

Rhetoric + Typography: Creative Interaction in Modern Communication

PAUL TRUMMEL

Abstract—As the means by which written communication is conveyed, typography is in many respects analogous to classical rhetoric. This paper discusses the elements of persuasion, emotion and pleasure, balance, perception, dynamics, style, form, and shape as they apply to both the concept being communicated and the typographic medium.

TYPOGRAPHIC ART precedes the printing of the best that men and women have thought, spoken, and chosen to write. It is an art of increasing simplicity and generality, a searching for the plain style of visible language, and a striving for legibility of images impressed upon paper. These fundamental elements of the typographic art are in an elemental and intimate opposition.

Humanistic concern and continuing meditation into the whole relationship between thought, its symbols, and the world are the kinds of concern that transmute a craft into an art. During simultaneous discovery and innovation, the craftsman is transformed into an artist whose idiosyncratic demand upon himself and upon his art causes him to dismantle his thoughts to their basic elements. Then, to reaffirm his art and himself, he reconstructs these basic elements so that they contribute to, and uphold the tradition of, the noble art of (in this case) fine printing. Cicero, in *De Oratore* [1], states that all the activity of an orator [rhetorician] falls into five divisions: invention, arrangement, style, memory, and delivery. The rhetorician must first determine what to say; then he or she must manage and marshal these discoveries, not merely in orderly fashion, but with a discriminating eye for the exact weight of each argument; next, array them in the adornments of style; then keep them guarded in his or her memory; and finally deliver them with effect and charm. The activity of the typographer falls into the same divisions as the rhetorician, thus making typography an integral part of the art of rhetoric insofar as it relates to modern technical communication.

Paul Trummel, Associate Editor for Graphic and Visual Communication, has spent 40 years as a typographer and graphic designer. He is Associate Professor of Industrial Technology at San Jose State University, a Fellow of the Institute of Printing (London), and is at present completing doctoral studies at Rensselaer Polytechnic Institute. He has developed a variety of educational programs and curricula on typography, graphic design, and technical communication.

INTRODUCTION AND DEFINITIONS

What is rhetoric? Too simply defined as the art of persuasion, it has outgrown its original concern with public speaking and direct verbal communication and has evolved to concern itself also with written and printed documentation.

Does rhetoric provide total communication? No. Language cannot communicate completely because it is not a direct avenue for sensory contact with reality; it serves only to name what is seen, heard, or thought, and refers to perceptual experiences. These perceptual experiences must be coded by perceptual analysis before they can be named by the rhetorician. The same is true for the typographer. His codification is the selection and arrangement of type which, as it perceptually affects the whole disseminative process, must be considered at the conceptual stage as an integral part of the whole.

The mind, in its struggle for an orderly conception of reality, proceeds in a lawful and logical way from the perceptually simplest patterns to patterns of increasing complexity. Typography is not a mechanical recording of rhetorical elements but rather the apprehension of significant morphological patterns. *Gestalt* studies make it clear that, more often than not, situations have their own characteristics, which demand that they be perceived appropriately, and that at no time can a work of art have been made or understood by a mind unable to conceive the integrated structure as a whole. *Gestalt* also refers to a body of scientific principles that were derived mainly from experiments in sensory perception. These principles have been adopted as the basis of all modern typography and graphic design. The rhetorical connection is that, before one can identify an individual element, the total composition makes a statement that the typographer must comprehend. One looks for a theme, a key to which everything relates—a thesis. Safely guided by the structure of the whole, he or she then tries to recognize the principal features and explore their dominion over dependent details.

PERSUASION

Aristotle divides rhetoric into three divisions, determined by the three classes of audience: deliberative or political (the public forum), judicial or forensic (the law courts), epideictic or demonstrative oratory (the ceremonial occasion) [2]. He defines the goal of rhetoric as persuasion and lists three modes: the character of the orator, the mood of the audience, and the proof of the case. He also maintains that the modes of persuasion are the only true constituents of the art of rhetoric and that everything else is merely accessory. If rhetorical study is concerned with the modes of persuasion, and persuasion is a form of demonstration, then the product or speech that results from rhetorical activity persuades the hearers by stirring their emotions.

There is a core of truth to the statement that visual things or concepts cannot be conveyed by verbal language. This limitation applies not only to graphic art but to any object of experience. No description or explanation can do more than present a few general categories in a particular configuration. Plato asserts in his *Timaeus* that the gentle fire that warms the human body flows out through the eyes in a smooth, dense stream of light [3]. Thus a tangible bridge is established between the observer and the thing observed, and over this bridge the impulses of light emanating from the object travel to the eyes and thereby the soul.

Aristotle states that for some audiences, not even the possession of the most exact knowledge will make it easy for what is said to produce conviction: for argument based on knowledge implies instruction, and there are people whom one cannot instruct. Here, then, the rhetorician must use, as his mode of persuasion and argument, written or visual forms that can be comprehended by such audiences. The visual form of a rhetorical work is not arbitrary, and it is indispensable as a precise interpreter of the idea the work is meant to express. The subject matter is exactly correlated with the formal pattern to supply a concrete embodiment of the abstract theme. Typography is to the written word as speech is to the spoken word. A product usually results from all rhetorical activity—a speech in the verbal form and a printed piece in the visual form.

EMOTION AND PLEASURE

Aristotle would prefer that people always made their choices and decisions on rational grounds. But, realist that he was, he knew that people are creatures of passion and emotion, as well as reason. Rational desires are those that man is induced to have; there are many things he desires to see or get because he has been told of them and induced to believe that they are good. Further, pleasure is the consciousness through the senses of a certain kind of emotion; imagination is a feeble sort of sensation, and there will always be in the mind of man an image or picture of what he remembers or expects.

Emotion strikes us: design seems to require a more active

response. The mind acts upon impulses, applies principles, coordinates a variety of experiences, and decides on a course of action. Man tends to be a passive receiver of stimulation because emotion is not the product of the activity organizing mind and merely presupposes a kind of openness.

Language is considered appropriate if it expresses emotion and character, and if it corresponds to its subject. The aptness of language is one thing that makes people believe in the truth of a story: their minds draw the conclusion that the author is to be trusted from the fact that others behave as he does when things are as he describes them; therefore, they take the story to be true, even if it is not. An emotional speaker always makes his audience feel with him, even when there is nothing to his argument, which is why many speakers try to overwhelm their audience by mere noises.

Striking examples of emotional response are the depictions made by the dancer Nijinsky during his years of confinement in a mental institution. His corresponding state of mind showed a freezing of feeling and passion accompanied by a withdrawal from reality. The secluded intellect weaves fantastic systems of ideas and visions because the sensory sources of natural form are clogged and the vital passions are dried up, leaving formal organization unmodulated. Simple shape is unhampered in the resulting void. Such examples demonstrate that remnants of thoughts and experiences are organized not according to their meaningful interaction in reality, but by purely formal similarities and symmetries. Patterns are built around visual metaphors through the fusion of heterogeneous content on the basis of visible resemblance.

Abstract patterns organize visual matter in such a way that the intended expression is directly conveyed to the eye. With speech, thought is transmitted by language, in an effort to prove or disprove, to arouse emotion, or to maximize or minimize aspects of the presentation. In reading, the mental procedure is similar—with the addition, unexplained, of a dimension that establishes importance and probability. By typographically stabilizing the interrelations between the various forces in the visual system, statements are made unambiguous.

Freud defined his pleasure principle to mean that mental events are activated by unpleasant tension, and follow a course that leads to reduction of tension [4]. Equilibrium achieved through visual experience is generally enjoyed as an image of broader aspirations; such activity can be said to be a component of the motivational process of rhetoricians. The meaning of their work emerges from the interplay of activating and balancing forces.

BALANCE

If writing is metaphorical, antithetical, and balanced, it will be unambiguous and give a sense of activity. Ambigu-

ity leaves a reader hovering between two assertions that do not make a whole, each relation being unbalanced in itself; together they balance each other in an unambiguous and whole structure. The type of language employed is the same, but the briefer and more antithetical such sayings are, the more convincing they are, for antithesis impresses the new idea more firmly, and brevity more quickly.

Although visual patterns are characterized by movement from left to right that introduces an element of imbalance because the weight (blackness) is distributed unevenly, they can be made unambiguous by stabilizing the interrelations between the forces in the visual system to create a state of equilibrium and make it appear livelier.

Typographic similes are in a sense metaphorical and antithetical, since they always involve two relations, as in a proportional metaphor. Composition rests on point and counterpoint—on many counterbalancing elements that are antagonistic but not contradictory and ambiguous. Typographic counterpoint is hierarchic and directly inverse to the morphology of language. It allows a dominant rhetorical force to be set against a subservient one. Typographic representation does not derive from the optical projection of the object represented, but is an equivalent, rendered with the properties of a particular medium, of what is observed in the object.

PERCEPTION

Liveliness is especially conveyed by metaphor, and by the further power of surprising the readers. Because they expected something different, their acquisition of the new idea impresses them all the more. It is achieved by using the proportional type of metaphor and by the graphic image—making the readers see things—by expression and metaphor that represent concepts in a state of activity. In perceptual experience, the stimulus pattern creates a structural skeleton, a skeleton that helps determine the role of each pictorial element within the balance system of the whole. It serves as a frame of reference, just as a musical scale defines the pitch value of each tone in a composition.

An observer sees the dynamics of visual patterns as genuine properties of the perceived objects themselves. It should be noted that the directional vector that makes compositions asymmetrical has little to do with eye movements. From tracings of eye movements, it has been proved that viewers explore a visual scene by roaming about irregularly and concentrating on the centers of major concerns [5]. Seeing is essentially a means of practical orientation, of determining with the eyes what a certain thing is. Seeing means grasping some outstanding features of objects. A few outstanding features not only determine the identity of a perceived object, but also make it appear as a complete, integrated pattern. This applies not only to the image of the object as a whole, but also to any particular part on which the attention is focused.

There is good evidence that perception starts with the grasping of outstanding structural features not furnished by any particular stimulus pattern. Probably the stimulus configuration enters the perceptual process only in the sense that it awakens in the brain a specific pattern of general sensory categories.

Recent psychological research calls vision a creative activity of the human mind. Perceiving accomplishes at the sensory level what in the realm of reasoning is known as understanding. All human eyesight anticipates being presented with patterns that validly interpret experience by means of organized form. Eyesight becomes insight.

Any stimulus pattern tends to be seen in such a way that the resulting structure is as simple as the given conditions permit. However, simple geometric patterns are far removed from the intricate patterns met in art and nature. Theoretical constructs do not pretend to more than approximate the complexities of reality, but relative simplicity does apply to every level of complexity. When one wishes to make a statement, one needs to consider two questions: What is the simplest structure that will serve the purposes (parsimony), and what is the simplest way of organizing this structure (orderliness)?

Every competent writer gives birth to familiar statements that look as they have never looked to anyone before. This new appearance, rather than being a distortion or betrayal, reinterprets the ancient truth in a fresh, enlightening way. The unity of the writer's conception leads to a simplicity that, far from being incompatible with complexity, shows its virtue in mastering the abundance of human experience. One dimension in which the typographer can exercise his or her freedom is in the degree of abstraction used to render the subject—replicating the appearance of the physical world with meticulous faithfulness or designing completely nonmimetic shapes, which reflect human experience by pure visual expression and spatial relations. Subtle complexity can be obtained by combining geometrically simple shapes; the combinations, in turn, may be held together by a simplifying orderliness.

DYNAMICS

Each kind of rhetoric has its own appropriate style. The style written for prose is not that of spoken oratory. The language of prose can be free-running, with its parts united by nothing except the connecting words—a style that comes to a stop only because there is no more to say on the subject. Or it can be compact and antithetical, with its periods—a portion of speech that has in itself a beginning and an end and is short enough to be taken in at a glance.

Compact language is satisfying because it is definite and the reader feels that he or she is grasping something and can reach a definite conclusion. It is easy to follow and easily remembered. Such simplicity allows organization of

a wealth of meaning and form in an overall structure that clearly defines the place and function of every detail in the whole—orderliness.

Simplicity can be defined as the subjective experience and judgment of observers who feel no difficulty in understanding what is presented to them, and orderliness, according to Spinoza in the *Ethics*, is the arrangement of things in such a way that, when they are represented by the senses, one can imagine and (in consequence) easily remember them [6]. Relative simplicity implies parsimony and orderliness whatever the level of complexity. Parsimony is obtained through the eye spontaneously creating classifications, based upon previous expressive experience, that cut across the order suggested by more complex organization. Charles Chaplin once said that one must shake the tree and keep only what holds onto the branches. The scientific principle of parsimony demands that when several hypotheses fit the facts, the simplest one should be accepted. According to Cohen and Nagel, one hypothesis is said to be simpler than another if the number of independent types of elements in the first is smaller than in the second [7]. A typographic law of simplicity asserts that the perceptual forces will organize themselves in the simplest, most regular, most symmetrical pattern available.

Isomorphism—the structural relation between the stimulus pattern and the expression it conveys—shows that simplicity requires a correspondence in structure between tangible pattern and meaning. In language, a sentence whose verbal structure exactly corresponds to the intricate structure of the thought to be expressed is simple; whereas any discrepancy between form and meaning interferes with simplicity. In typography, simplicity involves not only the visual appearance of the type but also the relation between the image seen and the statement it is intended to convey.

Graphic design does not deal with a designer's subjective and arbitrary additions to what he sees. Dynamics are an integral part of what the designer sees as long as his natural sensory responsiveness has not been repressed by education. Dynamics is not a property of the physical world, although the stimulus patterns projected upon the retina can be shown to determine the range of dynamic qualities inherent in the percept. Perceptual raw material is not impressed mechanically upon the passive receptor surface, but is an invasion of the organism by external forces that upset the balance of the nervous system. Expression can therefore be defined as modes of organic or inorganic behavior displayed in the dynamic appearance of perceptual objects or events.

The structural properties of typographic composition are not limited to what is grasped by the external senses; they are conspicuously active in the behavior of the human mind, and they are used metaphorically to characterize an infinity of nonsensory phenomena. Design deals with the psychological counterpart of the physiological processes

that result in the organization of perceptual stimuli. The fact that all visual presence is visual action brings about expression, thus making it possible to use percepts as a typographic medium. However, visual perception does not operate with the mechanical faithfulness of a camera, which records everything impartially: form is determined not only by the physical properties of the material, but also by the style of representation of a culture or an individual designer.

STYLE

Style, to be good, must be clear, just as speech must convey plain meaning in order to do what speech has to do. Style must also be appropriate, avoiding both meanness and undue elevation; poetical language is certainly free from meanness, but it is not appropriate to prose. Clearness is secured by using the words that are current and ordinary. It is good to give to everyday speech an unfamiliar air: people like what strikes them, and are struck by what is out of the way.

To be appropriate, style must sometimes be toned down, and at other times heightened; a speaker who uses the very words that are in keeping with a particular disposition will reproduce the corresponding character: a rustic and an educated man will not say the same things nor speak in the same way. Repetitions of words and phrases have a dramatic effect. If many things are said about a man, his name must be mentioned many times; therefore, people think that, if his name is mentioned many times, many things have been said about him [2].

Style is also made agreeable by a good blending of ordinary and unusual words, by the rhythm and by the persuasiveness that springs from appropriateness. This can be termed as speaking in the vernacular.

Typography and its principal discipline, graphic design, are means of replacing the repetitive elements of the spoken word that are condemned in the written word. In fine art, style is simply a means of giving reality to an image. Originality is the unsought and unnoticed product of a successful fine artist in an attempt to penetrate to the origins, the roots, of what is seen. The deliberate search for a personal style inevitably interferes with the validity of the work, because it introduces an element of arbitrariness into a process that can be governed only by necessity.

With graphic design, one is concerned with emphasizing the writings of others by using a number of techniques borrowed from fine art, but with a specific communication purpose in mind. All works of art must be looked at with a primary grasp of the total organization. At the same time, however, relations among the parts often play an important compositional role. To quote Julian Hochberg [5]: the smaller the amount of information needed to define a given organization, as compared to the other alternatives, the more likely that the figure will be so perceived. Goethe's

doctrine that art aims at a deceitful illusion, and that any deviation from this mechanical ideal needs to be explained, excused, and justified remains valid. A technological picture must give exact proportions and angles, establish the concavity or convexity of a given part, and distinguish between units. Properties of this kind are all one needs to know. This means not only that the better picture is one that omits unnecessary detail and chooses telling characteristics, but also that the relevant facts must be unambiguously conveyed to the eye. This is accomplished by means of perceptual factors: simplicity of shape, orderly grouping, distinction of figure and ground, and interpretation of spatial values. Precision of form is needed to communicate the visual characteristics of an object.

FORM

Mechanical replication of physical things and the visual interpretation of meaning apply not only to art. It would seem that images intended to convey factual information for scientific texts, dictionaries, and technical manuals would require only exactness of representation; yet this is not so. The relation between intellectual knowledge and visual representation is frequently misunderstood. Some theorists talk as though an abstract concept could be directly rendered in a picture; others deny that theoretical knowledge can do anything but disturb a pictorial conception. The truth seems to be that any abstract proposition can be translated into some kind of visual form and, as such, become a genuine part of a visual concept. The expression conveyed by any visual form is only as clearcut as the perceptual features that carry it.

The form of a prose composition should be neither metrical nor destitute of rhythm. The metrical form destroys the hearer's trust by its artificial appearance, and at the same time it diverts his attention, making him watch for metrical recurrences.

On the other hand, unrhythmical language is too unlimited; total limitation of meter is inappropriate, but some limitation is required, or the effect will be vague and unsatisfactory. Form is the visible shape of content and cannot be separated from meaning.

SHAPE

Whenever one perceives shape, consciously or unconsciously, one assumes it to represent something, and thereby to be the form of the content. Thus, a shape is never perceived as the form of just one particular thing, but always of a kind of thing. Wittgenstein uses an example: the line drawing of a triangle can be seen as a triangular hole, a solid, a geometrical figure; as standing on its base or hanging by its top corner; as a mountain, a wedge, an arrow, a pointer [8].

Therefore, all shape can be construed to be semantic; that

is, merely by being seen it makes statements about kinds of subjects. In doing so, however, it does not simply present replicas of its subjects. An intuitive search for spatial unity, supported by locally applied systems of construction, finds its final geometrical codification in the principle of central perspective—a geometrical construct, involving elaborate rules on how to represent stereometric solids of various shapes and spatial locations. The control of typographic shape is similar to what happens in analytic geometry when, in order to determine the shape of a figure, the points of which the figure consists are defined by their distances from vertical (y) and horizontal (x) Cartesian coordinates. Such a system does little more than summarize the locations of an infinite number of points, but it does allow for the mechanical manipulation of given shapes in computerized typesetting environments.

When by some circumstance the mind is freed from its usual allegiance to the complexities of nature, it will organize shapes in accordance with the tendencies that govern its own functioning. There is much evidence that the principal tendency at work here is that toward simplest structure—toward the most regular, symmetrical, geometrical shape attainable under given circumstances.

CONCLUSION

The art of typography is an integral part of the art of rhetoric, in its printed form, and perhaps more importantly, in modern technical communication. The activity of a typographer parallels that of the rhetorician. Like the rhetorician, the typographer applies rules of conduct to his art and, as an end result, persuades his audience to see as he sees. Like the rhetorician, the typographer practices the principle of esthetic parsimony, and must not go beyond what is needed for the purpose. Like the rhetorician, the typographer follows the examples of nature and does nothing in vain. More is in vain when less will serve; for nature is pleased with simplicity, and affects not the pomp of superfluous causes, as Isaac Newton puts it [9].

For each, the rhetorician and the typographer, to say too much is as bad as to say too little, and to make one's point in too complicated a fashion is as bad as to make it too simply.

Typography involves not only the visual appearance of the type but also the relation between the image seen and the statement it is intended to convey. This can be achieved successfully only through creative interaction between the rhetorician and the typographer.

REFERENCES

1. Sutton, E. W., and Rackham, H. (ed.), *Cicero's De Oratore* (2 vol.), Cambridge: Harvard University Press (Loeb Classical), 1959.
2. Corbett, Edward P. J., *The Rhetoric and the Poetics of Aristotle* New York: The Modern Library, 1954.

3. Archer-Hind, R. D., *The Timaeus of Plato*, New York: Arno Press, 1973.
4. Strachey, J., (ed.), *Freud's Beyond the Pleasure Principle*, New York: Liveright, 1950.
5. Hochberg, J., "The Psychophysics of Pictorial Perception," *Audio Visual Communication Review* 10 (1962), pp. 22-54.
6. Boyle, A., *Spinoza's Ethics*, London: J. M. Dent & Sons, 1930.
7. Cohen, M. R., and Nagel, E., *An Introduction to Logic and Scientific Method*, New York: Harcourt, Brace and Company, 1934.
8. Anscombe, E. M., *Wittgenstein's Philosophical Investigations*, New York: Macmillan & Company, 1958.
9. Newton, I., *Mathematical Principles of Natural Philosophy*, New York: Philosophical Library, 1964.

Der Franklin und sein Keit

(Originally printed, we are told, in the *Journal of the Electrochemical Society*, some 30 years ago)

Der Franklin der war ein rechter Tschinius, immer bissig mit Inwentschiuns, wie zum Beispiel sein Stohf, den wir bis heute noch bei seinen Namen kennen. "Bei Galli"—so meinte er eines Tages—"es ist doch e' Skandel und e' Schem, dass so viele Häuser von Leitning gestreikt werden. Wenn ich das prewenten könnte, es wäre schur eine kühle Million wert. Aber was ist denn eigentlich der Leitning? Ennihau, ich habe e' Honntschi!"

Also baute er ein Keit, mit einer langen String mit e' Kieh am Ende, und geht in die Beckjahrt, ihn zu fleihen. Und wenn es zu regnen anfängt, und der Leitning flescht, so steckte er e' Knockel an den Kieh; un achherrjesses! der Spark rippt ihm zwei Fingernehl und e' Viertelskwerrfuss Skinn von der Hand ab; und der Franklin weiss nun, von dem Schock, dass Leitning und Electrozität alleik sind.

Sodann steigt er auf die Ruf mit e' Bumberschuht mit e' stiehl Händel, und wartet für mehr Leitning; aber die Deborah—das war sein Frau—die hollert, das Sopper sei rettig, und er soll Hörriopp machen und aufwaschen und ins Haus kommen. Also machte er den Bumberschuht an den Daunspaut fest—und das war der erste Leitningrad.

Der Franklin war lockig und so lebte er noch vierzig Jahre, und hatte alle gestumpft—besonders die Lehdis; aber ein russicher Physiker, der den Keitexperiment repieten worte, wure vom Leitning gekillt;—was alles pruhft, der wahre Scientist hat nicht senns genug, vom Rehn auszukiepen.

Sol Nemen