each other and the "meaning" of the "poem" (in traditional terms), or the "experience" of the "material" (in concrete terms).

Mary Ellen Solt's non-verbal "moonshot sonnet" provides a supra-linguistic means of communicating the relationships that modern syntax is incapable of conveying. The sonnet is composed of an octave and a sestet, but the rhyming elements, like all the word elements in the poem, are non-linguistic symbols. Solt designed the poem after seeing the scientists' markings on photographs of the moon. She notes that "No one has been able to write a sonnet to the moon since the Renaissance, and I could not do it unless I was willing to incorporate its new scientific content. The moon has become a different object."²⁶ She compares the concrete poem to the "supra-national, supra-lingual" sonnet and terms her own version as both spoof of the old form and statement about the necessity for the new form. Her concrete vehicle, scientific symbol, is her way toward a scientific world of fact. Her moon is no longer even linguistic vehicle, but is the object or tenor of a scientific world.

The visual aspect of these concrete metaphors is important and has great implications for poetry to come. Traditionally, verse has been a tool of the wit and intellect. This tendency, epitomized in the meta-



chave léxica
lexical key



Luiz Álvaro Pinto. "A code poem." Reprinted in *Anthology of Concrete Poetry* from the semiotic poetry manifesto of Pinto and Decio Pignatari, *Invencao* No. 4, 1965.

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physical conceits of the seventeenth century, is climaxed in the early twentieth century by the obtuseness in much modern poetry. Even in recent romantic, confessional poems that deal with personal intuition or individual emotion, the poetic faculty, the imagination, has provided a rationalizing force. While not abandoning either the intellectual or the emotional, metaphors in recent concrete poetry have emphasized the sensory.

The sensorily perceivable metaphor achieves literal reality in the concrete poems that are nothing if not seen, spoken, heard, and touched by reader participation. For this reason Peter Michelson could term the concrete poem a “visual metaphor of modern sensibility.” By making a verbal art—poetry—visual and often pictorial, the concrete poem establishes the most revolutionary definition of a figurative technique: when literal, verbal meaning is juxtaposed with literal, visual appearance, the result is a newly defined figurative relationship between the word’s denotative and connotative meanings, and the visual figure’s stark appearance and multiple associations. “Meaning” therefore is multiplied (as in any figurative relationship) but is bound in the knowable, tangible world of the literal word and literal object on the page. This is how the sensorily perceivable metaphor can be defined as “concrete” and be judged as a real object rather than linguistic symbol. The figurative similarities and dissimilarities abound and enrich the relationship while the literal terms maintain a foot-hold in the real, external world. In effect, the “vision” of such contemporary poetry is accurate perception, not philosophic abstraction, and views through language first an external object and only then turns to spiritual meaning within that object.

And finally, even the visual relationships become relative as the reader is required by poet and poem to provide multiple perspectives and varying sensory responses to the ever-shifting elements on the page. Both the visual relationships and relativism are crucial to the concrete use of metaphor. By juxtaposing multiple, disparate words, letters, diagrams, and objects (that are things and energy), the poet/

Mary Ellen Solt. “Moonshot Sonnet.” Reprinted from Solt.

artist establishes his art as an integral part of reality in the modern world; by isolating specific particulars and constituent parts such as sound or letters he defines that reality as tangible and knowable; and by using the reader's/perceiver's sensibility to complete the "meaning" of the metaphor he facilitates reader contact with the real world of the poem. This evolution in the use of metaphor therefore is extremely important because it has moved poetry beyond the merging or confusion of abstract realms to a process whereby poetic "meaning" is a function of concrete particulars fused in the poet's and reader's sensibilities.

1. See Mary Ellen Solt, ed., *Concrete Poetry: A World View* (Bloomington, Indiana: Indiana University Press, 1971), pp. 67-86; Mike Weaver, "Concrete Poetry," *The Journal of Typographic Research* (now *Visible Language*), I, 3 (1967), 293-326. Reprinted from *The Lugano Review*, I, 5-6 (1966), 100-125; Richard Kostelanetz, ed., *Imaged Words & Worded Images* (New York: Outerbridge and Dienstfrey, 1970), intro. n.p.; Eugene Wildman, ed., *Anthology of Concretism* (Chicago, Illinois: Swallow, 1970), pp. vii-xi; and David W. Seaman, "The Development of Visual Poetry in France," *Visible Language*, VI, 1 (1972), 19-44.
2. Solt, pp. 7-60; Emmett Williams, ed., *Anthology of Concrete Poetry* (New York: Something Else, 1967), pp. v-vii; and Charles Boultenhouse, "Poems in the Shapes of Things," *Art News Annual*, XXVIII (1959), 64-83, 178.
3. For discussion of twentieth-century influences and how they relate to poetry in particular or concrete art in general see: Cecily Mackworth, *Guillaume Apollinaire and the Cubist Life* (London: William Clows, 1961), pp. 205-231; Wylie Sypher, *Rococo to Cubism in Art and Literature* (New York: Vintage, 1960), pp. 312-330; Roy McMullen, *Art, Affluence and Alienation* (New York: Mentor, 1968), pp. 93-128; Sheldon Cheney, *A Primer of Modern Art* (New York: Liveright, 1966), pp. 17-73, 97-154; Anna Balakian, *Surrealism The Road to the Absolute* (New York: Dutton, 1970), pp. 13-49, 67-99, 123-139; Hans Richter, *Dada Art and Anti-Art* (New York: Abrams, n.d.), pp. 41-49, 118-121, 137-154, 167-196; and Katherine Kuh, *Break=Up: The Core of Modern Art* (New York: New York Graphic Society, 1966), pp. 54-101.
4. Solt, pp. 60-64; Mary Ellen Solt, "Typography and the Visual Concrete Poem," *Visible Language*, VI, 2 (1972), 109-122; and John Begg, "Abstract Art and Typographic Format," *Magazine of Art*, XLV, 1, 27-33.
5. Eugen Gomringer, "The First Years of Concrete Poetry," trans. by Stephen Bann, *Form*, IV (15 April 1967), pp. 17-18; and Erich Kahler, *The Disintegration of Form in the Arts* (New York: Braziller, 1968), pp. 73-109.
6. Two articles provide exceptions to this oversight: Seaman bases his discussion of visible poetry in France on the assumption that the visual is an important aspect of verse that runs throughout the mainstream of poetry. Solt, in her article on typography, also recognizes the under-emphasized fact that concrete poetry is, above all else, a form of literature.

7. I. A. Richards first divided the metaphor into two constituent parts, the "tenor," an underlying idea or abstract principle which the "vehicle" or concrete figure means. *The Philosophy of Rhetoric* (New York: Oxford, 1950), p. 99.
8. Peter Michelson in Wildman, pp. viii-ix.
9. This study is indeed one-sided in its approach to the visual aspect of concrete poetry as a concomitant interactional force with verbal meaning. Such limitation of approach is demanded by the absence of critical inquiry into concrete poetry *as verse*. Such a deficit requires an integrative approach if the concrete medium is to be termed poetry; yet such an approach does not slight the visual as secondary in such an art form. On the contrary, the increasing importance of the visual image outside traditional boundaries of visual art is the stimulus for viewing the visual and verbal together.
10. Solt, p. 68. Reprinted from an essay in the Festschrift *Max Bill*.
11. Kostelanetz, n.p.
12. Weaver, *The Lugano Review*, p. 105.
13. Quoted by Margaret Davies, *Apollinaire* (New York: St. Martin's, 1964), p. 243.
14. Weaver, p. 100.
15. Solt, p. 14.
16. Williams, pp. v-vi.
17. Solt, p. 21.
18. Williams, n.p.
19. Williams, n.p.
20. Williams, n.p.
21. Williams, n.p.
22. Apollinaire's contribution to the concrete movement in particular and modern art in general is extensive. His calligrams are the first *modern* experiments with poetry emphasizing sight rather than sound. See especially Cecily Mackworth, pp. 205-231; Francis Steegmuller, *Apollinaire Poet Among the Painters* (New York: Farrar, Straus and Company, 1963), pp. 323-326, 333-334; Margaret Davies, p. 244; Leroy C. Breunig, *Guillaume Apollinaire* (New York: Columbia University Press, 1969), pp. 34-36; Stephen Themerson, *Apollinaire's Lyrical Ideograms* (London: Gaberbocchus, 1968), pp. 17-23; and Phillip B. Rice, "A Modern Poet's Technique: Guillaume Apollinaire," *Symposium*, II (1931), 470-483.
23. Emmett Williams, *Sweethearts* (New York: Something Else, 1967), n.p.
24. Williams, *Anthology of Concrete Poetry*, n.p.
25. Solt, p. 72.
26. Solt, p. 54.

The Language of Music

Let us return for a moment to natural language. If we discuss only the written word, we are in danger of overlooking the obvious fact that much of the meaning of an utterance depends on how it is said. The talent of an actor consists in his ability to select a convincing way of speaking his lines. The information conveyed by his choice will have little or nothing to do with the verifiable meaning of his statements: what, anyway, is the verifiable meaning of "To be or not to be: that is the question"? Every stress and pause, every rise and fall of his voice, will betray his inner experience of the world he is addressing. And not only on the stage but in ordinary conversation it is the rule rather than the exception for us to advertise our feelings and reactions, rather than merely informing our hearers about the public world. People simply do not say, even when the information might be called for, "The cat is on the mat." An actor faced with such a line might well throw a tantrum.

The argument is easily carried further. Much of human conversation is carried on with grunts, laughs, and physical gestures of one kind and another. This is the main reason why it is such a grisly task attempting to edit a tape recording for publication, or attempting to prepare a speech on paper. The written word seems, deceptively, free from the ebb and flow of feeling and emotion, but the spoken word defies separation from the flow of consciousness of the speaker.

Perhaps, then, the problem has been wrongly posed. We should be asking not, how is it that music can have meaning when there are no words to convey it, but, how can the written word convey meaning when there is no indication how it should be uttered? The wonder should be not that we can communicate through song, dance, and gesture, but that we can exchange experiences so effectively through such a dry-as-dust medium as patterns of marks on processed wood pulp. As usual, it seems, we are puzzled by the wrong things about ourselves; our most remarkable faculties are not those for which we normally give ourselves the credit.

H. C. Longuet-Higgins, University of Edinburgh; excerpted from his "The Language of Music," *The Times Literary Supplement*, November 20, 1970, pp. 1351-2.

The Renaissance of Books

Northrop Frye

The article attempts to deal with the place of the book among the instruments of communication in modern society. The paperback revolution is characterized as a change in the conception of the book from cultural monument to intellectual tool. The cultural context of this change is discussed and the effect of radio and more particularly television on twentieth-century society is briefly considered. The book, the author points out, can not only be read but reread, consulted at will as a stationary focus for the community. The book is the technological instrument that makes democracy possible, and public access to written documents the principle that keeps it functioning.

I suppose one may spend one's whole life with books, without thinking particularly about the different kinds of emotional impact that books may have, not only because of what they are, but because of what they symbolize or dramatize in society. I can trace in my own earlier life several kinds of such symbolic influence. There had been a clergyman in our family, and the bookcases in our house included several shelves of portly theological tomes in black bindings. These were professional books, of course, and their equivalents would have been, and still would be, found in other such homes. But on a child they gave an effect of immense and definitive authority, of summing

This essay was originally prepared as an address to the Ferguson Seminar on Publishing, held on the campus of the College of William and Mary, November 15 and 16, 1973. It is in some respects a reply to George Steiner's article, "After the Book?" in *Visible Language* (Summer 1972), which was also originally delivered as a Ferguson Seminar lecture. The Ferguson Seminars were conceived by William Cross Ferguson, former president of the World Book Company and director and treasurer of the American Textbook Publishers Institute, who before his death in 1967 set in motion the establishment of an endowment for "a seminar in publishing . . . devoted to the writing, editing, designing, printing, and marketing of books. . . ."

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up the learning and wisdom of the ages. They appealed to that primitive area of response before reading was a general skill in society, when “gramarye” meant magic, when there were few Prosperos and many Calibans to say of them:

remember

First to possess his books; for without them

He’s but a sot, as I am, nor hath not

One spirit to command. . . . Burn but his books.

And yet when I was old enough to begin to try to use these books myself, I became aware of another important principle connected with books: the principle of the mortality of knowledge. Apart from two which I am still using, a Cruden’s Concordance to the Bible and a Josephus, there was hardly a statement in any of these volumes which had not become demonstrably false, meaningless, or obsolete. I remember opening a huge commentary on the first page, the introduction to Genesis, and reading there: “Nothing is more certain than that this book was written by Moses.” Alas, I already knew that if there was one thing more uncertain than the authorship of Genesis, it was the existence of Moses. The black bindings were appropriate: the books were coffins of dead knowledge. Their impressiveness as physical objects was grotesquely inconsistent with the speed at which scholarship moves, and it was clear that books ought to have a very different sort of appearance if they are to symbolize the fact that genuine knowledge is always in a state of flux.

In the same house there were sets of Scott and Dickens, and sets of lesser writers as well, for in those days even a best-selling novelist with a temporary vogue might achieve a collected edition in twenty volumes. There were also poets—Elizabeth Browning, Longfellow, Whittier—bound up in some repulsive substance that at the least hint of sustained use began to split, crack, and come off on the fingers. Sinclair Lewis in *Main Street* refers to the “unread looking sets” of authors in the homes of Gopher Prairie, and doubtless many such sets were unread. But being read may not have been their only, perhaps not even their primary, social function. I still possess a set of *The World’s Best Essays*, bound in red leather and illustrated by steel engraving portraits of the authors. I hesitate to give it away, because it really is an extraordinary collection: I could hardly have believed

that so much of Baudelaire, for example, was so available to North American homes around 1910. But the physical conditions of the set make it difficult to read, and almost impossible to use.

I am not trying to characterize the reading habits, or non-reading habits, of an earlier generation: I am trying to illustrate the symbolic impact of certain types of books in middle-class households up to about 1920. As physical objects, such books assumed the role of a cultural monument, representatives of the authority of tradition. They are well evoked in an early poem of T. S. Eliot:

Upon the glazen shelves kept watch
Matthew and Waldo, guardians of the faith,
The army of unalterable law.

However, this poem is also about a girl who smoked and danced the modern dances, implying that even Matthew and Waldo may not have been altogether with it, at least not in that physical form. The word “glazen,” meaning, of course, that they were in formally designed bookcases with glass covers, indicates that, whether they were read or not, being looked at when they were not being read was an integral part of their function and value.

I went to Toronto for my university training, and Toronto, in the nineteen-thirties, still had a good deal of the British midland town about it, including a number of second-hand bookshops. Here was a quite different kind of emotional appeal connected with books. I should put this statement in the plural, for many emotions clustered around the second-hand bookshop. One was the emotion of nostalgia, on finding the favorite books of one’s earlier life. Alexander Woollcott has an essay about a woman who discovered on a Paris book-stall the identical copy of a book she had possessed as a child: he speaks of this experience as “catching nature in the act of rhyming.” Then there was the reflection on the vanity of human wishes, in coming, say, upon a book by an unknown author with a sad little inscription on the fly-leaf presenting it to a friend. More central, of course, was the excitement of the treasure hunt. This could be literal and commercial, the rare exhilaration of carrying out from under the bookseller’s nose something that was more valuable than he realized. But that was for experts: as a rule, one was content with the feeling that the book itself might be a hidden treasure, an unlocked word-hoard. This

feeling, however often disappointed, is quite as primitive and essential as the impression of magical authority, already mentioned. Such shops have now largely disappeared from Toronto, as from other cities: even the forlorn books that used to go the rounds of church rummage sales have been bought up by librarians of new universities, at least in enough quantity to remove them from the orbit of the book-searcher's interest. The second-hand bookshop however represents something irreplaceable in one's literary experience, and it is bound to revive sooner or later, if only as an aspect of the junk-antique business.

I was in London, on my way to Oxford as a student, when Penguins began to appear. At that time they were sixpence apiece, and could be got out of slot machines. They were aggressively advertised, at least for British mores at that time: I remember an advertisement contrasting a new Penguin with a battered and dog-eared copy of a book from a public library, with the caption: "You don't know who had it last." I did realize that this reflection on public libraries had some social significance, the public libraries being so major an influence on the book market throughout the nineteenth century, able to exert collateral forms of pressure like censorship. But I did not realize that I was seeing the birth of something like a revolution. After all, why should it have been one? Why should putting out books in brightly colored soft covers, with the pages glued instead of sewn, be an important cultural change? It is surely not comparable with other physical changes in the history of the verbal arts, such as the change from scroll to codex around the beginning of the Christian era, to say nothing of the invention of the printing press itself.

The reason, I think, is once again the fact that books are significant not only for what they are but for what they dramatize or symbolize in society by their appearance. The paperback was partly a reaction to the book as cultural monument, and by being that it helped to dramatize the importance of the book as an intellectual tool. It suggested a higher degree of expendability, and so acknowledged the mutability of scholarship and literary taste. The psychological effect of studying such a work as Hegel's *Phenomenology of Mind* in paperback seems to me to be quite different from studying the same book in a hard cover. And by dramatizing the book as intellectual tool, the paperback also dramatized the extraordinary effectiveness of the

book, the fact that, familiar and unobtrusive as it is, the book is one of the most efficient technological instruments ever developed in human history.

There are signs, naturally enough, that the paperback vogue is waning and that it will come to dominate the book world less exclusively in the future. One has to see it in its proper context, as one of several revolutions in verbal media. Others are the development of photocopying and the immense growth of facsimile reprints: I should add to this also what seems to me to be an unprecedented increase in the volume and range of translation. All these are part of the same cultural expansion that has produced reproductions in paintings and recordings of music, and like them they have greatly expanded the range of possible influence on contemporary culture. Just as any freshman in a conservatory may learn from records more about pre-Mozartian music than Mozart himself ever knew, so any student in a small college may have access, potentially, to a range of materials formerly available only in the biggest libraries. Even when books are produced in the scale and size of the cultural monument, they show the effects of these revolutions. An example is the type of book usually called, rather deprecatingly, the coffee-table book. This is normally a collection of photographs of pictures or buildings, and is designed, not to stand on shelves with an army of unalterable law, but to lie down enticingly and alone, like a mistress.

Paperbacks and photocopied materials reflect also a major change in the academic perspective. As an undergraduate I was taught philosophy by G. S. Brett, a scholar greatly admired by his students, and most deservedly so, for his vast learning. He was the author of a *History of Psychology*, still a standard work on the subject; he had no degree except an Oxford M.A., and was Dean of the Graduate School, a task he took with little seriousness because he thought graduate research was mostly a lot of nonsense. He represented a generation of scholars whose life work was expressed by a single major book, or a very restricted canon of such books. But even in his last teaching years, the cataract of papers, off-prints, and other manifestations of the publish-or-perish fetish in academic life had begun, as a part of the cultural change of which the paperback and the reprint are other symbols. Philosophers like A. J. Ayer began mounting attacks on metaphysics, partly, I think, because meta-

physics represented the structural aspect of philosophy, the aspect which made large books possible. In their wake came the “productive scholars” of a new school, who tended to be suspicious of all books that were not collections of brief papers. Robert Musil, in *The Man Without Qualities*, surveys the situation with his usual double-edged irony:

Philosophers are violent and aggressive persons who, having no army at their disposal, bring the world into subjection to themselves by means of locking it up in a system. Probably that is also the reason why there have been great philosophic minds in times of tyranny, whereas times of advanced civilization and democracy do not succeed in producing a convincing philosophy, at least so far as one can judge from the lamentations one commonly hears on the subject. That is why nowadays there is a terrifying amount of philosophizing done in small slices. . . . There is, on the other hand, a definite mistrust of philosophy in large chunks, which is simply considered impossible.

I have always been very touched by the preface to the third and last volume of Paul Tillich's *Systematic Theology*. This was a work on which Tillich had spent many years, because, he says, he had always wanted to write a systematic theology. I can think of no better reason for writing anything, but the ambition itself was typical of a certain period of culture. By the time he reached his last volume the fashion in theology had changed, the younger intellectuals had turned to much more simplistic versions of existentialism than the one that he held, and he was being told on all sides that the phrase “systematic theology” no longer made any sense, in fact was a contradiction in terms.

Similar changes naturally affected literature itself, especially poetry, which up to about 1950 symbolized a good deal of cultural authority whether it was read or not. When we speak of such nineteenth-century poets as Longfellow as “popular,” we are using the term in a somewhat retrospective sense: Longfellow was widely read, but he was also a scholarly poet, and most of those who read him felt that they were engaging in a fairly high-brow enterprise. Even writers of inspirational doggerel might be regarded, on a popular level, with the kind of awe implied in another phrase from Lewis'

Main Street: "they say he writes real poetry." The great poets of the first half of this century—Eliot, Yeats, Pound—had the somewhat aloof authority conferred by their erudition, even though they often felt the pull of the desire to be genuinely popular. We have the Eliot of Sanskrit quotations and the Eliot of practical cats; we have the Yeats of Rosicrucian symbolism and the Yeats of the luminously simple ballads in the *Last Poems*. Allen Ginsberg's *Howl* is usually taken as the turning point towards a neo-Romantic poetry which has been popular in a way hardly known to previous generations. Much of this poetry has turned back to the primitive oral tradition of folk song, with the formulaic units, topical allusions, musical accompaniment, and public presentation that go with that tradition.

The changes in prose fiction are even more significant from our present point of view. In Canada, as in many other communities, there lingered for a long time the myth of "the great Canadian novel," the hope that somebody some day would produce a novel in Canada as monumental as *War and Peace*. The word "the" implies that whoever did it would do it only once, but, even so, the achievement would have a redemptive force for the whole Canadian community: the authority of such a work would confer authority on the society that produced it. This means, among other things, that a monumental novel reflects a relatively coherent social order, as the Victorian three-decker, the book one could live inside of, manifested the prestige of Victorian society. Even Tolstoy's *Russia*, despite our hindsight, afforded a good deal of stability to the novelist of this kind. Hence the most highly regarded novels, in the period up to say 1940, were predominantly realistic, for realism had the dignity and the moral force that goes with the ability to study and interpret a civilization. Such realism was central to what F. R. Leavis calls "the great tradition," which he studies, in a book with that title, in George Eliot, Joseph Conrad, and Henry James.

However, when empires start building walls around themselves it is a sign that their power is declining, and "the great tradition" is now not much more than a tradition. Tolkien's *Lord of the Rings* came out in the mid-fifties, to the accompaniment of a chorus of readers saying "of course I can't read fantasy," usually with an air of conscious virtue. The success of Tolkien's book, however, indicated a change of taste parallel to the post-Ginsberg change in poetry,

towards the romantic, the fantastic, and the mythopoeic. Science fiction, which is really a form of philosophical romance, has taken on a new importance, and the mythical elements in Pynchon or Vonnegut do not revolve around a realistic center, as they do in *Ulysses*. Romance, fantasy, and mythopoeia are the inescapable forms for a society which no longer believes in its own permanence or continuity. I know several writers who acquired early in life an intense desire to be novelists of the “great tradition” type: they are dedicated and highly intelligent people, but they find heart-breaking difficulties in getting published, and when they are published suffer from a feeling that the parade is now going down some other street.

One curious feature of the realistic development of prose fiction, from *Don Quixote* down to the last generation, is that it so frequently took the form of a parody of romance formulas. This is explicit in *Don Quixote* itself, but many other novels, *Joseph Andrews*, *Northanger Abbey*, *The Eustace Diamonds*, even *Waverley*, began as parodies of well known types of romance. In Jane Austen’s other novels the realistic study of character and setting is related, somewhat quizzically, to a romantic story with a conventional happy ending, and in the later novels of Dickens a great pageant of vividly “lifelike” characters move within a melodramatic plot so incongruous with them as to be almost an anti-narrative. We notice that characters confused by romantic values—Emma Bovary, Lord Jim, Anna Karenina, Dorothea Brooke, Isabel Archer—often occupy the central place in a realistic narrative. There seems something inherently paradoxical about the structure of a genre of literature that avowedly imitates life. The reason is not really so hard to grasp. Life has no shape; literature has. A realistic story must get its shape from somewhere, and ultimately the only place it can get it from is romance, a form of fiction in which the story is told for its own sake.

The change of taste in favor of the romantic and mythopoeic in fiction, therefore, is parallel to the movement away from representation in painting. Fantasy presents the reader with the kind of situations that occur only in stories: it belongs to a conception of literature as a self-contained and autonomous art. But literature, as long as it uses words, can never be as purely abstract as painting or music, and a more far-reaching principle still is involved. Modern criticism, as such, begins with Oscar Wilde’s dialogue, *The Decay of*

Lying, the main object of which is to point out the shortcomings of any kind of literature that accepts the obligation to imitate "nature," or "real life." The speakers in Wilde refer to Charles Reade, who wrote one outstanding romance, *The Cloister and the Hearth*, followed by a number of inferior realistic stories, as an example of the fact that the popular notion of the greater weight and dignity of realism can often mislead a writer. They also say that *Romola* is a better novel than *Daniel Deronda*, not a statement that many admirers of George Eliot would accept, but again expressing a preference for romance over realism. Again:

M. Zola sits down to give us a picture of the Second Empire. Who cares for the Second Empire now? It is out of date. Life goes faster than Realism, but Romanticism is always in front of Life.

Literature, we are told, does not necessarily gain in seriousness or value when it imitates nature or real life, but nature and real life do gain in seriousness or value when they imitate literature, that is, when something like a literary shape can be discerned in their chaotic phenomena. Wilde's argument is presented as a good-humored paradox, but for us to go on thinking of it as one is living in the past: it expresses a simple truth reflected in many aspects of our cultural situation, especially from the mid-fifties to our own day.

The principle of life imitating literature explains why the growth of fantasy and mythopoeia in fiction is accompanied by such works as Truman Capote's *In Cold Blood* and Norman Mailer's *Armies in the Night*, which are not realistic fiction but are documentary reports on events that seem to have in themselves a narrative shape. In some films the boundary line between imaginative artifact and documentary is even more difficult to find, the former often being disguised as the latter. This development is important in the growth of the communication media that have the social function of stabilizing the non-reading public. The non-reading public includes, of course, the reading public whenever it is not reading. But it also includes the very large group of people who cannot get a sufficiently vivid stimulus from the printed word to rely much on it for their imaginative participation in society. This group has finally settled mainly on television, to which films, radio, and picture magazines have all become subordinated. All these media are concerned with news and

commentary as well as entertainment, and the principle of life imitating literature is present in both aspects.

Our waking existence is a continuum: sleep and dreams have beginnings and ends, but when we wake up again we rejoin the continuum. Our lives also begin and end with birth and death, but birth and death, both of which are often described in terms of sleep or dream, respectively attach us to and drop us off the unending continuum of the living, the dead, and the unborn, in Edmund Burke's phrase. The function of the news media is to present a verbal imitation of this continuum, and television is the most efficient of all the media at doing so. Ritual is one means of keeping the continuum punctuated: we dramatize the stages when we join it or leave it or make a major change in our relation to it. News, in the stricter sense, is whatever breaks into the continuum, which is why so much news consists of disaster, and why all disaster is news. But besides the images of breaking, air crashes and the like, there are images of confrontation. Intellectual news, or the discussion of "issues," consists very largely of a polarizing of attitudes, for and against, which is why news media are so fascinated by the conception of the "controversial." In the "issue" the continuum appears to stop for an instant and focus on a simultaneous vertical contrasting of opposed attitudes.

Television is consequently most effective when it presents such rituals as public weddings and funerals, or the ritualized confrontations of football and hockey games, and it presents "issues" in the same polarized way. Such direct pro-and-con opposition, with all neutral or middle ground eliminated, is also what the revolutionary aims at: the revolutionary strives for situations in which everyone opposed to his group can be equally characterized as "counter-revolutionary." Hence the treatment of issues in democratic mass media consists very largely of a kind of unconscious and undirected revolutionary strategy. The time when the impact of television really hit American society, in the later sixties, produced exactly this kind of undirected revolutionary confrontation, in student demonstrations and the like, which achieved practically nothing of any real social importance and stopped as suddenly as it began.

This combination of ritual, game, and polarized issue brings into television a quality of literary imitation, a "story line" with a beginning, a prescribed direction, and a conclusion. The three

elements are most completely merged in the great public trial or investigation scenes, where ritual, game, and the polarizing dialectic of legal prosecution and defence are all most fully employed. The Watergate sequence belongs to the same quasi-literary genre as the Joseph McCarthy hearings of the fifties: evidently a modern society needs a continuous supply of such dramas if the imitation of literature by life is to be kept at its most effective pitch. And unless life takes on something of the shaped quality of a literary structure it will not be deeply interesting to watch. For, as indicated above, it is by our imaginations, the mental response we make to literature, that we primarily participate in society.

By itself, of course, this imitation of literature by the news media could become a very sinister tendency. There is no difference between Watergate and the Stalin purge-trials of the thirties so far as the genre being employed is concerned. Besides, moral issues are not related to literature in the same way that they are related to actual life. We ask an actor to put on a good show, not to tell the truth, and when, say, a senator remarks approvingly that the President was very "believable" in his last interview, he reflects the confusion of standards. Such a confusion returns us to the Machiavellian principle of pure appearance, the basis of what we now call propaganda. It is not important that the prince should be virtuous; it is important only that he should seem so. Such an attitude is imaginative in a perverted sense. Literature is phenomenal: it presents reality entirely through appearance, but in "real life" what is "real" is normally hidden or disguised by the appearance. In trying to get out of the bind that this imitation of literature by life gets us into, we have to return to the book, or at least to the verbal documents of which books form a major part.

Newspapers and the electronic media have carried much further a tendency which was begun by the book: the tendency to break down the distinction between private and social experience. It always was true that poetry, for example, could never become the exclusive possession of one person in the way that an easel painting could be. Wherever there is a literature, there is a community of shared imaginative experience; and yet, wherever there are books, there is the opposite tendency of individualizing the audience. When society still contained a number of illiterates, or habitual non-

readers, a village community, say, would form around a man who could read aloud to them the news, or what passed for news, and current literature. A certain amount of Richardson in the eighteenth century, even of Dickens in the nineteenth, was transmitted in this way. But of course in proportion as the ability to read increased, the audience of hearers decreased. In Elizabethan times there were several popular theatres, but the fateful action taken by Ben Jonson in 1616, of publishing his plays in a book, and so suggesting that one could stay home to read the play instead of risking catching the plague in an audience, began an erosion of the public theatre that by Victorian times had threatened to remove drama from serious literature altogether. Similarly with religion: although Protestants insisted on public attendance at church as strongly as Catholics, their simultaneous insistence on the supreme authority of a sacred book did much to advance the decay of church attendance which is still with us. The concert hall has met similar difficulties with the recording of music. In the age of television it is a common experience to attend a public function and then go home to get on television a more comprehensive and comprehensible view of what one has just been engaged in. So what is the comparative value of the two experiences?

Traditionally, the individual is thought of as having a primary duty to support the institutions of society. The permanence and continuity of church, court, lawcourt, political party, classroom, even, in lesser degree, of theatre and concert hall and museum, give dignity and importance to the individual's life by representing something older and longer lasting than he is. Hence the feeling of obligation about many forms of public attendance. The kind of development we have been tracing, from the earliest books to television, reverses this tendency by increasing the range of private life. It is significant again that the impact of television in the late sixties carried with it a cult of nearly anarchic individualism. Yet the individual, qua individual, can hardly get much beyond the spectacular perspective on public life which makes it potentially a series of theatrical events. There must be some other form of activity that enables us to get closer to what underlies these spectacular representations.

The permanence of social institutions is often symbolized by public monuments, buildings, statues and the like, built for the astonishment of posterity out of stone or metal. There is of course a lurking irony in

such productions of the kind crystallized in Shelley's "Ozymandias" sonnet: anything that can be set up can be knocked down, and doubtless will be sooner or later. The history of verbal documents is rather different, even though they too can become monumental, as we saw. There is a dramatic episode in the Book of Jeremiah, in the Old Testament, where Jeremiah's secretary Jehudi is reading from the prophet's scroll, to the king, a prophecy consisting largely of denunciations of the royal policy. At the end of every paragraph or so the exasperated king cuts off the read portion of the scroll with a knife and throws it into the fire. This must have been a papyrus scroll: parchment or vellum, besides being probably beyond the prophet's financial means, would have been tough enough to spoil the king's gesture. The king's palace disappeared totally in a few years, but the Book of Jeremiah, entrusted to the most fragile and combustible substance produced in the ancient world, remains in reasonably good shape. The vitality of words written on papyrus, as compared with the hugest monuments of perennial brass, has perhaps some analogy to the fact that life, precarious and easily snuffed out as it is, is still at least as strong a force as death.

In our own civilization, as explained earlier, information changes quickly and needs more fluid media, and paperbacks, talked and taped books, interview books, print-outs, microfiche, and documents coded for feeding into computers are all parts of the result. So are the great mountains of photocopied papers, which among other things have thrown the copyright law into a complete chaos. But by doing so, photocopied materials have illustrated the importance of a moral issue connected with the verbal arts which is even more important than copyright.

In a primitive society, where there is no general dissemination of the ability to read or write, the poet becomes the teacher of the community. The reason is that a society without writing depends a great deal on memory, and the poet is better able to remember than other men because he can hitch things into verse, and verse is easier to remember than any prose arrangement of words. In such a society there is of course no sense of the poet's having exclusive possession of his material, any more than any other teacher would have. Later, the conception of literature develops as a body of great traditional themes held in common. Chaucer, Shakespeare, the writers of Greek tragedy,

all draw their materials from well known sources, and their assumption is: this story may have often been told, but I'm telling it better, so you won't need to refer to any other versions except mine. Gradually literature became assimilated to the conditions of the capitalistic market: the individual author's work had to be sufficiently distinct for him to patent it and prevent others from appropriating it. The right of an individual author to benefit from the marketing of his work is of course an unquestioned moral principle, and is likely to remain one. Still, copyright, or the private possession of literary work for the purposes of making a living from it, is not the primary moral principle connected with literature, or the verbal arts generally. That primary principle is rather the principle of public access to the work.

I think once more of the Old Testament. We are told that during the repairing of the Temple in Jerusalem, a "book of the law" was discovered and brought to King Josiah:

And when the king heard the words of the book of the law, he rent his clothes. And the king commanded . . . saying, Go ye, inquire of the Lord for me, and for the people, and for all Judah, concerning the words of this book that is found; for great is the wrath of the Lord that is kindled against us, because our fathers have not hearkened unto the words of this book.

What is significant here is the king's conviction that it was a matter of the utmost importance for the community as a whole to know what was in a written document. Naturally the first categories of verbal documents that need to be publicly known are the laws, so it is not surprising that a book of the law should first be open to public inspection. Most scholars think that the book thus discovered was, or was closely connected with, the existing book of Deuteronomy, which in the present arrangement of books looks like a supplement to or repetition of the law, as its name indicates. But it seems more likely that Deuteronomy was the kernel of the conception of a sacred book, out of which the whole Bible eventually grew. What was new was the feeling that this sacred book should be known by the whole community instead of being locked away among temple records. We see history in the process of turning a corner here, making a decisive and permanent change in human conditions. In such an event as the Protestant Reformation, two thousand years later, we can see how

important still for the future was the insistence on the general accessibility of the acknowledged sacred book.

This leads to a much more far-ranging general principle, one that has been expounded by the Canadian scholar Harold A. Innis in such works as *The Bias of Communications*. Control of communications is one of the primary aims of an ascendant class: whatever tends toward democracy must have, as one of its primary aims, the openness and sharing of communications.

This principle goes along with another one, that the more fully a communications medium is concentrated on the passing show, on recording events as they occur, the more it tends to become a one-way street of messages in which the ordinary consumer has a passive role. In our day radio and television tend naturally to become monologues of this kind, despite the efforts made through cable and open-line programmes to give the consumer a chance to talk back to his set. The electronic media are in any case so set up that, given a revolutionary situation, it is relatively easy for the group in power to seize control of them. Wherever there are dictatorships, the radio is the main instrument of expression: it is, in fact, highly significant that everything we regard as anti-democratic should be summed up by the word "dictator," that is, an uninterrupted speaker, who can expatiate for five hours on the glories of his regime and have the same speech bellowing from every street corner. Television is sometimes thought to be a "cooler" medium, but it isn't: we may compare the role of the "telescreen" in Orwell's *1984*. In the democracies, of course, radio and television reflect the economic anxieties of selling and making profits through consumer goods rather than the political anxieties of censorship and thought control, but the cultural consequences have many parallels. Newspapers also become one-way streets in proportion to their preoccupation with headlines and deadlines: however, the competition of television is now forcing them to become something more like journals of opinion. Even *Time*, the most dictatorial of all journals, was recently startled by Watergate into producing an editorial.

In this situation it seems clear that, however important it may be to have a "free press" and extend the principle of that freedom to radio and television as well, the main battles of freedom are not fought on the news front. They are fought further back, in an area where

issues have acquired some temporal dimension and some historical context. If it were really true, as McLuhan and others have urged, that print is a "linear" medium, carrying the eye forward and hypnotizing all responses except the purely visual one of reading, there would be no difference between print and any other medium. But this thesis confuses the reading process with the consulting process, and overlooks the fact that print has a unique power of staying around to be read again, presenting, with unparalleled patience, the same words again however often it is consulted. It is therefore public access to printed and written documents that is the primary safeguard of an open society. We notice how drastic the alteration of the degree of freedom in society is when we are at war and a large group of documents have to be treated as "top secret," thereby inculcating a facile habit of secrecy which carries on into peacetime. We said earlier that there is no difference between Watergate and the Stalin purge-trials of the thirties so far as the genre is concerned: open inspection of the relevant documents is one of the major moral distinctions between them, one quite as important as the physical treatment of the witnesses.

The relevant documents are, of course, difficult to interpret, and in raw form are as esoteric to most people as though they were locked up. We are brought back to the book, more particularly the book which is an expository treatise, as the ordinary means of expressing and understanding the general conflict of opinion in society, so far as that opinion is not simply a snap response to current events but a sustained and supported argument. The written expository treatise looks at first sight like a dictatorial monologue, but this is a misunderstanding. Nothing of the hypnotic rhetoric of speech to a present audience is left in it: the author is forced, by the nature of his medium, to put all his cards on the table, to take his reader into his confidence, to appeal to nothing but the evidence of the argument itself. And so, however often it may fail in meeting the standards prescribed by its own physical shape, the expository or thesis-book remains the normal unit of impersonal social vision, and the normal medium by which communication draws us together into a community. Now that society, after some years of reeling from the impact of television, is beginning to bring it under control, we can see more clearly that the book is the chief technological device that makes democracy and the open society continuously possible.

Word Recognition Latencies as a Function of Form Class, Stem Length, and Affix Length

P. David Pearson and Michael L. Kamil

This study investigated the effects of form class (nouns or verbs), stem length (3–10 letters per word) and affix length of inflected verbs ('ø,' '-s,' '-ed,' or '-ing') on the recognition latency of visually presented stimuli. Stem length proved to be a significant source of variation for all words and for the noun stimuli separately, but not for the verb stimuli. Subsequent analysis of the verb data revealed that stem length was a significant source of variation only on the first block of trials and that the additional time required for processing affixes is reduced between the first and fourth block of trials. The data fit a letter-by-letter interpretation of the recognition process, modified by a possible morphemic segmentation strategy for affixes.

The early work of Cattell in comparing recognition times for words versus letters has been taken as evidence that words are recognized as wholes in a manner similar to the way that individual letters are recognized. There is a more important aspect of the studies Cattell conducted. For example, Cattell (1885) measured the "threshold times" necessary for subjects to accurately report one half of the letters from a tachistoscopic display. Consistently, there was a difference on the order of .1 seconds between the threshold times necessary to complete the task when the display consisted of short words (4 or 5 letters) versus long words (over 8 letters).

Huey (1908, p. 101) reported the amount of time subjects needed to read entire lists of fifty items—letters or words of varying lengths. He found a 2.3 second difference between a list of fifty four-letter and fifty eight-letter words. A list of fifty twelve-letter words took an additional 8.9 seconds, and 15.6 seconds more were required over the twelve-letter list for a list of fifty sixteen-letter words.

The implication seems obvious if not particularly strong: length is a determinant for either recognition or reading time for words. But it is not satisfying to leave the conclusion at that point. The grossness of the measures employed by Huey and Cattell as well as the lack of any

standard for determining how large differences must be to reach significance demand a more precise assessment of the issue.

Gibson and Guinet (1971) conducted a study which investigated some of the boundary conditions for length factors in word recognition. Displaying words for a fixed amount of time on a tachistoscope (.33 seconds for adult subjects, .67 seconds for children), they found more errors as a function of length—4-, 5-, or 6-letter verbs. The verbs were all regular; i.e., of a class that can be inflected with ‘-s,’ ‘-ed,’ and ‘-ing.’ They concluded that inflections tended to function as perceptual units, compared to non-inflectional word endings, but that inflections did not increase the length of a word that could be read. Analysis of errors made at a fixed exposure time does not seem a sufficiently sensitive measure for studying the effect of length on recognition.

Stewart, James, and Gough (1969) and Gough (1972) developed another technique for investigating the issue. They presented nouns varying in length from three to ten letters and asked subjects to read them as quickly as possible. Latency to initiate the response was taken as the dependent variable. They found, as the length of words increased, an increasing but negatively accelerated function for recognition times. In addition they used a production task (subjects were told to say a particular word when a light flashed) which showed that production was relatively constant over all lengths. This would indicate that the increase observed as a function of length was due to recognition.

The present study was designed to investigate the processing of verbs, both uninflected and inflected, to determine just how much time is required to process an inflection. If processing is limited to a letter-by-letter integration, then adding inflections should increase the recognition time proportionately for inflections of different lengths. If processing is morphemic, then there should be no differences among the verb inflections used by Gibson and Guinet (1971).

Method

Stimuli: The verb list was composed of 48 words, twelve each of 4, 5, 6, or 7 letters. All verbs were regular in conjugation. They were equated for frequency between lengths using the Kučera and Francis list. For each stem ‘ \emptyset ,’ ‘-s,’ ‘-ed,’ and ‘-ing’ were added, producing

four forms of each verb. A randomized list of all the words plus all the inflected forms was produced with the restriction that a stem could appear once in each of four blocks. This yielded a balanced list of all verb stems and stems plus affixes containing 192 entries.

The list of nouns used by Stewart, et al. (1968) contained 192 words also, 24 of each letter length from three to ten. This list was randomized, and included in the present study as a second word list.

Design: The basic design used was a repeated measures factorial with the following factors: Form class (nouns or verbs), word length (for nouns, 3-10 letters; for verbs, 4-7 letters, excluding inflections), and affix type (for verbs only, 'ø,' '-s,' '-ed,' or '-ing'). Subjects were given both lists (nouns and verbs) in balanced orders.

Subjects: Thirteen undergraduate psychology students at the University of Texas were used in this study. They were given course credit for participating.

Procedure: The stimulus words were presented on oscilloscope displays controlled by a PDP-8i laboratory computer. The presentations of each word were controlled by the subject, who pressed a button when ready. Pacing was limited by the computer program so that a response could not be made more often than once every five seconds. Latencies were taken with a Scientific Prototypes voice activated relay and were recorded on line in the computer. Each subject was given several trials with a list of unrelated words, in an effort to control for warm-up. Sessions lasted about 30-35 minutes.

Results

For the first analysis, a subjects \times form class \times length analysis of variance for repeated measures was conducted. Only the verb data for the items without inflections and the noun data for 4, 5, 6, and 7 letters were used. The only significant source of variance was that for length: $F(3,36) = 6.92, p < .05$. The means for the four lengths, from four to seven letters are respectively: 603, 592, 590, and 634 msec.

A subjects \times length analysis was conducted on the full set of latencies for nouns, from 3 to 10 letters. Length proved to be a significant source of variance again: $F(7,84) = 9.02, p < .001$. The eight means from 3 to 10 letters are respectively: 604, 625, 608, 613, 657, 634, 686, and 666 msec. Trend analysis showed the linear and quadratic components were significant ($F(1,84) = 44.19, p < .001$; $F(1,84) = 6.66, p < .05$).

An analysis was performed on the verb data alone. This was a subjects \times affix type \times length analysis of variance. Length was not found to be a significant source of variation although affix type was: $F(3,36) = 4.10$, $p < .05$. The means for the four affixes summed over stem lengths were: 'ø' = 586 msec.; '-s' = 584 msec.; '-ed' = 591 msec.; and '-ing' = 617 msec.

Because the length effect showed up in the noun data but not the verb data, it was suspected that the repeated practice on the verb stems washed out differences between the lengths. Thus, separate subjects \times affix type analyses of variance were conducted on each block of data. (In each block, there was only one occurrence of each verb stem.)

For the first block, length proved to be a significant source of variance; $F(3,36) = 8.70$, $p < .001$. The means for the four lengths summed over affixes were 598, 618, 611, and 665 msec for 4, 5, 6, and 7 letters, respectively. The linear trend component was significant: $F(1,36) = 19.39$, $p < .001$. When the means for the four stem lengths (without affixes) were examined, the means were: 562, 587, 616, and 648 msec. The linear trend for these means was also significant: $F(1,108) = 6.93$, $p < .025$. Affixes did not have an effect on recognition latency: $F(3,36) = 1.43$, $p > .05$.

The second block analysis revealed no effect on length, but affixes were a significant source of variation: $F(3,36) = 12.08$, $p < .001$. The means for the four affixes were: 577, 567, 612, and 624 msec. for 'ø', '-s', '-ed', and '-ing', respectively. The analyses for blocks three and four revealed no significant effects for either length or affixes.

When the stems alone were compared with the stems + affixes, the following results were obtained for the first block: (stem + '-s') — (stem) = 24.5 msec.; (stem + '-ed') — (stem) = 24.0 msec.; and (stem + '-ing') = 30.2 msec. An orthogonal comparison revealed that stems plus affixes required significantly longer recognition latencies than stems alone: $F(1,108) = 4.55$, $p < .05$. The same analyses on the other three blocks revealed no significant differences between stems and stems plus affixes. It is of interest that for block four the differences are 14, 9.7, and 13.8 msec. additional time for adding '-s', '-ed', and '-ing.'

Discussion

The results of these experiments reveal several important findings. First, the previous findings with regard to length were generally replicated. That is, the general increase in recognition time as a function of length seems to be an established fact. The data for the nouns is of approximately the same shape as the Stewart, et al. (1968) data. Verbs seem to show similar effects to those found by Gibson and Guinet (1971) in their error analysis.

A second important finding is illustrated in the block two data. The addition of an inflectional ending adds a constant amount of time to the recognition latencies—about 25–30 msec. Even more striking in the data is the fact that this additional time is approximately the equivalent to the increase in recognition latency when a single letter is added to a verb stem. This also compares with the Stewart, et al., finding of a roughly constant increment in latencies as a function of length.

The third significant result is that with practice (from block one to block four) the effects of length and affixes vanish. The data seem open to two possible interpretations. First, subjects may develop a strategy of using the first letters of the inflectional endings to identify the whole ending. The alternative would be that subjects use a dual processing mechanism whereby they scan the words for length first and then segment the word morphologically. These two alternatives are not tested unambiguously in the present data, but some evidence is available to support the latter choice. Practice washes out the differences among stem lengths almost completely, but only decreases the time for inflectional recognition from about 26 to 13 msec. This would indicate that the scanning time is decreased for the stems, but the segmentation time for the words remains constant. Scanning time is conceived of as a letter-by-letter search of the word. Segmentation time involves dividing the word into morphological components. If this is the case, the 13 msec. figure (in block four) for the addition of an inflection might be a close estimate of the amount of time necessary to do the segmentation.

In general the least theoretical effort seems to be expended in a letter-by-letter interpretation modified in the following way. It would appear that the subject begins by using a strict letter-by-letter approach, but begins to realize that there are other strategies for

recognizing the words. The subjects test various hypotheses which lead to progressively better performance before they become fully adept. In the present data, the naive state (letter-by-letter) is reflected in the block one data. The hypothesis testing stage occurs roughly in blocks two and three. Subjects seemed to become fully sophisticated by block four.

Morphemic analysis in word recognition has not been established as a general effect beyond the case of verb inflections. However, the present findings stress the need for such investigations.

One final consideration seems appropriate for the present study as well as for most "reading" studies which use word recognition tasks. Clearly such tasks do not assess the full range of cognitive processes involved in reading in context. Studies of the processes involved in contextual reading need to be based on solid theory and methodology. These more restricted word recognition studies can provide the foundation for both.

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Lettering and Society

Nicolete Gray

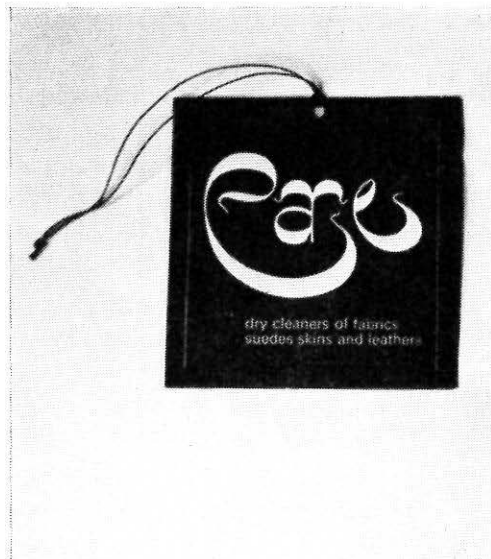
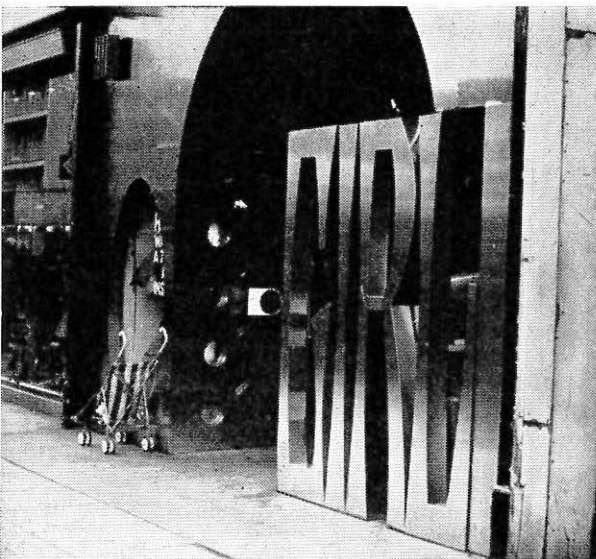
Lettering is omnipresent in our daily lives and takes a great variety of forms; it involves two different types of reading behaviour: private and voluntary, public and involuntary. There is little physical similarity between the two. Thought of as a medium, the physical qualities of lettering—colour, form and dimension—regain importance. Lettering can transmit not only the meaning of the words but also an attitude towards those words. Criteria for which public lettering should be judged are presented. Socially, public lettering should enrich our environment through creative variety of all appropriate letter styles. In lettering education both the application of geometric principles and the study of the past are important. The past can provide models, ideas, and inspiration toward the many directions lettering can be extended; no legible letter is obsolete.

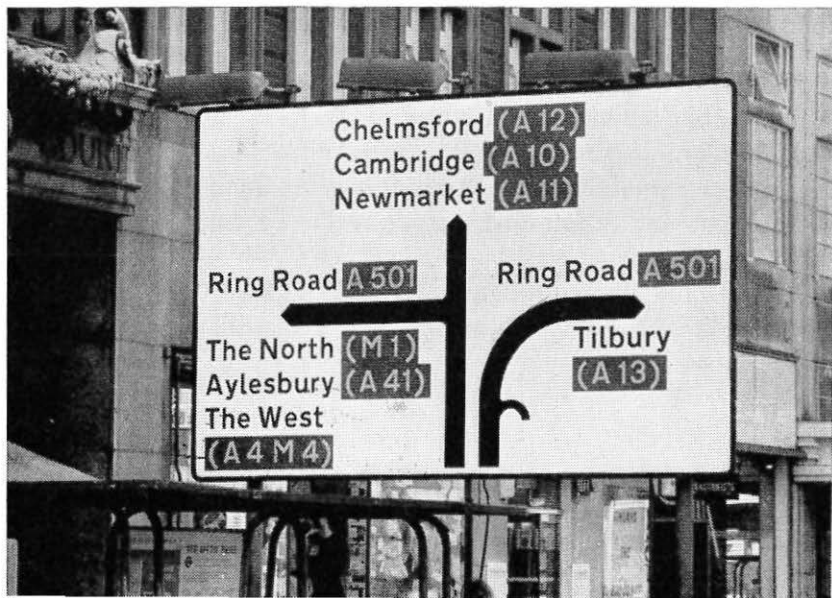
What is the place of lettering in contemporary society? Is this situation satisfactory? If not, what should and can be done about it?

The answer to the first question is, of course, that lettering is a means of communication and as such performs a vital social function. But this is not part of normal social activity; on the contrary, reading is a very private affair and the written word implies lack of contact. We write because we cannot or do not want to speak. The writing side is also a complex affair. There is the sense communicated; with this we are not concerned here. Whether what is written is socially or aesthetically desirable, whether advertising is ethical—these are questions we can leave aside. Then there is the person who initiates the communication, who may be different from the person who composes the actual words used and is almost certainly different from the designer who gives them a legible form. This written product, is however, received by an individual, and the criterion of the success and value of any lettering is, in the final resort, its impact upon individuals. I propose therefore to begin my inquiry on the side of the reader.

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What part does lettering play in the life of the ordinary city dweller? We probably find a newspaper on the breakfast table, and perhaps typed and hand-written letters. Going to work, shopping, or visiting we meet traffic signs and signing systems on buses, in the underground and supermarkets. Posters shout their message verbally and pictorially; even vans are labelled, and we recognise consciously or sub-consciously a house-style which we may meet again as a letterhead. At lunch time we distinguish the restaurant sign which we want from scores of surrounding shops and banks. If we buy something, its package or wrapping will be covered with letters. When we relax at home we may read a book or look at a magazine, and the jacket or cover will incorporate a letter design; and the magazine will certainly contain advertisements. Or we may take a record out of its lettered sleeve, or turn on the television and be met with the programme title sequence. Or we may go out, to find the town centre, and even the side streets, illuminated with letters in many colours, or dominating the skyline. Finally we are unlikely to get through the day without having to scribble something on paper. For most people lettering is not only omnipresent in everyday life but also takes a great variety of forms.

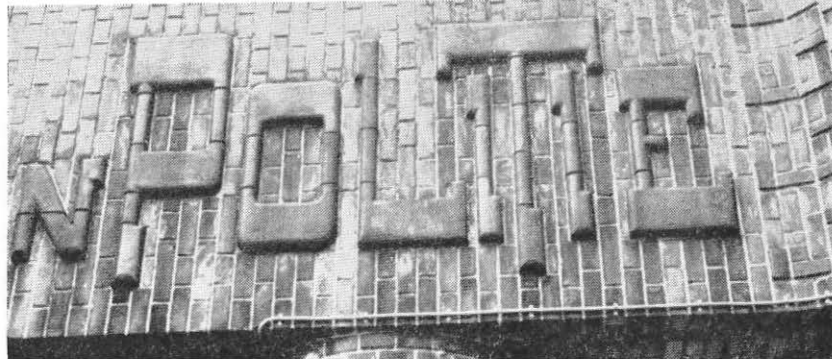






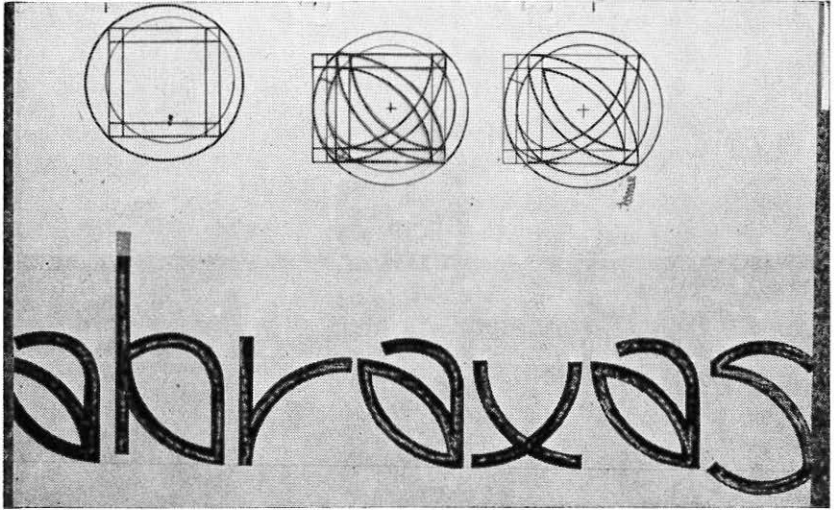
A consideration which is immediately apparent from this catalogue is that people are normally involved in two quite different sorts of reading. One is private and voluntary; we choose whether to make notes or write letters, whether or not to read a book, what book, and for how long. When we are tired of it we close the book, and its contents are seen no more. But the other, greater part of our daily reading is involuntary, if not actually against our will. Even book jackets and record sleeves are displayed in shops, and designed with this in mind. All this public lettering is thus a factor in social life in quite a different sense from ordinary reading and writing, and it is a new factor. It has become part of the environment and its problems. It is lettering for these new and various uses—as opposed to the design of text type-faces for books and newspapers—upon which I propose to concentrate.

First I would like to distinguish the differences a little further. Apart from the difference in use between private and public reading matter,



there is a physical difference. The characters which we write or which we read in books are normally small black marks on white paper. Those which we see displayed in advertisements, in shops, on the streets, or on the screen are made up of all sorts of sizes, mostly large or very large; in all sorts of materials: plastic, metal, ceramic, fibre-glass, etc., as well as paper; produced by many different sorts of process; and in many cases with the added dimensions of colour, artificial illumination, and movement.

Such physical differences can leave virtually nothing in common between the printed letter and the sky sign except a mental concept. This is a vital consideration to which I shall return. But first, to pursue the social problem. We all, I imagine, agree that public and display lettering everywhere leaves much to be desired. We accept that one of the things to be done is to educate public authorities—as well as those who commission and those who read—to discriminate between



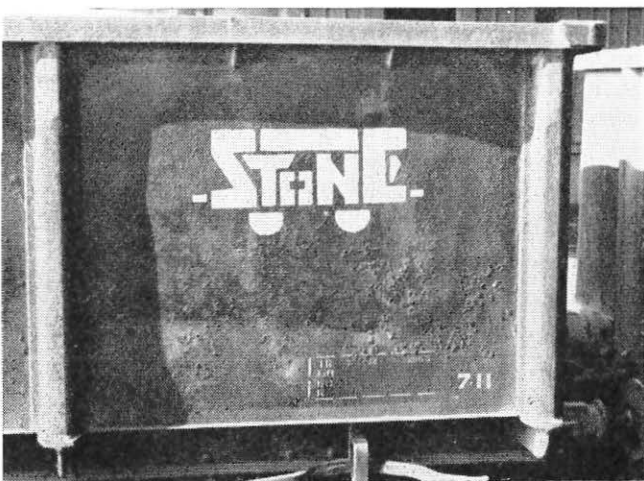
Student work: geometry as a starting point for invention.

good and bad lettering. We need to show them what good lettering is, and the ways in which it can enrich, instead of deface, our surroundings.

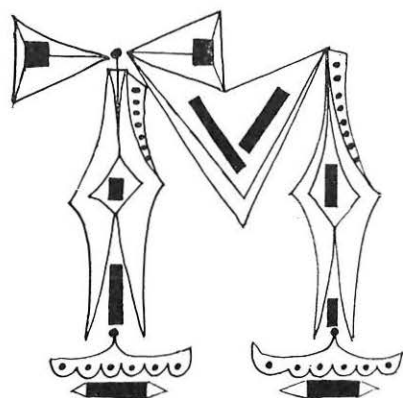
At this point, some may well protest that we have all been shown what good lettering is like. We have only to look at the best Roman inscriptions to see the most beautiful possible letterforms; and we have in this century seen their application to various modern needs by artists such as Eric Gill. Everything depends on how you think about letters. If you think of them conceptually—as signs which are individualisations of an idea in the mind, which are beautiful in so far as this idea is clear and correct, and its realisation is skilled—then perhaps we need only to maintain this revival. This is a classical way of thinking, and it undoubtedly produced very beautiful and sensitive classical lettering on classical buildings. But we no longer build in the classical style, and one has only to look at the roman letters produced in the form of perspex boxes, now to be seen in many streets, to realise that romans are not readily adaptable to all uses and materials. The classical idea that each letter has one perfect form is one which was arbitrarily tied at the Renaissance to the stone-cut monumental letter of the Romans. Perhaps if we detach it from this connection, it will still work today. It can surely be more logically applied to a sanserif letter

based on objective geometrical principles. The result is just one sort of letter applied to all purposes. Is this really what we want? To a certain extent, we have it already and can imagine the ultimate result. Surely it would not only become very monotonous but also unfunctional. Far from being more restful, one would be obliged to read everything, instead of being able to recognise the kind of product at a glance by its lettering style. The idea of a house-style, in itself restful and convenient, would disappear. In a station, how would directions be differentiated from advertisements? And why should the advertiser be deprived of this direct way of catching the eyes of indifferent readers? And most relevant of all to my mind, why should we deprive ourselves of the possibility of making our environment gayer and more lively?

It may be said that there is plenty of variety in sanserif as used today—in design, proportions, colour, etc. But in so far as this idea of variety has been accepted, the classical idea of lettering has been abandoned. Where then should variation stop? In this case we now have to find a different theory. If letters are not realisations of definite mental concepts, what are they? I should prefer to say that they are realisations of very *indefinite* mental concepts. Consider for a moment the multiplicity of signs and objects which we recognise as ‘A’ (and the paleographer can add another whole array). Surely the concept which enables us to read all these is very elastic. I suggest that it might be more relevant if we abandoned trying to define the nature of letters in terms of Greek philosophy and tried another approach. A momentary consideration of the analogy of the spoken word may be illuminating. In ordinary speech we seldom note the quality of a voice: we are primarily interested in whether what is said is audible and distinct. But we do also recognise that words can be shouted to attract attention, or can blare at us and become a menace; or they can be spoken or sung with such art as to give a whole gamut of entertainment from the trivial to the sublime. The possibilities of the art of lettering are parallel. I see letters as a medium by which the designer transmits not just the meaning which the words spell out, but also his attitude to those words. This may be completely impersonal, as in a directional sign, when it should be as clear and simple as possible; or the designer may make his point with a simple visual transference—fat letters to spell the word ‘fat.’ He may wish to evoke various connotations in



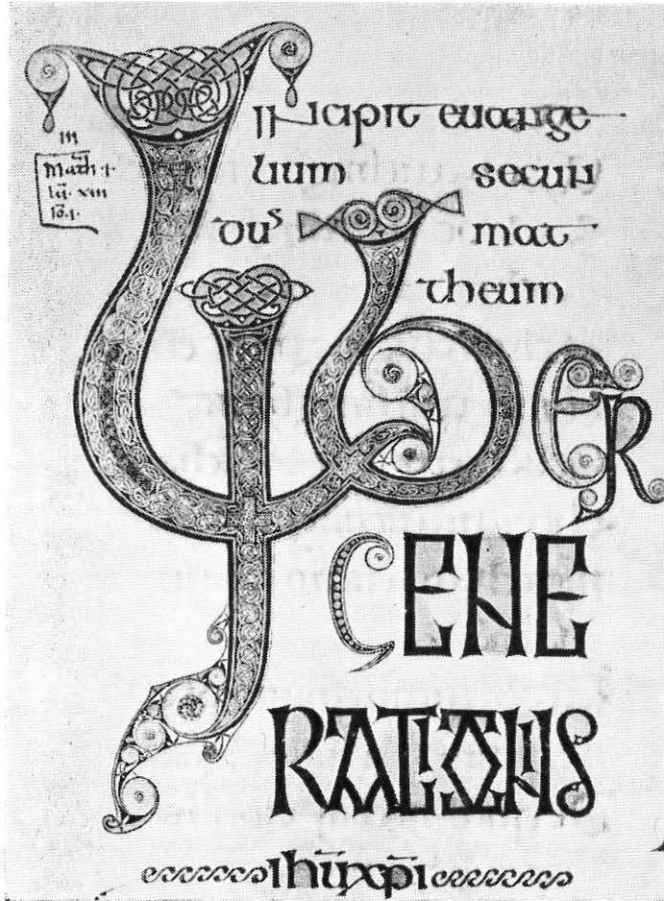
Literal suggestion, stencil on a railway wagon carrying stone.



Personal fantasy, drawing by Imre Reiner.

advertising scent or cigarettes; or the shape of the letters may be an opening into a world of fantasy, as with the nineteenth-century fairy story illustrators, or in a different way as devised by Saul Steinberg. Lettering may also be used to convey deep personal feeling, as by Rudolph Koch; or to give a sense of the sublime import of what is written, as by medieval artists copying the Gospels.

If letters are thought of as a *medium*, their physical qualities regain importance. The *whole* thing—colour, form, dimension—is important and integral, and they can all equally be used to fulfil the purpose in hand. The requirements of a technique, and the exciting possibilities which it may offer, can be incorporated into the basic conception of the job. And the way becomes clear for lettering to be thought of as a major abstract art which can, for instance, provide architectural sculpture or transform the city-scape by night. Finally this approach frees display lettering from the inhibiting influence of type-design. The only rational excuse for using, for other purposes, letters designed for one specific scale and technique, is the theory that all letters conform to one basic concept. The practical reasons why this is, in fact, so often done is that it is always cheaper and easier to specify type, and that so many excellent designers have been employed to design type-faces and their work is readily available; whereas few have been con-



Illustrations for this article are from the Central Lettering Record.

Sublime import, opening page of the Gospel of St. Matthew, from the Echternach Gospels.

cerned in designing for display techniques. This is surely a situation which we should try to remedy.

If letters are indefinite concepts, which are a medium for diverse purposes, how can we expect individuals or committees to discriminate between good and bad? And most important of all, how are we to train art students to master this medium?

For many years I have been trying to think out and check the criteria by which lettering should be judged. There are various definite factors: fitness for purpose, which includes legibility; fitness for the place and the material and the process in question; competence of

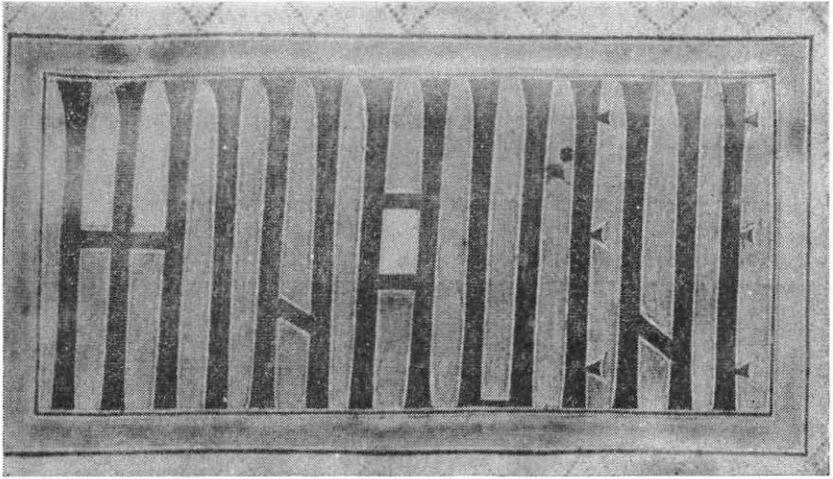
execution; judgement in details of design and spacing; sensitivity in delineation; feeling for individual letter character; originality. The relative importance of these factors varies with each particular job. There are, I believe, no more precise general principles which can be laid down so that lettering can be judged arbitrarily, without thought and knowledge. The application of an academic orthodoxy—which is so congenial to establishment thinking, creating a comfortable illusion of well-informed superiority—can only have a blighting effect, as we see in England in the control of church memorials and tombstones. What we want from those who commission and from those who may control lettering is an open mind, an awareness of positive possibilities, and if possible a little knowledge. The required action seems to be propaganda and education.

Finally, we come to the vital question of the training of art students in letter-design. To what end should such a training be adapted? Surely to meet the requirements of present-day society; again the sort of usages I suggested at the beginning of this article. For calligraphy in the sense of formal pen writing or illuminating, I see little place. Lettering as a personal means of expression is for the specialist; the sort of course which I envisage might lead to this, but it should be primarily directed to the commercial uses—or rather possibilities—of lettering. It has been my argument that lettering can and should be infinitely diverse. I do not mean by this that we do not need a vernacular. It is essential that there should be a current vernacular, which like the standard eighteenth-century house and the more or less standard modern building, provides a comparatively ordered and therefore restful background to living. I think that all students should know something about the principles and the history of sans-serif and roman letters, and be able to use them and to discriminate between good and bad designs, suitable and unsuitable usage. But beyond this, how are they to achieve versatility in this medium which is potentially so rich in scope and opportunity? If we expect invention and originality, how can such talent be trained and fostered? Current practice seems to consist in reviving designs from trendy decades of the recent past. This has reintroduced a few good designs but is obviously a barren and defeatist method.

There are two methods of approach by which the designer can expand his formal lettering vocabulary and find a training which will

discipline and enlarge his native invention. One is the application of geometrical principles, the other is the study of the past. I shall concentrate here on the second—though I should like to emphasise that I think that both are necessary. In our course at the Central School of Art and Design in London we use geometry in two divergent ways: as a principle for analysis, simplification, and clarification of ideas—and as a starting point for formal or expressive invention.

I am not a revivalist; I do not believe that you should use Roman Rustics today, any more than that we should build classical or gothic buildings. I do, however, think that no letter is obsolete which is legible, and that all forms are usable, *provided* that there is a good reason for their use. As I see the history of lettering, its pattern consists in a series of classical revivals followed by periods of experiment and invention when letters—as in the Pre-Carolingian, Gothic and Art-Nouveau periods—have burgeoned into all sorts of shapes. The successive classical revivals have meant that letters have never strayed so far from these prototypes that they have lost continuity, and become illegible and unusable. I suppose the most extreme examples of divergence are the great tangled baroque letters created by the Neudorffers and their contemporaries ca. 1600. And it is significant to note how usable these remain, for instance on record sleeves of seventeenth-century music. This example demonstrates my point of view. Both in its formal and expressive qualities such a letter corresponds to the design problem involved; the shape suits a square format, the swirling strands of its divided stem—now parallel, now interlaced, now branching into complex involutes—suggest polyphonic movement; the period suggestion is a secondary element. Could an effect of equal richness possibly be made from sanserif or roman letters? Or again, supposing it is an architectural problem requiring lettering which needs to work in with strong vertical features, a compressed sanserif may meet the case. But the more ruthless verticals of eighth-century Irish capitals, or even the brick and tile Kufic lettering on Islamic buildings, may suggest forms and treatment which could transform merely suitable (or unsuitable) lettering into a creative pattern. Or, again, suppose the problem is linear (a neon sign or a line which grows on the television screen); the handwriting of the contemporary student may not easily work up into lively movement, but he can find delightful convolutions in late Roman

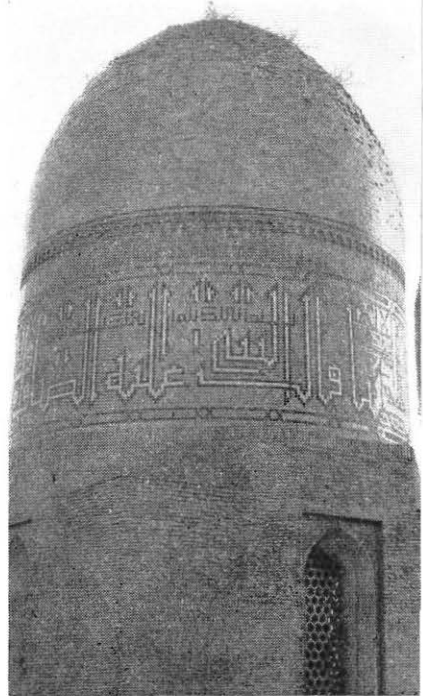


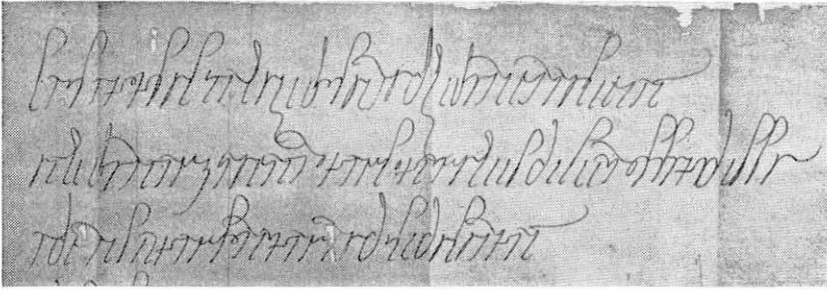
Eighth-century Insular capitals: "MINO VENE."

Neudorffer initial design.

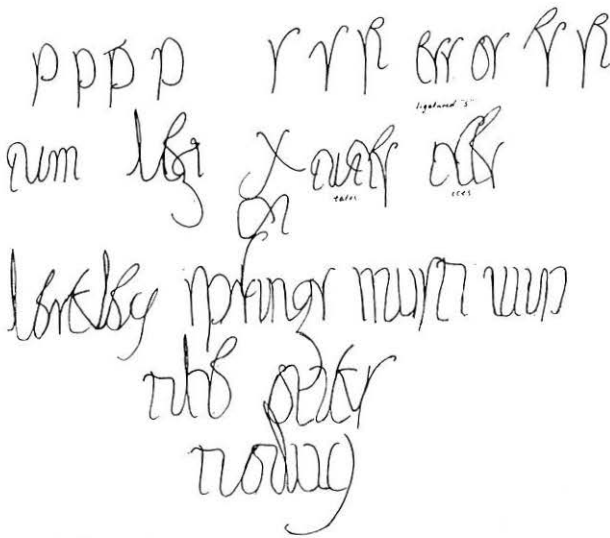


Kufic tile inscription,
Samarkand.





Detail of a fifth-century Imperial document.



Student study from late Roman cursive as preparation for neon tube sign design.



Student project, design for neon tube sign.

cursive script and in the books of the early French writing masters. The lettering work of the past is like a great store where the designer can search for forms of letters, ideas, and inspiration—according to his problems and his taste.

From my experience of teaching lettering for the last eight years in collaboration with Nicholas Biddulph at the Central School—and every year we have re-examined our ideas—I think that there are four things which such a course can and should teach.

1. It should teach students to draw, a particularly valuable contribution now that drawing from the life is out of fashion; to distinguish and master the line which can alter the character of a letter by a minimal movement; and, if time allows, to master more than one drawing instrument.
2. It should teach students to analyse existing alphabets, not just to recognise differences or learn the tricks of a style, but in order to find out the formal idiosyncrasies which create its character so as to be bale to abstract and transpose these into their own idiom.
3. It should teach students to think out design problems by integrating the conditions of material, purpose, wording, etc., with the formal and expressive qualities of letters which they create.
4. As a necessary tool for the third aim, students should have a wide vocabulary of letterforms, and know how to extend this vocabulary.

Much of this implies a considerable knowledge of past lettering. This should not, I think, be taught as the history of lettering or through obliging the student to master historic styles. It should be introduced at various stages in the course, to illustrate solutions to problems or to demonstrate the many directions in which lettering can be extended as an art. We have found our most essential teaching aid to be our Collection of photographs of examples of all sorts of lettering. We are constantly adding to this Collection which will, we hope, provide a great body of source material, not only for our students but for all designers of lettering.

This article has been adapted with kind permission from Nicolette Gray's paper given at the 16th International Congress of the Association Typographique Internationale, Copenhagen, August 1973. Its theme: Education in Letterforms.

A Proposition for Education in Letterforms and Handwriting

Wim Crouwel

Education should provide the means to find a personal form of expression through letterforms; it should not be restricted to an established system for copying existing styles. A new starting point for creating letterforms (as well as for design in general)—based on a system of regular pattern in the widest sense—would create a system allowing the greatest freedom and flexibility. Utility and self-expression are equally important in teaching a child to write—and, at the same time, to recognize patterns and the basic rules of form and shape.

When talking about “education in letterforms,” we cannot separate this activity from other activities in the field of creative education. In my view, education means helping a human being to find a personal form of expression through letterforms. It does not mean, learning how to copy existing types. If today we find ourselves in a situation with education in letterforms, it only means that we have discovered how nonsensical it is to follow any of the numerous “how-to-do-it” systems. We are no longer sure which method or which direction is best. It is as if the environment has become polluted with type, with written shapes, and with printed letterforms. No clear line can be perceived.

When I say that none of this can be seen as a separate situation, I mean that the same critical point has been reached in most other fields of education. For example, in the field of art education: from the moment when everything was possible in art, problems arose. These problems occur in almost every art school; the possibilities are endless, and teaching is no longer accepted in the old way (the way that stands for “the man who *knows* teaches the one who does *not*

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know"). It is no longer possible to talk about "beauty" or "ugliness," or about "good taste" or "bad taste" in absolute terms. "Aesthetic" has become a term which can be interpreted in many different ways. Any shape for a utility-object is as good as any other shape, as long as it serves a certain purpose—as long as it is ergonomically satisfactory in handling. So any letterform is as good as any other letterform today, provided it serves a certain aim.

The result is that there is no longer any basic standard to which we can refer, either for shape in general, or more specifically for letterforms.

Let me concentrate on letterforms. Today we are still willing to accept that certain historic typefaces are perfect examples, mainly because these types were in accord with the time of their creation, and perfectly expressed that time. But what typeface today expresses *our* time? Is it the so-called computer-type with strange dots and thicknesses here and there? Or is it the neutral easy-to-read sanserif? Is it the standardized functional forms of handwriting with those ballpoint pens which are forced into the child's fingers?

Our present strangely unrealistic computer-type is only a fashionable short-term trend-setter that has nothing to do with computers. Sanserif receives another finishing touch every five or ten years according to fashion, and today's handwriting is the most deadly system for any touch of personality.

The only way out of this critical stage in designing and teaching is, in my view, a cellular approach to the problems. This means thinking along the lines of cellular patterns as a basic structure for design in general. Regular patterns (in the widest sense) allow the greatest freedom of forms and shapes, and at the same time bring a specific point of view which goes like a red line through every form that results from this way of conceiving design. Let crystallography serve as an excellent example from nature!

This is a new starting-point for all two- and three-dimensional design problems—for letterforms as well as for industrial design. We have to create rules for a new design method; to work in accordance with these rules will lead to results which will fit into a new invisible system. This will not force us into uniformity but will allow the greatest degree of freedom and flexibility.

At the same time, letterforms will evolve away from their existing

forms, and it will almost cease to be possible to make faithful copies of historical typefaces. (See, for example, what the Digiset, the Linotron, or any other CRT-machine which works along the lines of regular patterns is making of historical types. Take a close look through a magnifying-glass; because the pattern is so small as to be almost invisible to the naked eye, we accept these ill-shaped results!)

We really need a new way of thinking to get ourselves out of the mess we are making of the problem.

We no longer have to teach finished letterforms, but instead we have to teach the rules of regular patterns; we have to open up the fantastic world of pattern systems. This is the grammar to serve a language of our new forms and shapes. It is not a “new” way of thinking; the sign systems of the Middle Ages, as well as the earlier nineteenth-century Hokusai handbooks for the textile trade, are older examples of the same principle.

How can this direction of thinking, which is so very well suited to the design of printed letterforms, be worked out to encourage a more personal form of handwriting? In principle, each style of handwriting fits into a basic pattern; almost every teaching method for handwriting starts with a determined pattern, and from the strict limitations of this basis, one has later to develop a personal style. I think we have to invert this system. We have first to find the basic pattern which is strictly personal for each individual, so as to explore the existing creativity of the child; personality in handwriting style can then start much earlier and will develop far more harmoniously.

Different teaching systems exist today: systems that use single, double, triple, or more lines along which to write; systems that start off beginners with a flexible pen, a flat pen, or a pencil; systems that use pre-printed examples, which start with the single letter, or which start with certain letter combinations; or the most advanced system, which starts with the drawing. But all these systems have one thing in common: the result is to be more or less the same script for everybody so as to provide a consistent communication tool. This utility purpose is primary; self-expression is always secondary.

In my opinion both purposes are equally important; neither should be given preference—certainly not in this era of typewriters, dictaphones, and other tools, which serve the same purposes of communication just as well or even better. Instead of trying to teach every

child to write in the same style (with the underlying belief that this will later change automatically into a more personal style), we should help the child learn the rules of the game and develop the natural feeling for the basic patterns. For this we have to discover basic patterns from a study of the child's uncontrolled scribbling in his pre-writing period, and these will provide basic directions towards his natural feeling for rhythm. Rhythmic scribbling exercises could serve to uncover natural basic patterns.

The most important element in this pattern is the angle, or the different angles, or movements; other elements are widths and heights which can only be defined at a later stage. Having defined the principal pattern elements of each individual child, the actual teaching of writing can begin. The complete regular pattern can be used from the beginning without fear of disturbing natural free movement, because this pattern is itself a record of free muscle reflexes.

For these earliest writing exercises, we should not teach basic symbols of the alphabet in a specific traditional form, but only basic form-characteristics. These form-characteristics should be shown in such a way that the child can interpret them in his own way. A moving picture could serve this purpose, or a series of slides could show the symbol in different existing forms. The idea is not to show a specific "a" but to show the *characteristics* of the symbol "a," etc. Some of the basic patterns may, at first, look rather different from the ones we use today in teaching handwriting—especially if we take into account right- and left-handed patterns. This general approach to handwriting will be much freer and entail fewer frustrations. Its advantages will be greater sensitivity in recognizing patterns, and greater sensitivity towards the basic rules of form and shape.

This article has been adapted with kind permission from Wim Crowwel's paper given at the 16th International Congress of the Association Typographique Internationale, Copenhagen, August 1973. Its theme: Education in Letterforms. Organization and accompanying materials are by the author.

Research in Brief: Printed Intonation Cues and Reading in Children

Linnea C. Ehri and Lee S. Wilce

Eighty third- and fourth-graders read one of four types of printed texts: standard print; print in which word size was varied to reflect aspects of speech intonation (three stress-pitch levels); print in which word size reflected differences in the grammatical form class of words; and print in which word size was varied randomly. Reading speed and comprehension with standard print were compared to performances with each of the other texts. Results revealed that the intoned text was read faster than the standard text by third-graders but not by fourth-graders. No other major effects were observed. Findings though preliminary are consistent with the view that less experienced readers transform graphic to aural input before deriving a semantic interpretation.

Design of the present study investigating the effect of print manipulations on the reading process was guided by two lines of thought, the first focusing upon the relationship between printed language and reading, and the second centering on the relationship between speech and reading. Hochberg (1970) has described reading as a process in which peripheral search guides (i.e., printed cues registered in the periphery of the eyes) are used to obtain advance information about the structure of a text. Detection and use of the blanks between words, the first letters and lengths of words, the location of capital letters, and punctuation marks all serve to maintain a good reader's speed, organization, and comprehension of a passage. There have been a few investigations undertaken to assess the effects of manipulating the form of such printed cues upon reading behavior. Hochberg, Levin, and Frail (described in Hochberg, 1970) presented children with texts in which the spaces between words were filled with a consistent but meaningless symbol. Reading speeds on this text were substantially below those with unadulterated text, especially among older subjects who were presumably more experienced in the use of printed cues to guide their reading. Cromer (1970) studied the

effects of grouping printed words within sentences into constituent phrases. He did this by extending the amount of blank space at phrase boundaries. In presenting this text as well as regular text to adults thought to be deficient in reading organizational skills, he found that comprehension with the phrase structured text was superior to comprehension with the unaltered text. This effect was thought to result from the advantage provided by text cues which assisted these readers in grouping words into meaningful units. These studies suggest that manipulation of printed cues can either facilitate or impede aspects of the reading process depending upon whether the cues hinder or aid the reader in structuring a text.

Not only characteristics of printed language but also aspects of spoken language are thought to be involved in reading. Although much disagreement pervades discussions of the role of articulation or acoustic representation in the reading process (McGuigan, 1970), most studies suggest that silent reading is accompanied by some phonological imagery or activity (Conrad, 1972). Although it is unclear whether such phonological information actually contributes to the process of mature reading, for children who are still mastering the skill and who must transform print to speech before they can achieve an interpretation, it may be that phonological information is essential for helping them recognize words and organize them into meaningful units. Goodman (1968) suggests the importance of recoding from print to speech in his psycholinguistic model of beginning reading. One acoustic component of speech which aids the listener in segmenting the flow of sound is intonation, made up of variations in pitch and stress. Cues in printed text provide little information about this aspect of speech, and it may be that as a consequence, children's reading is slow because they must identify the appropriate intonation pattern for each sentence before they can make sense of it. Lefevre (1964) and also Fries (1963) have emphasized the role of intonation in their discussions of factors involved in learning to read. This view of beginning reading suggests that if aids enabling children to identify the spoken correlates of printed language were provided, their reading might be improved substantially. The investigation described below constitutes the first of a number of studies directed at obtaining evidence for this possibility and sorting out the various factors responsible for any observed facilitation.

The present study was designed to examine the effects of printed intonation cues on reading in children and to contrast the effects of these cues with two other sorts of cues. In order to build information about intonation into printed language, the letter size of words was varied to reflect levels of pitch and stress. Three word sizes were utilized. In addition, texts containing two other word size treatments were created. In one case, the grammatical form class of words was used as the basis for assigning word sizes. Levin and Kaplan (1970), Mehler, Bever, and Carey (1967) as well as Cromer (1970) present evidence suggesting that phrases are the units used to read. It was reasoned that cues reflecting the form class of words might convey structural consistencies useful for organizing sentences into phrase units. In the second type of text, word sizes were assigned randomly. This condition was included in order to verify that any facilitative effects resulting from systematic word size variations could be attributed to these variations, not to the mere presence of word size differences. Reading performance with each of the three text treatments was compared to a control condition in which word size was uniform. It was expected that young readers would find intonation cues more useful than the other sorts of cues.

Goodman (1968) and Weiner and Cromer (1967), among others, assert that as readers gain in experience and proficiency, they learn the regularities of printed language. As a consequence their dependency upon speech during reading diminishes and they become able to decode meaning directly from print. It was reasoned that if this is true, then younger *Ss* should benefit more from intonation cues than older *Ss*. In order to examine this possibility, third- and fourth-grade readers were selected. Since a substantial portion of the classroom learning experiences of fourth-graders, in contrast to third-graders, entails reading, it was thought that by the end of the school year, these two groups should be quite different in their reading experience and in their use of speech to derive meaning. Hence, in the present study, the reading of third-graders was expected to be facilitated more by the presence of intonation cues than the reading of fourth-graders.

When this mammoth was found, it was sitting on its back legs. One of its front legs was raised. Except for parts of the head, which had been eaten by wolves, the animal was perfectly preserved. It was so fresh that the meat could even be eaten - if anyone cared to eat "elephant" meat. Most amazing of all, there were buttercups on its tongue!

Figure 1. Sample page from the intoned text.

When this mammoth was found, it was sitting on its back legs. One of its front legs was raised. Except for parts of the head, which had been eaten by wolves, the animal was perfectly preserved. It was so fresh that the meat could even be eaten - if anyone cared to eat "elephant" meat. Most amazing of all, there were buttercups on its tongue!

Figure 2. Sample page from the form class text.

When this mammoth was found, it was sitting on its back legs. One of its front legs was raised. Except for parts of the head, which had been eaten by wolves, the animal was perfectly preserved. It was so fresh that the meat could even be eaten - if anyone cared to eat "elephant" meat. Most amazing of all, there were buttercups on its tongue!

Figure 3. Sample page from the random text.

When this mammoth was found, it was sitting on its back legs. One of its front legs was raised. Except for parts of the head, which had been eaten by wolves, the animal was perfectly preserved. It was so fresh that the meat could even be eaten - if anyone cared to eat "elephant" meat. Most amazing of all, there were buttercups on its tongue!

Figure 4. Sample page from the standard text.

Method

Materials. Two stories, one about growing oranges and another about the discovery of a frozen mammoth, were used. There were 453 words organized into five paragraphs in the orange story, and 510 words comprising eight paragraphs in the mammoth passage. Each paragraph was printed on a separate page. Four printed versions of each text were created: (1) an intoned text in which each word was printed in one of three sizes to reflect levels of pitch and stress which might be assigned by a person reading the story aloud; (2) a form class text in which words in noun phrases and pronouns were printed in the largest type, verb contentives, predicate adjectives, and adverbs in the middle-size type, and prepositions, auxiliary verbs, conjunctions, and relative pronouns in the smallest type; (3) a random text in which the three word sizes were assigned randomly, with the number of words of each of the three sizes identical to that in the intoned text; and (4) a standard text in which word size was equivalent to the middle of the three word sizes and constant throughout the story. Examples of text types are presented in Figures 1 through 4. A computer-graphics computer editing program developed at Bell Laboratories, Murray Hill, New Jersey, was used to generate all of the texts.

Subjects. Five sets of 4 males and five sets of 4 females were selected from the third- and fourth grades of an upper-middle class elementary school in Davis, California ($N=80$). Members of each set were matched in reading ability based on standardized scores on the E.T.S. Co-operative Primary Test, administered in May of the preceding year. All children fell above the 50th percentile on this text. Set members were assigned randomly to the four text conditions. Children were tested in the spring. The mean age of third-graders was 8 years 10 months, and of fourth-graders was 9 years 11 months.

Procedures. Children were examined individually by a female adult. The orange grove story was read first for the purpose of introducing the child to the text type. The child and experimenter took turns reading the first four pages aloud, and the child read the final page silently. After each page was completed, the examiner presented comprehension questions to the child to insure that he paid attention to the story's meaning. Following this passage, the mammoth text

was presented. The child was told to read this story to himself, and he was warned that afterward he would be asked some questions about it. The examiner timed the subject's completion of each page with a stopwatch. When finished, the child was asked to retell the story to the examiner, and then his memory for specific parts was elicited with 21 short-answer questions.

Design. A randomized blocks design was utilized. There were five blocks at each sex and grade level. Within each of the blocks, subjects were assigned randomly to one of the four text treatments. In the analysis, the treatment factor was nested within each of the two grade levels.

Results

Analyses of variance were performed on three dependent measures taken on subjects' silent reading of the mammoth story: reading time, number of correct facts recalled freely, and number of facts elicited by the question prompts. Mean values are presented in Table I. Main effects of grade emerged in the two recall analyses, with $F(1,4) = 28.11, p < .01$, for free recall, and $F(1,4) = 13.42, p < .025$, for prompted recall. Not surprisingly, fourth-graders remembered more of the passage than third-graders. Dunnett's test (Winer, 1962) was used to assess the effects of the text treatments within each grade level. Comparison of performances with each of the three varied texts against performance with the standard text revealed one difference. Third-graders given the intoned passage took significantly less time,

Table I. Mean Time in Seconds and Mean Recall Scores as a Function of Grade Level and Text Treatment

Grade	Measure	Text Treatment			Form Class	Mean
		Standard	Intoned	Random		
3rd	Time*	253.5	179.7	213.8	242.3	222.3
	Free	14.15	14.50	12.35	13.65	13.66
	Prompted	14.95	14.05	13.30	14.05	14.08
4th	Time*	196.4	182.7	168.9	195.3	185.8
	Free	21.10	21.10	22.25	19.55	21.00
	Prompted	19.30	21.00	21.05	19.50	20.01

*MSE (24) = 3460.9

in fact, more than one minute less reading time than third-graders given the standard text, $t(24) = 2.81, p < .025$. None of the other main effects or interactions in these analyses was significant save for one. In the prompted recall analysis, a sex by treatment interaction nested within grade level emerged, $F(6,24) = 2.72, p < .05$. Inspection of cell values revealed that in the random condition scores of third-grade boys were depressed relative to the other conditions whereas scores of third-grade girls were heightened. Causes of this interaction are unknown.

In hopes of gaining additional insight into the performances of third-graders, since this was where the intoned text exerted some effect, various aspects of their oral reading behavior on pages 2 and 4 of the orange grove story were examined. Inspection of the mean number of word repetitions revealed slightly more in the random group than in the standard group, $\bar{X} = 8$ vs. 5, matched pair difference test $t(9) = 1.69, p < .10$. However, differences in reading errors between the standard text and each of the other groups were minimal. Despite the absence of error differences, there did occur a difference in reading speed. Subjects given the intoned text were observed to read the final page of the passage faster than standard text subjects. In fact, 9 out of 10 paired values favored the intoned text: $\bar{X}_I = 60.7$ vs. $\bar{X}_S = 78.3$ seconds, matched-pair difference test $t(9) = 2.34, p < .025$. It is interesting to note that such a difference was not evident earlier in the story, when readers possessed less experience with the text cues. On page 2, only half of intoned text subjects read the passage faster than their matched standard-text mates.

Discussion

Results of the present study yielded preliminary confirmation of some of the hypotheses proposed regarding effects of word size variations on reading in children. The silent reading speed of third-graders given intoned text was greater than that of third-graders given standard text. Such facilitation was also observed in the oral reading times of third-graders and it appeared to result not from a reduction in number of reading errors but from an increase in the rate of reading once these readers had acquired some experience with this cuing system. However, intonation cues did not boost the reading comprehension (as measured by recall) of subjects above that occurring with

standard print. Comprehension was found to be substantial and equivalent among all the groups. Perhaps this occurred because adjunct questions were presented during the reading of the first story and so served to insure that all subjects processed the meaning of the passages. The research of Rothkopf (1970) supports this possibility. Furthermore, because all subjects were reading at or above grade level, and no poor readers were included in the sample, it may be that extracting meaning from the story was not a problem for any of these children.

It is thought that intonation cues boosted the reading speed of third-graders because the cues assisted these readers in transforming print to speech. However, there are alternative ways of explaining these results. Perhaps the cues provided structurally relevant eye fixation points. Or perhaps they distinguished the most from the least semantically salient words. Or perhaps such acoustic information aided subjects who were having difficulty comprehending the material being read. It is known that articulatory activity during reading becomes more pronounced when readers encounter difficult material (Edfeldt, 1960). These uncertainties remain to be clarified by additional research.

The finding that, unlike its effects on third-graders, intonation cues failed to improve the reading speed of fourth-graders is also consistent with expectations that fourth-graders, being more experienced readers, have learned to decode meaning directly from print and so they have little use for speech cues in their reading. Cromer (1970) has obtained findings parallel to these. In comparing the effects of a text cued for phrase structure to a standard text, he found that good adult readers did not profit from the cued text while poor readers did. This occurred presumably because it was the good readers who were skilled in using cues present in standard print to organize the text and and so needed little additional assistance.

One inadequacy of the present study must be mentioned. It is possible that effects of printed text cues on reading were limited because the treatments were only weakly administered. No attempt was made to direct readers' attention to or to force them to use these cues in their reading. Furthermore, subjects were provided with only limited exposure to these cues (i.e., only two stories were read). In order to ascertain whether reading comprehension as well as speed

might be boosted, whether facilitation might occur in older as well as younger subjects, and whether form class cues as well as intonation cues might enhance some aspect of reading, more explicit instruction and practice in the use of these cue systems need to be provided. Exploration of these possibilities constitutes the next step in this line of research.

In conclusion, it must be noted that the present study was a first attempt to explore effects of printed text cues on reading in children. Findings are useful mainly as a basis for the design of other studies verifying that intonation cues facilitate reading and exploring various factors which might account for such effects. Additional work of this sort is in progress.

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The authors wish to thank Ernst Rothkopf and Mary Koether of Bell Laboratories for their assistance and helpful suggestions in producing the stimulus materials. Requests for reprints should be sent to Linnea C. Ehri, Department of Education University of California, Davis, California 95616.

Research in Brief: Orientation to the Spatial Characteristics of the Open Book

Marie M. Clay

One of the first code-breaking activities for the beginning reader concerns the arbitrary conventions of how books are presented. The orientation to the spatial characteristics of visible language was observed in 4 five-year-old identical girls through the developmental progression of their hand behavior while reading. Preliminary theoretical explanations are offered in terms of bilateral nervous systems, handedness and reading, and perceptual strategies for visual analysis of stimuli.

One of the first code-breaking activities for the beginning reader to discover concerns arbitrary conventions of how books are presented.

Where should he start?

What direction should he move?

Where should he look on reaching the end of a line?

Most discussions of beginning reading ignore this early learning of orientation to visible language, and yet a test of these "Concepts About Print" (Clay, 1972b) has discriminated reliably between children in their first six months of school instruction.

An opportunity to observe this learning was provided for the author by four identical girls. Despite an unusual degree of similarity in hereditary and environmental histories, they approached the problems of orientation to visible language on different time schedules and in different ways.

Background information was available from an earlier study of 100 children who had been observed each week during their first year at school. All behavior was recorded by the researcher as each child read his reading book for which the teacher had prepared him in the past week. A note was made of all occasions on which children pointed to the text and the direction of movement that they made. To externalize this "direction of movement," the child was asked to

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“Read it with your finger” after a warm-up period on two or three pages. An unexpected finding emerged. When the children were divided into progress groups, the top two quartiles used either right or left hand for pointing to texts. In 892 observations recorded at weekly intervals during the school year, 459 were right-hand responses and 423 were left-hand responses. It was as if the children were flexible in their hand approach to the printed text. The two lower quartiles (i.e., the slow progress readers) used their left hands more often and were significantly different from the top 50% in this respect ($p < .01$). Only three of the 100 children were left-handed. It happened that the reading books being used by all the children had been published with the text invariably on the left page and the pictures on the right page. Thinking of the open book as the visual field with the target to be located on the left page, the results suggested that the high progress readers approached this target with either hand, while the low progress readers used their left hands often as if drawn to this by the location of the text on the left. They matched their body response to the visual field characteristics. In the lower 50% of children, body and field seemed to be linked; in the top 50% they seemed to be independent (Table I).

These results report the summed records of hand behavior observed during the first year of instruction. It is possible that such a summary masks important changes that occur during that year.

The movement possibilities as a person with two hands approaches an English book with two pages were plotted diagrammatically. Suppose that simple text occurs on each page. Records must be kept of (1) which hand was used, (2) to move in which direction, (3) across which page. This complex orientation problem related to the

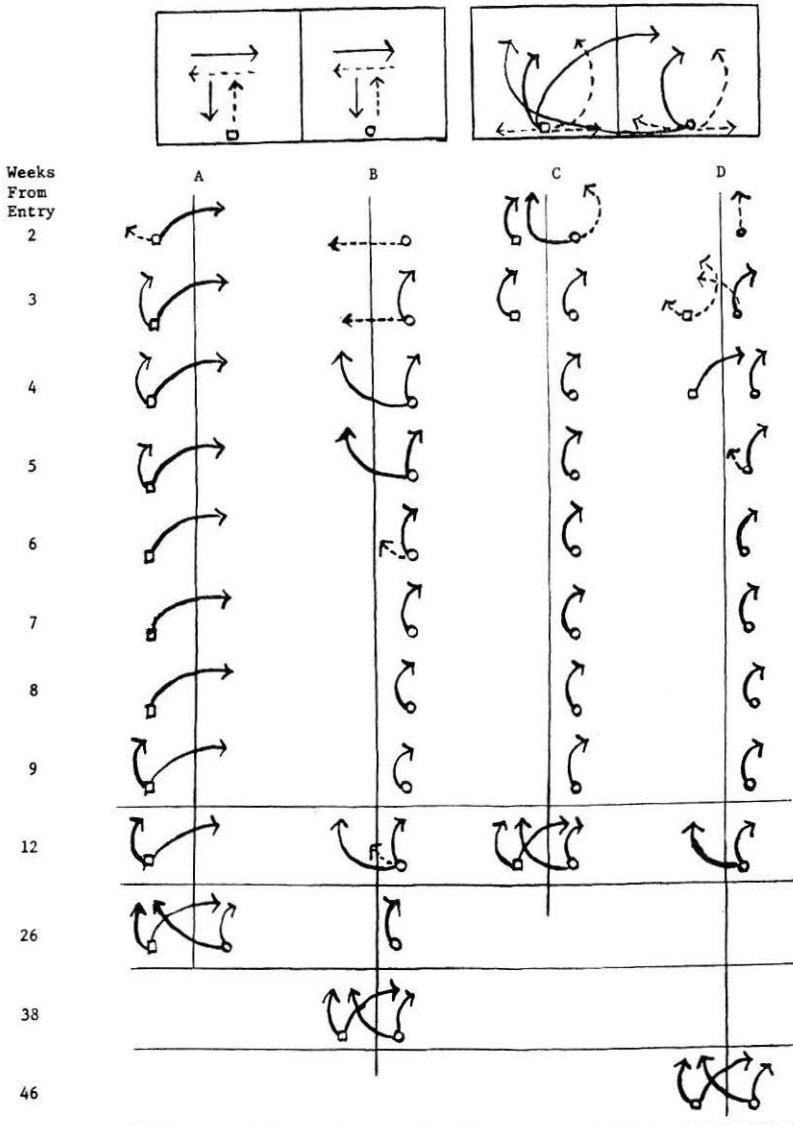
Table I. Pointing Behavior during Reading Observations

<i>Quartile</i>	<i>Right-hand pointing</i>	<i>Left-hand pointing</i>	χ^2	<i>Significance at .01 level</i>	<i>Interpretation</i>
H	216	206	0.24	ns	Independent of perceptual field
HM	243	217	1.47	ns	
LM	163	284	32.75	yes	Dependent on perceptual field
L	157	235	15.52	yes	

acquisition of the directional schema for the printed form of a particular language is not covered by the simple question, "Which hand does the child prefer to use?" In the diagram at the top of Figure 1 the solid arrows plot several appropriate movements using a left hand or a right hand, and the dotted arrows show a few of the inappropriate movements. My research records show that observations close to the onset of reading instruction will produce each of these movements and others even more strange.

The diagram records some behavior that can occur when either

Figure 1. Hand used to point to text. □ = left hand; ○ = right hand.



hand is used on either page in either of two horizontal and two vertical directions. Constraints on such variety must be established. Are there any common factors as the child comes to behave within these constraints?

This problem was explored further with a longitudinal record of change in identical quadruplets. Observations were made at intervals during their first year at school. The girls obtained average intelligence test scores and average scores on visual perception tests. Baseline observations of handedness during the first week at school showed that one subject was left-handed and three were right-handed in self-selected classroom activities. This was explained in the medical history by the fact that a later subdivision of cells could produce one mirror pair. During the first year at school many observations of finger-pointing to simple texts were recorded.

After two weeks at school one right-handed subject B and one left-handed subject A were consistently using one hand for pointing to caption book texts. The other two right-handed subjects, C and D, took four and five weeks respectively to reach this stage. This behavior was not specifically trained in the classroom program. After that period the subjects used their preferred hand consistently and without lapse to point to both right and left pages; an asymmetrical response to the directional schema of English had been established on the basis of hand behavior. Variety occurred in the text stimuli and its placement on a page; consistency occurred within the individuals' orientation to that stimuli.

Observations continued. At twelve weeks right-handed subject C—who was making the best progress in reading—began to use either hand again. This behavior was different in several respects from the initial behaviors at the beginning of the study. The approach was always correct, and either hand could be used to produce this correct response despite variation in the stimulus or visual field. The change was in the direction of flexibility. Variety in the stimuli could now be consistently and correctly approached from either of two asymmetric responses in the individual. Would this be true of the other three subjects?

Left-handed subject A, making good progress in reading, reached this flexibility stage at 26 weeks. The other two subjects arrived at a similar state at 38 and 46 weeks respectively, although they showed occasional lapses from consistent performance.

In this particular group of five-year-olds a developmental progression in the orientation to the spatial characteristics of written language was recorded.

1. There was a period of orienting to print and the difference between subjects would probably be due to past or concurrent learning.
2. There was a period in which an asymmetrical hand response was consistently applied.
3. There was a later movement to alternate use of either hand whatever the format of the text.

The sequence held true for both right- and left-handed subjects, and the timing of acquisition differed for individuals of identical heredity and similar environmental histories.

The subjects of this study were learning to operate effectively within the directional conventions of written language. They were bilateral humans seeking to master an arbitrary directional approach to a bilateral source of stimuli. They could use either of two hands, but must read one of two pages first and move horizontally, not vertically in a left-to-right direction only, with a return sweep rather than returning right to left.

Theoretical explanations of the observed behavior touch on bilateral systems, handedness and reading, and perceptual strategies for visual analysis of stimuli.

The bilateral symmetry of the nervous system in animals creates difficulty for discriminating between forms and displays and their mirror images (Corballis and Beale, 1971). If one is to develop asymmetry in a symmetrical system (that is, a preference for one particular type of response rather than an alternative one), then one may learn a tilt of the head to one side, the predominant use of one hand, or a particular directional approach to surveying print. Asymmetrical responding is most obvious in man's vehicle driving. He does not sit in the centre of the road and respond randomly to any possibilities. His responding is constrained to one of two sets of rules, keeping to the left or keeping to the right. Returning to the example of written language, the directional constraints to be learned are a starting position, sequential movement along (or down) a line, and a return on the diagonal to a new starting point. This is quite arbitrary and the directional schema for Hebrew or Japanese are quite different

from the schema for European languages. Each requires the establishing of asymmetrical responding in the interests of efficiency.

It therefore appears that if one is a young child, the learning of an arbitrary directional convention for approaching written language may be a matter of movement or placement of one's body relative to the visual field. There is a motor component to the learning. If the approach is made by eye scanning movements only, it is still a motor activity though less easy to observe (Elkind and Weiss, 1967). Eventually it becomes a brain scan, so that during a fixation of the eyes sequential attentional scanning without apparent movement gives little sign of the motor activity which was probably necessary during the acquisition stage.

If the school entrant has a firm preference for a particular hand, one could predict that such an asymmetrical response would be used to guide the asymmetric eye scan movement needed in reading. Either hand could be used to orient the body and so bring the eyes to the appropriate starting position (Clark, 1973).

For a long time there has been repeated reference in the literature on learning to read to left-handedness and its possible link with reading difficulties. Once such a notion appears in print, there occurs a selective referral problem. Children referred to the clinician or neurologist are children who have the characteristics which the literature describes. The specialist is then able to say with some certainty that the children he sees with reading difficulty have handedness or laterality differences. When a sample of children from the whole community is studied rather than a clinical sample, such a selection bias disappears. Clark (1973) has found in community surveys of handedness and reading difficulties that the association does not hold up. If 4% of the population are left-handed and 33% are left-eyed, there must be a large group of the population of mixed laterality, and many are successful readers.

The school entrant to a reading program in English has to learn how to approach an open book.

The child may scan the pictures as he scans the world, from a focal point of high interest or information in a criss-cross of visual search patterns as he links up ideas (Luria, 1966). Perhaps by such "open search" he first locates the print of the text. Russian developmental psychologists have been interested in the development of eye and hand searching as young pre-school children explore novel stimuli

(Lynn, 1966). Before the age of five they found that children attended better to the stimuli if the tracing of new shapes involved hand and eye together, and that it was only the older children who were able to carry out effective exploration of new shapes with their eyes alone.

The child must first learn something about the placement of his body in relation to an open book (Benton, 1959).

The child reading English must learn to locate the left side of the text and proceed left to right according to the directional schema of the English he is reading. This learning is relative rather than fixed because of the placement of texts in books changes in size and layout. Detailed study of the emergence of this directional control has shown that children demonstrate all manner of variations in learning these arbitrary conventions, but that within about six months of entry into formal instruction the *average* child has become consistent in the use of an appropriate asymmetrical response. The quick learner may take less than a month; the slow learner may take a year to stabilize an appropriate schema or set of responses.

Although a child beginning to grasp this directional learning may operate within the general pattern required by printing conventions, he may not read a left page before a right page or he may not scan the letters within the word from left to right even though he sweeps along the line in the correct direction (Clay, 1972a).

How is the hand action related to visual scanning? The mechanisms of perceptual analysis are duplicated within each cerebral hemisphere, although visuo-spatial functions relate primarily but not uniquely to the right hemisphere. Dimond (1972) believes that "it would appear to be misleading to attribute the capacity for analyzing the events of the three-dimensional world to one hemisphere only." He has studied performance when both the right and left hand were required to respond at the same time and has devised a model according to which an asymmetrical pointing response to print would not mean that the brain organization on one side had exclusive control over the behavior. He proposed a centrencephalic movement system receiving instructions from either the right or left cortex and passing impulses back to hemispheric control of muscular activity.

How does this relate to the observations on the identical subjects reported above? Interpreting these observations ontogenetically in relation to Dimond's model, "cortical instructions" to point to print were perhaps executed at first by the preferred hand and an estab-

lished motor localization pattern. Over time the subjects came to perform as if a centrencephalic movement system had been created, possibly by cross-talk between hemispheres, so that the organized response pattern could initiate the response to print by *either* hand.

Such a view is consistent with Luria's position (1966) that "writing and reading are functional systems of complex composition . . . (and) the psychophysiological composition of these acts changes in the successive developmental stages. . . ." The differential timing of the acquisition of this behavior implies that the apparently similar environments produced different learning histories in the subjects and points to a differential interaction of subjects with environmental opportunities.

The technique of asking a child to "Read it with your finger" will only reveal the directional orientation to the gross schema of line scanning. Beyond this there must be some very important visual perception learning relating to the attentional scanning of letters and clusters of letters. One might anticipate that further steps in the developmental progression described above occur, but some further devices for externalizing what is happening would be needed to observe these. A closer analysis of motor activity in the young child's orienting to print and its relation to attentional scanning during fixations of the eyes seems warranted.

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Kurzfassung der Beiträge

Übersetzung: Dirk Wendt

Konkrete Poesie: eine Untersuchung von Metaphern von *Abbie W. Beiman*

Verschiedene Eigenheiten der konkreten Poesie sind untersucht worden, aber nur wenig Aufmerksamkeit ist auf den Beitrag dieser Kunstform zur Literatur gerichtet gewesen. Tatsächlich verwirklicht das konkrete Gedicht eine dramatische Veränderung des grundlegendsten Elements der Poesie: der figürlichen Sprache. Traditionellerweise hat die figürliche Sprache eine Beziehung aufgestellt zwischen den greifbaren Objekten um den Menschen herum und dem Unfaßbaren, das er erfassen möchte. Die allgemeinste Form solcher figürlicher Verknüpfungen war die Metapher, ein bildlicher Ausdruck, der eine Spannung zwischen den Ähnlichkeiten und Unähnlichkeiten der durch sie einander gegenübergestellten Elementen schafft. Bei der konkreten Poesie ist der Brennpunkt dieser bildlichen Ausdrücke nicht mehr die abstrakte und geistige Seite der Metapher, sondern die sinnliche Wahrnehmung des Wörtlichen und Konkreten.

Die Renaissance des Buches von *H. Northrop Frye*

Der Aufsatz versucht, die Stellung des Buches zwischen den Kommunikationsmitteln der modernen Gesellschaft zu behandeln. Die Paperback-Revolution wird gekennzeichnet als Änderung der Konzeption des Buches vom Kulturdenkmal zum intellektuellen Werkzeug. Die kulturellen Zusammenhänge dieser Änderung werden diskutiert, und die Auswirkung des Rundfunks, und besonders des Fernsehens auf die Gesellschaft des 20. Jahrhunderts betrachtet. Der Verfasser weist darauf hin, daß das Buch nicht nur gelesen, sondern auch wiedergelesen, und nach Belieben als feststehender Brennpunkt der Gemeinschaft befragt werden kann. Das Buch ist das technologische Instrument, das die Demokratie möglich macht, und öffentlicher Zugang zu geschriebenen Dokumenten ist die Grundlage, auf der sie funktionsfähig bleibt.

Worterkennungs-Latenzzeiten als Funktion der Wortart, Stammlänge und Endung von *P. David Pearson und Michael L. Kamil*.

Diese Studie untersucht die Einflüsse von Wortart (Substantive und Verben), Wortstammlänge (3 bis 10 Buchstaben pro Wort) und Endungslänge bei gebeugten Verben ("Ø", "s", "ed" oder "ing") auf die Erkennungszeit von visuell dargebotenen Reizen. Die Stammlänge erwies sich als bedeutsame Variationsquelle für alle Wörter und auch für die Hauptwörter für sich genommen, aber nicht für die Verben. Eine weitergehende Analyse der Daten für die Verben zeigte, daß die Stammlänge nur in der ersten Versuchsserie eine signifikante Variationsquelle war, und daß die zusätzlich benötigte Zeit zur Verarbeitung der Wortendungen sich zwischen der ersten und vierten Versuchsserie verringerte. Die Daten lassen sich durch einen buchstabenweisen Erkennungsprozeß erklären, der durch eine mögliche Gestaltgliederungsstrategie für die Endungen modifiziert wird.

Buchstabengestaltung und Gesellschaft von *Nicolette Gray*

Schriftgestaltung ist allgegenwärtig in unserem täglichen Leben und nimmt eine Vielfalt von Formen an; sie betrifft zwei verschiedene Typen des Lese-Verhaltens: privat und willkürlich, öffentlich und unwillkürlich. Zwischen den beiden ist wenig physische Ähnlichkeit. Als Medium gedacht, gewinnen die physischen Eigenschaften der Buchstabengestaltung—Farbe, Form, Ausmaß—neue Bedeutung. Schriftgestaltung kann nicht nur die Bedeutung der Worte übermitteln, sondern auch die Haltung gegenüber diesen Worten. Es werden Kriterien angegeben, nach denen Buchstabengestaltung für die Öffentlichkeit gemessen werden sollte. Sozial gesehen, sollte die Schriftgestaltung für die Öffentlichkeit unsere Umgebung durch eine kreative Vielfalt aus allen angemessenen Buchstabenarten bereichern. In der Ausbildung zur Schriftgestaltung sind sowohl die Anwendung geometrischer Prinzipien und das Studium der Vergangenheit bedeutsam. Die Vergangenheit kann Modelle, Ideen und Anregungen für die vielen Richtungen geben, in die sich die Schriftgestaltung entwickeln kann; kein lesbarer Buchstabe ist veraltet.

Ein Vorschlag zur Ausbildung in Buchstaben-gestaltung und Handschrift von *Wim Crowwel*

Die Ausbildung sollte die Möglichkeit schaffen, eine eigene Ausdrucksform durch die Buchstabengestaltung zu finden; sie sollte nicht darauf beschränkt sein, in einem etablierten System bestehende Stile nachzuahmen. Ein neuer Ausgangspunkt zur Schöpfung von Buchstabenformen (ebenso wie für Gestaltung im allgemeinen), basierend auf einem System regelmäßiger Muster im weitesten Sinne, würde eine Einheitlichkeit schaffen, die größtmögliche Freiheit und Flexibilität erlauben würde. Nützlichkeit und Selbstverwirklichung sind gleich bedeutend beim Schreibunterricht bei Kindern, und gleichzeitig das Erkennen von Mustern und grundlegenden Regeln über Form und Gestalt.

Forschung in Kürze: Gedruckte Betonungs-Hinweise und Lesen bei Kindern von *Linnea C. Ehri und Lee S. Wilce*

Achtzig Dritt- und Viertklässler lasen je einen von vier Arten gedruckter Texte: Standard-Drucktext; Drucktext, in dem die Wortgröße entsprechend der Sprechbetonung variiert war (3 Stufen der Betonung); Drucktext, in dem die Wortgröße Unterschiede der grammatikalischen Wortarten wiedergab; und Drucktext, in dem die Wortgröße zufällig variierte. Lesegeschwindigkeit und Verständnis beim Standard-Drucktext wurden verglichen mit jeder anderen Druckart. Die Ergebnisse zeigten, daß der betonte Drucktext von den Drittklässlern schneller gelesen wurde als der Standard-Drucktext, aber nicht von den Viertklässlern. Sonst wurden keine bemerkenswerten Einflüsse beobachtet. Obwohl diese Ergebnisse noch vorläufig sind, bestätigen sie doch die Auffassung, daß weniger erfahrene Leser graphische Reize in akustische umformen, ehe sie eine semantische Interpretation vornehmen.

Forschung in Kürze: Orientierung an räumlichen Merkmalen des offenen Buches von *Marie M. Clay*

Eine der ersten Entschlüsselungs-Tätigkeiten des Lese-Anfängers betrifft die willkürlichen Festlegungen darüber, wie ein Buch dargeboten wird. Die Orientierung an den räumlichen Merkmalen der sichtbaren Sprache wurde bei 4 gleichartigen fünfjäh-

rigen Mädchen über den Entwicklungsfortschritt des Verhaltens ihrer Hände beobachtet, während sie lasen. Vorläufige theoretische Erklärungen werden gegeben im Rahmen bilateraler Nervensysteme, der Händigkeit und des Lesens, und von Wahrnehmungsstrategien zur visuellen Analyse von Reizen.

Résumé des Articles

Traduction: Fernand Baudin

La poésie concrète et l'art de la métaphore, *Abbie W. Beimann*

La poésie concrète a été envisagée sous bien des aspects. Mais on ne s'est guère soucié de ce qu'elle représente en littérature. Elle marque en fait un changement radical dans ce qui est fondamental pour toute poésie: le langage figuré. Traditionnellement le langage figuré s'efforce de relier le tangible qui entoure l'homme avec l'intangible auquel il aspire. La forme la plus courante de ce genre d'accouplement est la métaphore, figure de style qui crée une polarité entre les ressemblances et les disparates des objets accouplés. Dans la poésie concrète ce n'est plus l'abstraction, le côté spirituel de la métaphore qui en constitue l'élément vital, mais bien la perception sensible, visuelle du sens littéral, concret.

Le renouveau du livre, *H. Northrop Frye*

L'auteur s'efforce de situer le livre par rapport aux autres instruments de la communication dans la société contemporaine. Le livre était un monument culturel, le poquette en a fait l'outil du travailleur intellectuel. L'auteur analyse le contexte culturel de ce changement: l'influence de la radio et surtout de la TV sont brièvement examinés. Il insiste sur le fait que le livre ne se prête pas seulement à la lecture mais à la consultation; il est un foyer de connaissances permanent au coeur de la communauté. Il est l'instrument du savoir démocratique par excellence; sans livre, sans l'accès public à l'écrit, elle cesse d'exister.

Les radicaux et les désinences en tant qu'éléments latents de la lecture, *P. David Pearson et Michael L. Kamil*

Il s'agit d'une recherche concernant l'influence possible des formes de déclinaison (substantifs) et de conjugaison (verbes) ainsi que des radicaux dans la perception de stimuli visuels. La longueur du radical s'est avérée une variante signifiante dans tous les substantifs, mais insignifiante dans les verbes. L'analyse séparée des formes verbales montra que le radical était une variable signifiante uniquement dans la première série de tests, et que le temps requis pour déchiffrer les désinences va diminuant de la première à la quatrième série de tests. Les résultats indiquent que les données ont été épelées, avec toutefois la possibilité d'une isolation morphologique des désinences.

Les formes des lettres dans la société, *par Nicolette Gray*

Sous les formes les plus diverses, l'alphabet fait partie intégrante du décor de la vie quotidienne. Ce qui détermine deux types de lecture distincts: l'une, privée et délibérée; l'autre, publique et involontaire. Matériellement, elles ont peu de chose en commun. Mais dès qu'on les envisage en tant que medias, les propriétés matérielles des inscriptions couleurs, formes, dimensions- reprennent toute leur importance. En effet, outre le sens, le dessin des lettres dicte une attitude à l'égard des mots représentés. L'auteur propose quelques critères de discrimination à l'égard des inscriptions publiques. Du point de vue social, elles devraient enrichir notre environnement par leur variété. Dans l'enseignement, les notions de géométrie ne sont pas moins importantes que les notions historiques. Le passé est une source de modèles et d'inspiration. Il ouvre des perspectives de recherches et de renouvellement. Aucune forme d'inscription lisible n'est jamais obsolète.

Une méthode pour l'enseignement de la lettre et de l'écriture, *Wim Crouwel*

L'enseignement devrait procurer un moyen d'expression personnelle par le dessin de la lettre. Il ne devrait pas se contenter de donner à copier des modèles existants. L'auteur pro-

pose une méthode nouvelle pour inventer des formes de lettres—et des formes tout court. Elle est fondée sur un réseau d'éléments réguliers qui font naître l'uniformité au sein de la liberté et de la souplesse. L'efficacité et l'expression personnelle ne sont pas moins importants pour l'enseignement de l'écriture dans le primaire—tout comme la perception des structures d'ailleurs, ainsi que les règles élémentaires des volumes et des formes.

Notes de recherche: Indications d'intonations et lecture chez les enfants, *Linnea C. Ehri et Lee S. Wilce*

On a donné à lire à quatre-vingt élèves de troisième et de quatrième quatre types d'imprimés: un normal, un autre où les mots étaient composés en trois dimensions différentes pour suggérer trois degrés d'intonation; un troisième où la dimension des mots traduisait leur fonction grammaticale, et un quatrième où la dimension des mots variait au hasard. On a comparé les vitesses de lecture et de compréhension du texte normal avec les autres. Les résultats montrent que les indications d'intonations facilitaient la lecture aux élèves de troisième, mais non plus aux élèves de quatrième. Aucune autre observation marquante. Bien qu'il ne s'agisse que d'une première approche, les résultats confirment ce que l'on sait concernant les lectures débutants: ils traduisent les données visuelles en éléments auditifs avant de passer à l'interprétation sémantique.

Notes de recherche: l'attitude en face des éléments spaciaux d'un livre ouvert, *Marie M. Clay*

Un des premiers exercices de décodage qui s'impose au lecteur débutant porte sur les conventions de la mise en page des livres. L'attitude adoptée en face des éléments spaciaux du langage visuel a été observée chez quatre fillettes de quatre ans à travers la progression des mouvements de leurs mains en cours de lecture. Les premiers essais d'interprétation sont exprimés en termes de système nerveux bilatéral, d'habileté manuelle, de lecture, de méthodes d'approches pour l'analyse de stimuli visuels.

This number of *Visible Language* has been composed in "Monotype" Baskerville type and produced by W & J Mackay Limited, Chatham, England, on Beaublade Nimrod Cartridge, 100gm². The layout is based on the original design by Jack Stauffacher of the Greenwood Press, San Francisco.

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