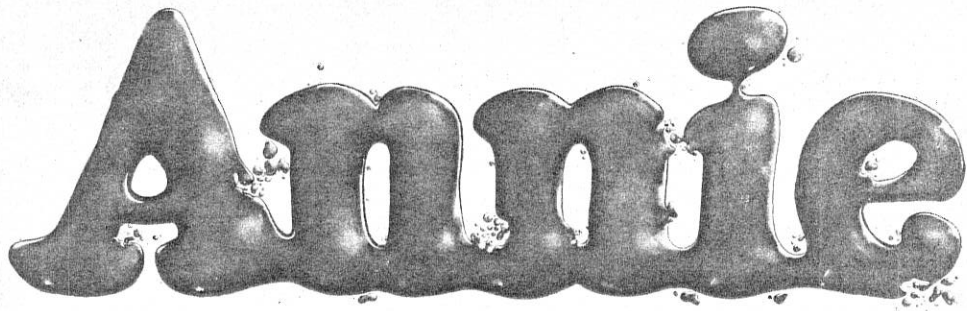


VISIBLE LANGUAGE

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Annie

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

355 *Bedno : A Program for Developing Visual Symbols*

randomly. No solutions were shown or discussed relating to the assigned problems. Basic guidelines were given for technical consideration, such as generally accepted line weights for legibility at a distance, the necessity for simple form that will reproduce in any process, etc. The students worked with this program for an average of 12 hours, including two one-hour class critiques. The classes were composed of a somewhat mixed group of Institute of Design students; twenty were in the visual design program, four were in the photography program, four were in the product design program, and four were in the art education program. None had worked in this area of design previously.

A summary of the program itself follows. Space does not permit a full description or example of each step. If sufficient interest warrants, I would hope to eventually publish this program as a workbook. The first ten steps require written responses and are concerned with the stages of problem definition, analysis, word and image generation, and preliminary synthesis.

1. Statement of Problem. For example, to design a visual identifier for The Museum of American History.
2. Description of the User. Who or what it is; what it does. The inexperienced designer at this stage usually oversimplifies, uses unexamined clichés, or just does not know (but describes anyhow).
3. Analysis of Description. Now that you have described it, do you know what you've said? Explain your description, including definitions for all terms used.
4. Sources of Information. Where you got your verbal and visual information about your problem. Because of time limitations, the information will usually be less than preferred; but it does demand some awareness of information needed and builds a vocabulary of possible verbal and visual symbols.
5. Implications of Subject. If an object, what it does or would do. If an organization, what it accomplishes or should accomplish. If an idea, how it would affect us. These descriptions take one beyond simple physical representation into potentially broader symbol possibilities.
6. Descriptive Words Relating to Subject. Reduce your subject title to its simplest form and generate as many words as possible that

relate to these words. For example: *Computers in Education*. Generate word lists for both *Computers* and *Education*. At this stage, precision is not essential. Write down any word association, no matter how absurd.

7. Descriptive Images Relating to Subject. Same as above, but visual images. You will find that images will suggest further words, and words will suggest further images. Be prepared to work back and forth in both areas.
8. Matrix. Select the twelve best (most appealing to you) word or image statements from your list and lay them out on a matrix: six horizontal and six vertical. At this stage it is important that your selections are concerned with things that can be visually represented. Hazy, unexplained, over-generalized words or images cannot be dealt with. One cannot easily visually represent "thinking," but one can certainly represent "brain", or "nerve network", or "spark" (Fig. 1).
9. Matrix List. From this matrix, 36 combinations will result. These combinations represent the synthesis stage, where seemingly unrelated elements, when combined, suggest new and unexpected entities (Fig. 2).

	CROSS OUT SIGN	TRASH CAN	FIRE	GRAVE STONE	SKULL AND CROSSED BONES	FRAGMENT
LETTER GRADE	✓	✓	✓	✓	✓	✓
NUMERICAL PERCENTAGE	✓	✓	✓	✓	✓	✓
REPORT CARD	✓	✓	✓	✓	✓	✓
DUNCE CAP	✓	✓	✓	✓	✓	✓
TEST PAPER	✓	✓	✓	✓	✓	✓
CHECK	✓	✓	✓	✓	✓	✓

Figure 1. Matrix for student selected images relating to *Elimination of the Grading System*. When all of these elements are matched, 36 combinations will result, each of them representing a potential visual metaphor.

MATRIX LIST

Mushroom cloud/Dove with olive branch
Mushroom cloud/Plowshare
Mushroom cloud/Band-aid
Mushroom cloud/Broken lance
Mushroom cloud/Muzzle with flower
Mushroom cloud/Open palm of hand

Fractured world/Dove with olive branch
Fractured world/Plowshare
Fractured world/Band-aid
Fractured world/Broken lance
Fractured world/Muzzle with flower
Fractured world/Open palm of hand

Eagle with arrows/Dove with olive branch
Eagle with arrows/Plowshare
Eagle with arrows/Band-aid
Eagle with arrows/Broken lance
Eagle with arrows/Muzzle with flower
Eagle with arrows/Open palm of hand

Barbed wire fence/Dove with olive branch
Barbed wire fence/Plowshare
Barbed wire fence/Band-aid
Barbed wire fence/Broken lance
Barbed wire fence/Muzzle with flower
Barbed wire fence/Open palm of hand

Buildings skeletons/Dove with olive branch
Buildings skeletons/Plowshare
Buildings skeletons/Band-aid
Buildings skeletons/Broken lance
Buildings skeletons/Muzzle with flower
Buildings skeletons/Open palm of hand

Cannon/Dove with olive branch
Cannon/Plowshare
Cannon/Band-aid
Cannon/Broken lance
Cannon/Muzzle with flower
Cannon/Open palm of hand

Figure 2. Matrix list, showing 36 possible combinations relating to *Pacifists Against War*. From this list the student selects 12 to develop visually.

10. Selection from Matrix. From the list of 36 combinations, select 12 that present the most interesting potential. From this point on, the basic ideas can be visualized.
- 11 to 22. Synthesis Sketches (12). Each of the combinations should be drawn as a single, unified visual image for a total of 12 visualized ideas (Fig. 3). At this point the visual quality of the sketch is of no importance, only the variety.
- 23 to 28. Development Sketches (6). Select the most promising synthesis sketch and try for a diversity of form within the parameters of a single idea (Fig. 4).
- 29 to 34. Reduction Sketches (6). Select the best development sketch and make six sketches, starting with the idea as it was first indicated; then progressively eliminate unnecessary elements until you have reached the point where the image can no longer be simplified without losing its meaning (Fig. 5).
- 35 to 40. Reduction Sketches (6). Select the best reduction sketch and make six sketches that progressively refine your idea in terms of visual quality. A rational solution is not necessarily a beautiful solution, and it is at this point that subtle variations can take place involving personal aesthetic decisions (Fig. 6).

By the end of the program the resulting image should have combined the most interesting idea with the clearest meaning with the simplest form that is most pleasing to the eye. Obviously, theory and practice do not always coincide, but the examples shown do indicate a high level of performance considering the absence of an instructor, the unfamiliarity of the subject, and the small amount of time available. Some of these symbols are at about the same level as similar projects previously given that occupied weeks of effort (Fig. 7).

It would appear from this that the creative process can, to some extent, be analyzed and structured. I would be the first to point out, however, that procedures such as these are at their best when the instructor has a fairly clear idea of what the goal will be. Having designed symbols professionally, it is possible for me to work "backwards" from a goal to a set of procedures that will most likely lead up to the goal.

Perhaps the most rewarding aspect of this method is not that inexperienced students find themselves able to produce professional

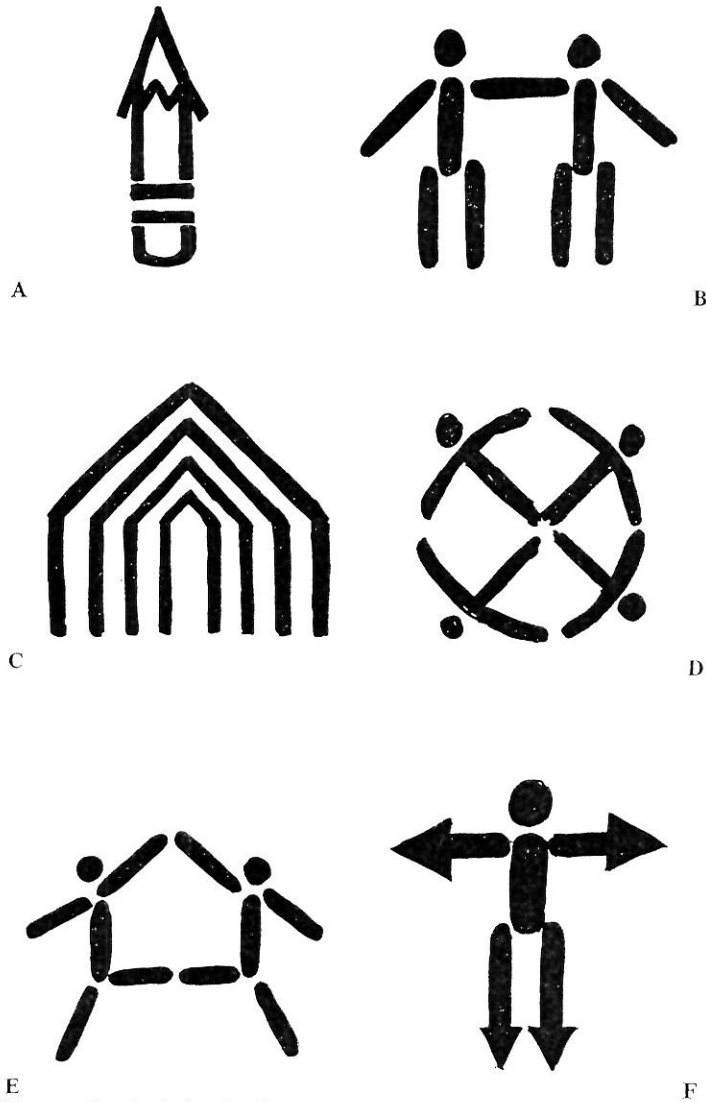


Figure 3. Synthesis sketches for *Free Schools Association*. Each of the 12 matrix selections is visualized. At this point, only the idea is important, and not the appearance. Shown here are syntheses of: A, Direction (arrow)/Pencil. B, Student/Holding hands. C, Schoolhouse/Growing. D, Student/Circle of hands. E, Student/Schoolhouse. F, Student/Multi-direction.

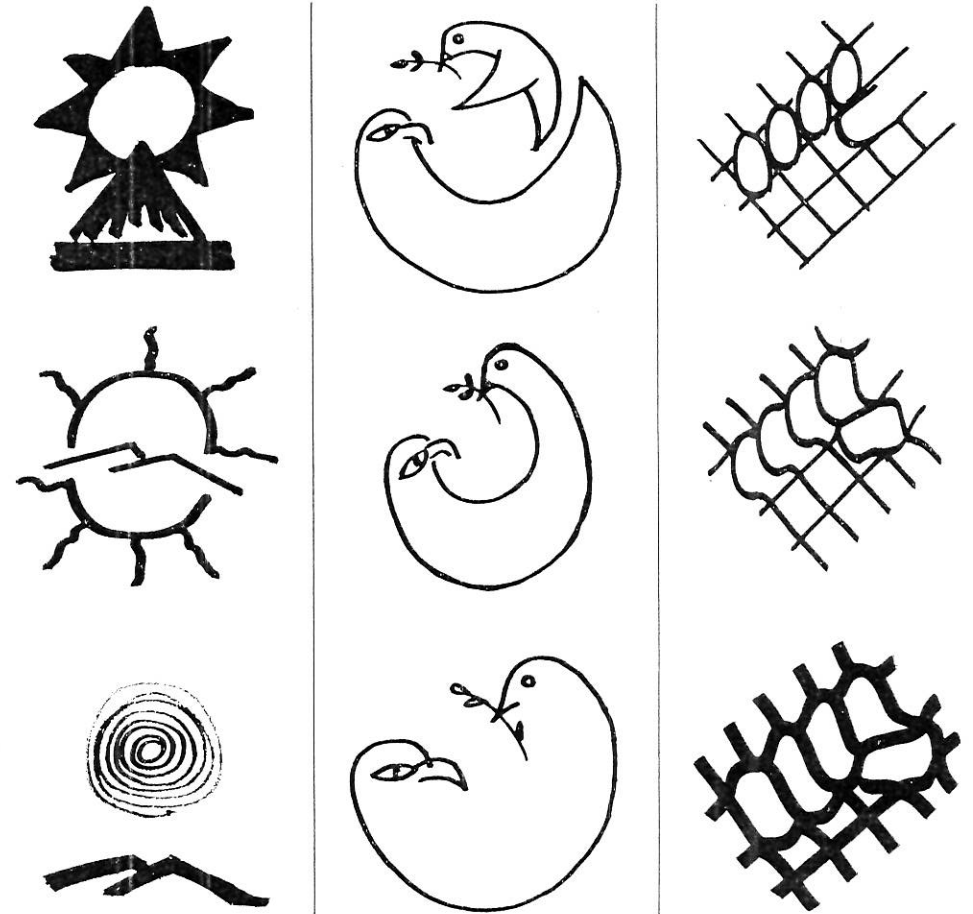
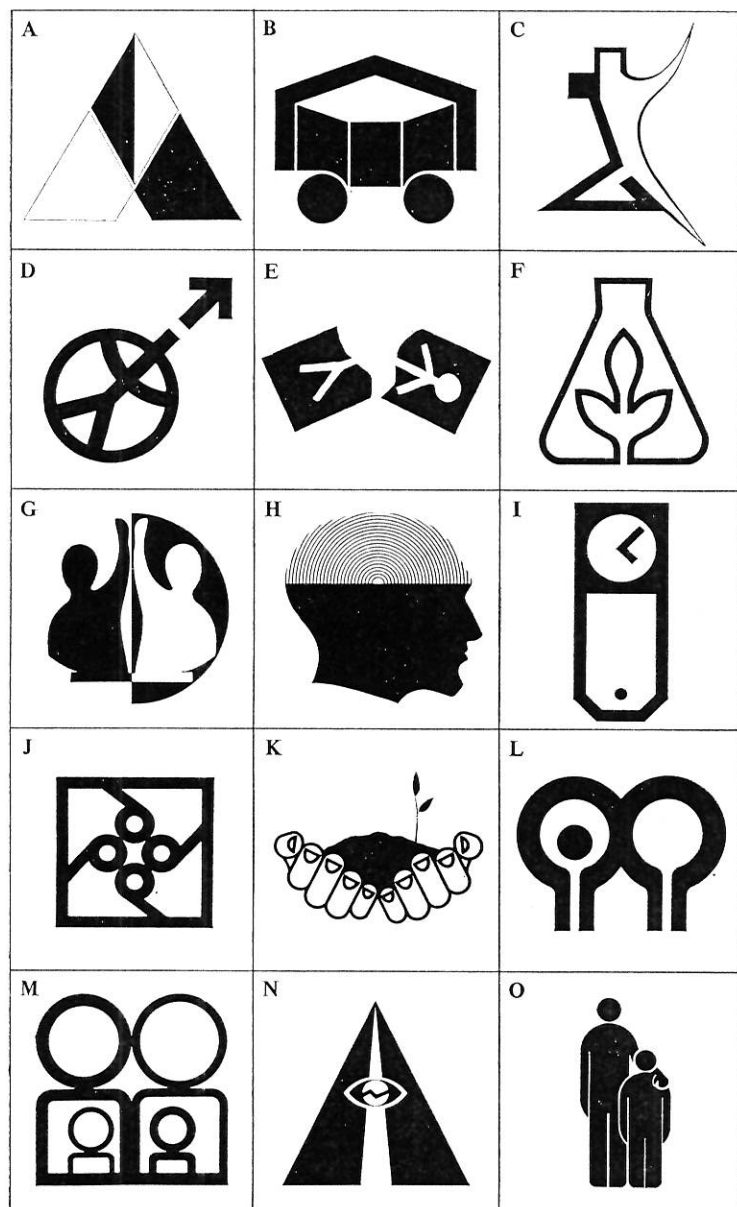


Figure 4. Development sketches for *Return the Land to the Indians*. Having selected one synthesis idea to pursue, the student experiments with form variations on the same idea.

Figure 5. Reduction sketches for *Pacifists Against War*. Having selected one form to pursue, the student attempts to reduce all visual elements to their simplest statements without losing the meaning.

Figure 6. Refinement sketches for *Release of Political Prisoners*. Having selected one reduction to pursue (a hand clutching a wire fence), the student progressively refines, blends, and makes aesthetic decisions. From this point the symbol is ready for a finished rendering, suitable for reproduction processes.



looking symbols, but that anyone involved in the method appears to gain insight into the creative process. Many of my students have since informed me that they have advantageously utilized aspects of this method in other problem solving situations. It is to this end that I would suggest further development and consideration.

Overleaf

Readers are invited to try the Bedno system for developing visual symbols; some will be rewarded with subscriptions to *Visible Language*!

Figure 7. Representative selection from two classes. About 1/8 original size each. These symbols represent various hypothetical associations, institutions, firms, or ideas: A, Alloys, Inc. (fusing of two elements into one letterform). B, Museum of the American West. C, Contemporary Dance Association (both modern and classic forms are represented). D, Vasectomy Association. E, Suicides Anonymous. F, Farm Research Association. G, School Integration Association. H, Mental Health Association. I, The Junque Shop (early twentieth-century antiques). J, Devonshire Paper Distributors. K, Save the Land. L, Abortion Association. M, Family Planning Association. N, Abolish Highway Eyesores. O, Child Abuse Association.