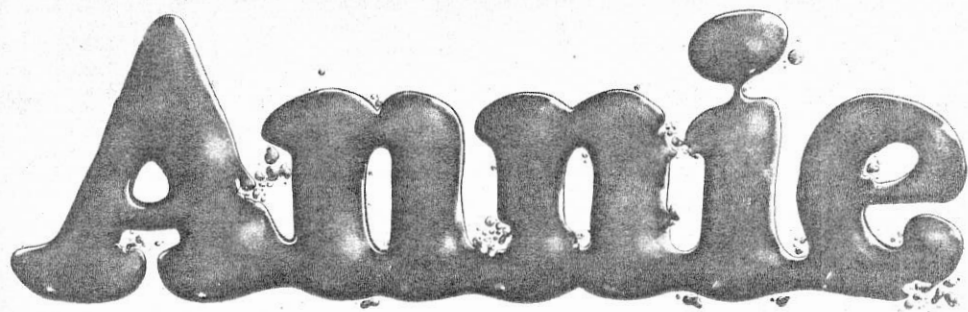


VISIBLE LANGUAGE

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Annie

geometry, substitutes the principle that the position of one body can only be stated relative to another body and not to a fixed reference point.

Paul Laporte in "Cubism and Science" writes: "The best manner to explain the new concepts in [Cubist] painting is by correlating them to modern physics."¹⁴ He juxtaposes the failure of traditional explanations to offer solutions in both fields, suggesting that the remedy lay only in the reversal of basic ideas germane to each. In physics, non-Euclidean geometry in the form of the "special Theory of Relativity" provided a solution. Of painting, Rosenblum writes: "For the traditional distinction between solid form and the space around it, Cubism substituted a radically new fusion of mass and void. In the place of earlier perspective systems, Cubism offered an unstable structure of dismembered planes in indeterminant spatial positions."¹⁵

In an essay from 1924, Juan Gris put the principle of relativity to use in his own realm. "The power of suggestion in every painting is considerable. Every spectator tends to ascribe his own subject to it. One must foresee, anticipate, and ratify this suggestion, which will inevitably occur, by transforming into a subject this abstraction, this architecture which is solely the result of pictorial technique."¹⁶

Conclusion

The development of the typographic element in Cubist painting began with the earliest use of such elements as a motif beyond their traditionally decorative role. It ended with the invention and exploration of a new medium: collage. The visual nature of the typographic element was such that it proved a valuable tool in solving formal problems that Cubism faced in its early stages. It terminated its career in Cubism when its users had investigated those formal and semantic possibilities of interest to them. The abstract, symbolic motif of the alphabetical and numerical forms by that time had served them well.

14. P. Laporte, "Cubism and Science," *Journal of Aesthetics and Art Criticism*, VII (March, 1949), 244.

15. Rosenblum, p. 9.

16. D. Kahnweiler, *Juan Gris, His Life, Work and Writings*. New York, 1947, p. 139.

The Changing Responsibilities of the Typographic Designer

G. W. Ovink

At our present level of audio-visual output, we are faced with a sensory overload. The typographic designer must help cut this "mental pollution" by insisting on less and better-designed print. He must increase his understanding of both the readers' and the clients' attitudes and responses—while maintaining his unique contribution as a graphic designer. Primarily through broadened education and research awareness he must develop as a general "informatician." The typographic designer is not playing his rightful role in the development of new printing technology. He must assert leadership for flexible development of the new processes, based on his responsibility as the reader's representative and on the age-old traditions of graphic communication.

We know that the development of professional life moves—inexorably, it seems—towards ever greater specialization. Yet we know, too, that specialization got our society into its present mess. We see around us what happens when specialists proceed on their own, without due regard for those consequences of their work which they all too often consider to be outside their own province. We see scientists and technicians working without moral consciousness, but also moralists judging without scientific and technical knowledge; we see economists working without social consciousness, but also social idealists making plans without economic insight.

So the typographic designer hardly ever questions the content of the piece of print he has helped to make more penetrating. True, the designer would be in trouble *if* he questioned it! His principal would

This article has been adapted from Dr. Ovink's Beatrice Warde Lecture given in London, March 1972. The general purpose of the lecture series—instituted in 1971 by Dr. Bror Zachrisson—is to invite each year an authority of international standing to illuminate some aspect in the field of communications, particularly with regard to printing and typography.

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tell him: "Just make me a good piece of printing; don't bother over what's it about." The designer who *does* bother, is torn between two duties: he must earn a living, but he also feels that he ought to refuse making an effective job of a text which tells people worthless or even wrong things.

Nils Treving, the Swedish audio-visuals specialist of the Esselte-Bonniers Company, warned the printers and publishers of the world at last year's Comprint Congress in Geneva that we have already reached an audio-visual level of stimulation as bad as our overpopulation and environmental pollution. He called it "mental pollution." There is too much to see and too much to hear—"a sensory overload"—and too much of that is also lacking in credibility, decency, and efficiency. The victim of this mental pollution can do two things: he can stop reading and listening entirely; or he can go on, mixing up what he perceives. Either way, the message does not come across.

Clearly, we must reduce the total volume of audio-visual stimulation each individual receives. As far as our field is concerned, in other words, we must print less per capita, and then only true and useful things; and these so well presented that the reader will understand and recollect with a minimum of effort.

Less and better print. How do we set about this without committing economic suicide? Partly we will have to accept a loss of demand. That is the way in which the reading public can show that it has no use for a certain kind of print; either directly, by not buying books or periodicals, or indirectly, by not buying the products advertised through print.

Many wrong or worthless things are printed not because people are wicked or stupid or vain, but from high-minded hopes, or at least fair motives; only with wrong expectations about the reaction of the readership. If they had known beforehand that the public would not read their stuff, would not understand it, or would despise their originator for it, they would often have published it in a different way, or not at all. Scientific evidence about readers' attitudes can help the designer and publisher to turn out better work. It can help them to screen the material more effectively. I cannot go deeply into this, but I must frankly admit that we have not got very far with research yet, in spite of the great interest that producers of consumer goods, political parties, and public and private institutions also have in know-

ing how the public will react, and for which they spend large sums on research. Much of that research is on specific cases and the results remain private property, but the techniques of research are developed, and general results on human behaviour are published. But the difficulties are enormous, much greater than some research workers seem to realize.

Let me give you two examples. Both indicate how manifold and complicated influences render the reader's reaction almost unpredictable.

First: the largely passive attitude of the public. The reader does not judge consciously and deliberately. He accepts what is thrust upon him, if it does not differ much from what he expected. He simply undergoes what he gets—unless it is unusually poor, or unusually attractive. If he sees no alternative, he will even accept a definitely inferior product without a grudge against the producer. His ready acceptance of so much typewritten typography has surprised most of us. Alas, the same reader will also accept a very well produced piece without much positive effect, if he thinks that it is simply as it ought to be.

What makes the reader expect a certain quality? Clearly, a combination of what the reader has seen lately in the same kind of work from similar producers in his particular sphere of life, and his evaluation of what the producer could have done. The reader discounts poor quality from a man unable to spend more; he discounts good quality from a rich and powerful firm. All these influences are difficult to predict; the more so, now that new technology sets all the established kinds of printing adrift. Considering this passivity of the reader, and the chance element in his quality standards, it is understandable that the designer is inclined to make what he likes himself. Why should he speculate so much on what the public will like?

My second example of the intricacy of the reader's judgment: we all judge the aspect of a thing according to its price. We call a certain newspaper well set and printed, but call the same quality shoddy if found in a paperback; we admire the quality of a paperback, but would feel cheated if we got that quality in a \$15 book. We adjust our standards automatically to what we expect for that kind of product for that price, and what it means to us. A scientist may admire and gladly pay a high price for a typewritten congress report that reaches

him soon, but rage against a beautifully produced report at the same price, which he gets a year after the congress.

Though sceptical about the value of most research up to now, I am confident that, in the future, research can help publishers, printers, and designers considerably. The result should be less print, of better quality. The general trend of thought today is not unfavorable. The postwar generation everywhere shows a remarkable willingness to exercise self-restraint in economic growth. Hundreds of thousands of young people are prepared to live with less comfort than they could have, by renouncing lucrative work which goes against their conscience. And that conscience embraces a much wider concept of human decency than that of my generation at that age.

In the communication industry we will also have to apply a voluntary self-restraint. Refusal to cooperate in the printing of non-essential or misleading matter can be direct, by declining an order; more often it will work in a roundabout way which, though slower, will be deadlier. By withdrawing their talents from the production of undesirable matter, the typographers will cause the quality of that work to go down. Less-talented and less-principled colleagues will take over. In the course of time, readers will get fed-up with the hollowness and ugliness of that kind of printing, and will stop buying. We see this happening already in advertising. Many of you will look back with nostalgia to the advertising art of the Twenties and early Thirties, as recorded in Sir Francis Meynell's *Typography of Newspaper Advertisements* or in the first dozen or so *Modern Publicity* annuals. Those were the days! The wit, the sound approach of the problems, the virtuosity of typography and illustration of that period are rarely found today.

What happened?—a brain drain. Much of the talent that formerly found employment in advertising, has left in disgust. To other media, to social reform, or perhaps to the contemplative life in Ibiza or Nepal. They could not face the prospect of presenting cigarettes or soft drinks or whiskey as the condition for belonging to the respective “with-it” sets, or of presenting detergents as a means of beating your neighbor in the race for greater whiteness. As a result of that brain drain the advertising trade is left with a much higher proportion of unimaginative and pliable men. Eventually the public may come to mistrust and hate *all* advertising. That is regrettable, for advertising is indispens-

able for an efficient distribution of goods. A new confidence has then to be built up patiently and at great cost. You will understand my point, however. Producing an effective piece of communication—printed or otherwise—requires a great deal of craftsmanship. If many good craftsmen withdraw their talents from a group of publications, these publications will die from inner weakness.

Some predict even a prominent role for the designer in the improvement of society, namely on the grounds that he is particularly equipped to deal with problems involving mass behaviour. Creativity, they say, consists of the power to recognize, sooner than others, a certain structure or pattern of action. His imagination then enables him to devise a new approach, new solutions. With his vitality he dares to push these forward against the natural mistrust of non-creative people.

Developing the designer into a kind of universal handyman in problem situations is going too far, I think. He should be able to disengage himself from custom and from available patterns; that, however, does not make him the intrinsic revolutionary every artist is claimed to be. In this sense of “finding new ways,” every great man is a revolutionary, whether he be artist, scholar, businessman, statesman, teacher, or social worker. We must ask: should the ordinary designer in his daily work be as much of a renovator as only the great men can be in other professions?

I hasten to warn against the conception of the designer as the professional brainstormer, ideas man, the universal problem-unraveller. And against the whole idea of a free-floating creativity, to be taught in art schools and to be applied wherever new patterns of thought are required, in design or elsewhere. Originality is not enough. To be called “creative,” a person should have that originality combined with all the knowledge and skill required for a specific job—plus energy and willpower—if he is to perform what others could not think of. Training solely for creativity can be as one-sided as training strictly for professional knowledge and manual skill.

The present glorification of creativity, originality, and novelty rests on a curious paradox. The demand for creative designers derives from two opposite sources. One is idealistic. It hopes to make men who will *not* be integrated into the capitalistic system, who will not be “Fachdioten” (blind and dumb specialists), but who will use their fresh minds to help in making a better society. The other demand,

however, comes precisely from the capitalistic system with its logic of mass production through "built-in obsolescence," its need to create new demands continuously, its perpetual dissatisfaction, its exploitation of stupidity and lower instincts, its unscrupulous pushing of non-essentials presented as important inventions. Thus the training for creativity—for originality of mind and daring—*may* produce social reformers, if they are so motivated. It may also produce prolific inventors of sales-gimmicks.

It is natural that young people bring a fresh note into a profession. All right, liberate their minds, so that they come up with more new ideas. However, don't we all want a new society that is far more stable and natural than the present? We want quiet advertising that is reasonable, honest, informative. We want print containing no more than we need to have, presented so that we can easily understand, learn, or enjoy it. We want reference works to be clear, manageable, and complete. All this requires a high degree of typographic, editorial, and informational competence—old-fashioned professional skill, partly based on age-old experience. On the other hand, some of these skills have to be acquired in fields formerly alien to the trade.

Let me explain. We ask from the typographic designer an approach to his job as general "informatician," if I may introduce this term. Also we want him to consider the relevancy of his work. This may lead him to decide: "No, this novel should not be a book; it should rather be turned into a radio play." Or: "This catalogue should not be the book of 160 pages I'm asked to do, but a card file—or a micro-film." Or: "You ask me to design this for conventional printing by your ordinary printer, but it will be as effective, or more, if it is type-written and run off a small offset machine by yourself." Or vice versa: "You think that you can do this cheaply, but actually it requires color reproductions on a much larger format with a completely new text."

The typographic designer who has thus become a general "informatician" must have a much wider knowledge at his command than is usually taught to him. And he must have the authority to intervene in the management policy of his principal. Of course, some designers are already working along such lines today. But they are only pioneers of what will be a much more general practice tomorrow. It is understood of course, that many designers can go on in the traditional way,

designing jobs of which the relevancy and the best way of presentation have been established for a long time, or because their temperament or the scope of their talents make them stick to a single way of working. For many others, however, typography as the selection and display of types, selection of format, materials and lay-out will not be enough.

In the first place, the designer, trained to deal with texts as elements of visual design, will be expected to read texts with critical understanding. I venture to submit that too many designers do not read the texts they have to design, that they do not design according to the meaning of the text, and that they do not rewrite a text if that is necessary and possible. They think of themselves as visual *artists*, not informaticians. If they have no linguistic talents, then they should work together with an editor.

Writing is too serious a business to be left to the writers. That goes for writers in the field of technical and scientific reports, school-books, and manuals. The informatician, with his bag of typographic means of elucidation and suggestion, and his knowledge of the reader's powers of perception, can make things understood in a way that the straightforward, undesigned original text can not. Even more will be demanded from the designer: a knowledge of research methods and results regarding readers' attitudes and performances—legibility problems, aesthetic judgment, buying motivations. In short, a general knowledge of all sorts of human behaviour. Then: a considerable knowledge of printing technology and its costing; some knowledge of neighboring techniques.

Is this an unrealistic, vastly exaggerated demand? Yes, for all of it from all designers. No, for those designers who decide how huge sums will be spent to reach a certain public effectively, and who have a variety of means to choose from. It will be clear also, that in the present set-up of the information professions, all this is easier said than done. What the job needs, what the designer wants to do, is not how most customers see it today. The man who orders a piece of typographic design, does not regard that as an information problem. He does not ask and does not pay for a fresh evaluation of his job. He thinks that he knows himself what he needs; it is he who pays the piper and can call the tune.

Typographic design should be put on a profitable basis again. A

profitable basis means that the designer's fee is found to be a fair price for the designer's usefulness in the whole production.

Of course, many customers simply don't know what design involves, and are unfair when they accuse the designers of giving too little and asking too much. The final result looks so deceptively simple. But we must admit that there are designers—even famous ones—who do not know enough about techniques and costs, or don't care, and so ask without real necessity for things that can't be done easily and cheaply. The duty of the typographic designer to know about techniques and costs brings us to his responsibility as adviser on the design aspects of technology.

To take only the technique most important for graphic design: typesetting. Regrettably, most of the development and the discussion on future development has bypassed the designer. He was rarely asked to contribute, except on details of type design, and he has not offered many contributions. His art school training did not equip him to tackle these problems; he is afraid of them and all too soon declares them to be corruptions of quality standards he is determined to maintain. The designers may argue, "Why should we go into the technology of these machines? Of course they are primitive in the beginning, but if we insist on having our way, they will become simple, foolproof, and versatile. No need to study computer technology and all that now; we just tell the technicians what we want and they will comply."

This may indeed happen, in the long run, but at what price! I fear that we are about to repeat all the mistakes we made in the development of hot-metal composing machines—and more. It may come out all right in the end, but in the meantime a lot of work will go undesigned, and a lot will be designed but produced on new equipment at little or no profit, because the equipment couldn't handle it properly. Either way, the designer and the printer and the reader will suffer.

The need for active reorientation on new technology may not seem urgent when the designer finds that most of his regular customers and printers are as wary of the new inventions as he is. More and more, though, he will discover customers switching to different publishing or publicity policies, for which they have totally different suppliers. Or the designer, coming to his regular printer, will find a new machine there, with a new man in charge who isn't a designer, but who still tells the real designer what he can do and what he cannot.

The designer is about to lose many of his former liberties, too. Rightly so, inasmuch as many of these liberties consisted in satisfying personal whims. Let us be honest: it is easy for the designer to supply rough sketches and faulty originals, making his final adjustments in the proofs. It is easy, but it isn't right. The first blow against that kind of false liberty was struck when economists figured out what that took in craftsmen's wages and in idle equipment. The second blow comes now from new machines and processes, which cannot work from unclear specifications or faulty originals.

The curtailing of the designer is inadmissible, however, when engineers and other technicians want to have it easy in *their* turn. The trouble is, many designers don't realize how acute the danger to their profession has become, and don't raise their voices unitedly to make their requirements known. If the engineers and equipment manufacturers are allowed free reign, they will organize typesetting and reproduction so that it is most logical, efficient, and cheap according to *their* viewpoint. But their logical, convenient, and profitable methods are not always what the designer needs for ensuring reading comfort and appeal to the public.

Have we forgotten so soon the painful story of the development of the Linotype? The greatest demand for mechanical composition in the 1880's was from the newspapers, which needed vast amounts of simple, uniform matter set rapidly—American language, of course. The Linotype provided just that, and this saddled Europe with 90 channels and a corresponding keyboard, unfit for languages with many accents and for scholarly work. History repeated itself with the introduction of 6-channel teletypesetter tape, and again today with simple photocomposing machines, unable to cope with anything else than basic English, unless at great loss of speed and quality. Machines and processes are developed for the uses which are first in the greatest manifest demand. It is always thought possible to adjust or extend them for other demands, if such demands become profitable. So the Linotype advanced from single-character matrices to two-character matrices (providing an italic, or bold or special signs, but on the same width as the main figure) to pi matrices for special signs; from single magazines to four-deckers with side-magazines; there are now multiple-mould wheels, quadding and centering devices, saws, etc. *Makeshifts!* They do their work, but the machine could have been

constructed in a different way if the present demand had been manifest in the beginning.

What is a paying proposition in the long run? After 25 years of developing photocomposing machines we still don't know what is needed. Why are the cleverest minds in the industry unable to agree on this? Terrible losses have already been incurred by countless firms! Why is this problem so difficult? It is a fascinating question. I will focus only on the part of the designer in deciding which machines and processes we are going to use most in the future.

A really new machine or process is made not for an existing market, but for a potential market. The potential purchaser doesn't know what the operating costs will be, whether the new product will be acceptable to the public, nor whether his prices will cover cost and profit. The machine manufacturer asks the potential customer, "What do you prefer: cheapness? speed? quality? versatility?" The customer doesn't know; how can he? He is, in turn, dependent on his clients. Moreover, there are other manufacturers who make even more beautiful propositions. Perhaps one should wait a little; let other people lose their money first, and step in when the risk is gone. Meanwhile, manufacturers incur losses, and printers deprive themselves of benefits the new machine or process could have afforded them.

What has been the result?—photocomposing machines that were too fast, too versatile, and too expensive; machines with an output too small and deficient at any price. New compromises are now being sought involving quality, versatility, speed, and price. Their success will depend to a considerable extent on the contribution of the designer to new, efficient design and composition routines. Yet the voice of the designer is hardly heard in all the discussions on the future of printing, notwithstanding all he knows about the requirements of authors and readers. Author and reader are therefore not heard at all; neither directly, nor via the designer who could represent them.

With the designers and printbuyers largely passive the efficiency-minded engineers seem to have our future planning all to themselves. This is a danger. I'm all for efficiency, but *their* efficiency is so often one-sided and short-sighted! Today millions of dollars are spent on the development of information storage, retrieval, and dissemination systems. As with the Linotype, the decisions are being made by

interested groups which can make clear-cut demands—and pay for them, now: newspapers, the space industry, medical and pharmaceutical sciences, banking and stock markets, et al. Each has homogeneous material to be processed in bulk, rapidly, for people waiting eagerly for the information. Not so the humanities and the arts, nor even commercial publicity, for their material is not homogeneous, does not come in bulk, and is not needed in a hurry. My fear is that the needs of the sciences, etc., will be met by equipment and processes which seem to present so many advantages that they will have to be adapted for use by the humanities—again by means of unwieldy makeshift adaptations and extensions.

What do we do about it in the field of typographic design?

Most urgent are the problems of photocomposition. Representatives of the humanities should first decide—with the aid of typographic designers and legibility research workers—what their minimum requirements are; what is intrinsically important in present rules of composition and layout; and what, on the other hand, is nice to have if you can get it, but no more than that considering the adaptability of human nature. Then the printing technicians and economists should come in and explain what they need absolutely, and what they can do without, if need be. The two viewpoints should then be brought to a compromise. A few examples.

We all agree that text composition and page make-up will soon be done in one, integrated process, with nothing left to improvisation; and that, ideally, all keyboarding and actual character generation should not start before absolutely clean, final copy and design are in. No afterthoughts permitted. This means that both author and designer must visualize the final result before the typographic stage. Can we train authors and designers to renounce their deep-rooted habits, and to adopt difficult new routines—"for the printer's sake," as they will say? Partly they will comply, if the choice is between having the thing done so or not at all; partly they won't comply, whatever the lure or economic pressure. Fortunately, there are several escapes.

It should be emphasized, first, that these are *visual* problems, not merely technical ones. Any difference between original copy and printed result must be predictable through *seeing*. Calculating the number of characters and lines from typescript or tape is not

sufficient, because the typographic form affects the visual importance and balance among the parts. It will be necessary, as a rule, to run the tape twice through the photocompositor: once at high speed and low quality, sufficient for correction of proofs; and once, after correction, at reduced speed and high quality for final result—as many machines can do today. Once agreed on, rules for breaking-off, spacing, and capitals; for placing notes, captions, and illustrations can be programmed. Of course, agreement on proper breaking-off rules should be reached between all users of a language, and on proper rules of capital spacing, between all designers. Perhaps some characters in some typefaces should be redesigned to follow general rules, e.g., the notorious Bembo capital R. Professor C. J. Duncan was quite right in ridiculing the individualism and chauvinism which prevented such rules and conventions to be agreed on long ago.

In page make-up of complicated work it is possible to provide for eventualities by using a flexible layout system, with “play-room” so to speak; variations on the basic scheme need not hinder, because the whole style is based on variability and not on uniformity, as traditional typography is. There is the danger that the text done in such a flexible lay-out, being less compact, presents too few elements at a single glance; that it looks disjointed, vapid, rambling. Traditional typography gives a terse and succinct exposition of facts, because it concentrates these in the smallest possible area. But that requires a strictly individual treatment of every page, which a largely computerized, run-of-the-mill production does not allow for. However, the tape-driven visualizing screens or “terminals” used for editing and correcting tape may help us in this, though it will take some time before these visualizing contraptions can match the ease and accuracy of single-character correction in hand- and Monotype composition.

In all these matters the typographic designer should establish design models which exploit the specific possibilities of the machine, while neutralizing or compensating its specific limitations. Possibly the designer will find that even when he does his very best to meet the engineer’s wishes, there are still things left which the machine cannot

Figure 1 The headstone to the grave of Beatrice Warde in Epsom Cemetery, Surrey, England, to which Dr. Ovink refers at the conclusion of his article. The lettering was cut in Welsh slate by Will Carter.



produce at a profitable rate, though it should. Then such important reader's requirements should be urged upon the machine manufacturer or, *mutatis mutandis*, upon the process developer. Only then, when all the possibilities and limitations have been tried out and checked with the people most concerned, will the manufacturer take notice and consider improvements. Engineers and manufacturers will accept good advice from the designer, but only if the designer knows what he is talking about both in technical and in commercial respects.

How do we get designers who can thus act as typographic informaticians; who can cooperate effectively with engineers and salesmen; but who can also act as the loyal opposition? Fortunately, strict separation is lessening between our various educational programs between art schools, trade schools, commercial schools, technical colleges, universities, and the old apprentice system. Typographic design has always attracted people from different backgrounds, and it will do so even more in the future. Printing can offer much to all kinds of talents, and it will draw on all the gifts a person can muster. The future generation of typographic designers, therefore, should take to heart the line cut on Beatrice Warde's grave-stone: "Quantum potes, tantum aude"—which we may paraphrase, perhaps, as: "Whatever your talents are, dare to use them to the full."

A Program for Developing Visual Symbols

Ed Bedno

A programed procedure involving discrete visual and verbal steps to simulate the creative processes involved in visual design is presented. The program was used by students in a design school as a guide to the design of visual symbols. The resulting level of performance was generally quite high. Results tend to indicate that this procedure is an accelerated and efficient method for extending the student's awareness of the possibility of conscious creativity.

One of the problems continually facing a professional designer is the need to devise clear graphic symbols for instructing, identifying, or motivating the viewer. The clarity and originality that is brought to the solution is most often credited to the individual designer's experience and intuitive abilities. Although this would appear to be the case on the surface, most designers tend to follow a more or less similar procedure without either knowing or being able to describe it. Many studies of the creative act recognize that it usually, or often, involves the steps of problem definition, analysis, generation, synthesis, development, refinement, and presentation.

Proceeding from this assumption (and my own experience), I developed a structured procedure to guide the user through these steps. To test this procedure, I assigned a problem to two classes of sixteen students each, requiring the design of a visual identifier for a hypothetical institution. I avoided institutions concerned with specific products so that the student could not rely on a simple pictograph of an object but would be forced to represent symbolically a broad idea. All students were given the same procedure to follow; ten discrete steps in the verbal mode, followed by thirty discrete steps in the visual mode. The end result should be a simple, clear visual symbol representing the institution. The problem was given and the procedure described. The hypothetical institutions were assigned

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