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Declaration by Design: Rhetoric, Argument, and Demonstration in Design Practice

Introduction

If one idea could be found central in design studies, it most likely would be communication.[1] Directly or indirectly, this idea and its related themes have animated more discussion of design theory and practice than any other. I refer not only to graphic design, where communication is an obvious goal and where the concepts of classical rhetoric are now being applied with promising results,[2] but also to the larger field of design, which ranges from industrial and product design to architecture and urban planning and for which there is no unifying theory of rhetoric. Although not so obvious at first glance, the themes of communication and rhetoric in this larger field exert strong influence on our understanding of all objects made for human use. Consider, for example, the numerous historical, sociological, esthetic, and cultural studies of design in recent decades: they are not obviously rhetorical, yet when dealing with the influence of designers and the effects of design on an audience of consumers or society at large,[3] move deeply into the domain of rhetoric. Similarly, these studies also involve a significant rhetorical component when they are concerned with the process of conceiving designs; the influence of a designer's personal attitudes, values, or design philosophy;[4] or the way the social world of design organization, management, and corporate policy shapes a design.[5] In addition, when studies of the esthetics of design treat form not only as a quality valuable in itself, but also as a means of pleasing, instructing, and passing information,[6] or, indeed, as a means of shaping the appearance of objects for whatever intended effect,[7] these studies are rhetorical also because they treat design as a mediating agency of influence between designers and their intended audience.

Ironically, a unifying theory of rhetoric remains surprisingly unexplored and, at the same time, most needed in the larger field of design, where communication is at least as significant as in graphic design. It is needed, first, because of the growing importance of technology in the twentieth century and the increasing distance between technologists and designers.[8] There is a general attitude that technology is only an applied science, rather than a part of design art, and this approach has led many to abandon hope

1) "Communication" is an ambiguous word often used casually and without regard to its many useful and sometimes conflicting meanings. This essay, is concerned with communication as rhetoric, the inventive and persuasive relation of speakers and audiences as they are brought together in speeches or other objects of communication. This is in sharp contrast, for example, to recent semiotic theories of communication, which are essentially grammatical theories concerned with a system of natural or conventional signs and the meanings stored in them. It is also in contrast to Marxist or other dialectical theories that regard communication as significant only in relation to some economic or spiritual truth.

2) Gui Bonsiepe, "Persuasive Communication: Towards a Visual Rhetoric," in Theo Crosby, ed., *Uppercase 3*, (London: Whitefriars Press, Ltd., 1961); Gui Bonsiepe, "Visual/Verbal Rhetoric," *Ulm* 14/15/16 (1965). These are valuable early explorations of the theme, but more strongly influenced by semiotics than rhetoric. See also Martin Krampen, "Signs and Symbols in Graphic Communication," *Design Quarterly* 62 (1968): 3-31. An entire issue of *Icographic*, edited by Victor Margolin, is devoted to the theme "Persuasive Communication." See *Icographic* 11/4 (February 1984). See also Hanno H. J. Ebert, "Representing Macbeth: A Case Study in Visual Rhetoric," *Design Issues* 1/1 (Spring 1984): 53-63. This is a useful case study of invention in graphic communication, although it is limited to figures of speech and the grammatical viewpoint of semiotics.

3) Jonathan M. Woodham, *The Industrial Designer and the Public* (London: Pembridge Press, 1983).

4) Nikolaus Pevsner, *Pioneers of the Modern Movement, from William Morris to Walter Gropius* (London: Faber and Faber, 1936). See, for example, the chapter on "The Engineers of the Nineteenth Century." This book was subsequently published as *Pioneers of Modern Design*.

that technology can be seriously influenced and guided by human values and a discernment of beneficial ends in the human community. A suitable theory of rhetoric in design would be one in which technology is viewed fundamentally as a rhetorical problem, integrated within the perspective of a broader design art, however radical that may seem to technologists. The theory would suggest productive ways in which closer connections between technology and design art could be established.

As important as this is, however, there is a second reason why a theory of rhetoric in design is needed at this time. The classic concepts of design have been abandoned recently by many designers in favor of unruly, antagonistic, bizarre, or often inexplicable concepts that challenge and confuse the general public, as well as the field of design. Examples might include "punk" fashions, Memphis furniture, or the architectural designs of Arquitectonica in Miami. In almost every area of design, we encounter objects that have a strange and startling unfamiliarity that may provoke or even repel us. Although such reactions may suggest that the public lacks critical awareness about the nature of design, they also indicate a new weakness in design communication. John Pile contends that many people will accept any product simply because it is offered as the fruit of technological advance, whether or not it is well designed.[9] Nevertheless, there are also many who care about the products that surround them and who are thoughtful about the influence and the power of objects to enrich or impoverish the quality of their lives. For these people, the accepted forms of design communication may seem to be breaking down or designers may seem to have little interest in seriously communicating with the public. A suitable theory would be one in which the puzzling diversity of design communication as we encounter it in everyday products is made more intelligible, providing the basis for better public criticism and evaluation of design.[10]

The need for a broad theory of rhetoric in design was less urgent when technology seemed to be under rational control and designers worked within a generally accepted view of the way design should function in a well-ordered society. But now, as technology becomes increasingly specialized and isolated from design practice and as designers have so many conflicting and confusing opinions about their own practice, the need has special urgency. To bring these problems together in a single, comprehensive theory is a difficult challenge, but one that explains better than any other the rise of design studies as a serious field of inquiry.

Design as rhetoric

Communication is usually considered to be the way a speaker discovers arguments and presents them in suitable words and gestures to persuade an audience.[11] The goal is to induce in the audience some belief about the past (as in legal rhetoric), the present (as in ceremonial rhetoric), or the future (as in deliberative or

5) John F. Pile, *Design: Purpose, Form and Meaning* (New York: W. W. Norton and Company, 1979). John Heskett, *Industrial Design* (London: Thames and Hudson, 1980).

6) Pile, *Design*. See chapter 5, "Communication through Form."

7) David Pye, *The Nature and Aesthetics of Design* (New York: Van Nostrand Reinhold, 1978). Pye defines design as the art that "chooses that the things we use shall look as they do..." (p. 11). This is especially interesting when seen in the context of the long tradition of rhetoric as an art of appearances. Inevitably, Pye has committed himself to setting forth rhetorical criteria for good or proper appearance, involving taste, style, beauty, utility, and so forth.

8) The education of designers and technologists today often deepens the division. More effort is needed to develop an integrated philosophy of design education suited to the complex role of design in the modern world. See, for example, Tomas Maldonado, "Design Education and Social Responsibility," in Gyorgy Kepes, ed., *Education of Vision* (New York: George Braziller, 1965). See also Kenneth Frampton, "Apropos Ulm: Curriculum and Critical Theory," *Oppositions* 3 (May 1974).

9) Pile, *Design*, 2.

10) Such criticism is, of course, better developed in architecture, but too often lacking in other areas of design practice.

11) Grammatical theories often regard communication as the transfer of a state of mind from the speaker to the audience — a passing of information and emotion. However, rhetorical theories tend to regard communication as an invention of arguments (logical, ethical, or emotional) that induce belief or identification in an audience. The difference may seem slight, but the consequences of each approach are significantly different.

political rhetoric). The speaker seeks to provide the audience with the reasons for adopting a new attitude or taking a new course of action. In this sense, rhetoric is an art of shaping society, changing the course of individuals and communities, and setting patterns for new action.[12] However, with the rise of technology in the twentieth century, the remarkable power of man-made objects to accomplish something very similar has been discovered. By presenting an audience of potential users with a new product — whether as simple as a plow or a new form of hybrid seed corn, or as complex as an electric light bulb or a computer — designers have directly influenced the actions of individuals and communities, changed attitudes and values, and shaped society in surprisingly fundamental ways. This is an avenue of persuasion not previously recognized,[13] a mode of communication that has long existed but that has never been entirely understood or treated from a perspective of human control such as rhetoric provides for communication in language.[14]

We all have a share in the natural impulse to make things for practical use, to make objects that will use nature to work for our purposes, but Aristotle's remarks on the rise of rhetoric as an art of persuasion have relevance to the art of design.[15] He points out that all humans have a share in rhetoric because all attempt to persuade one another of various ideas and beliefs. Yet, some do this randomly and by chance, whereas others do it out of familiarity and the kind of habit that arises from experience. But it is precisely because persuasion can be achieved in both ways, that it is possible to find the reasons why some efforts are successful and others are not, and, thus, the art behind successful persuasion can be discovered. A similar pattern may be suggested for design. Some have the familiarity and habit of craftspeople, specialized in working with different materials or meeting specific needs; others have the experience of scientific understanding that has enabled them to identify opportunities for practical applications of their knowledge. But because both avenues of design are possible today, we have a better perspective from which to identify the elements of art common to all the variations of design practice and to recognize design as something distinct from the labor of manufacturing products, as well as from those subjects that are useful and related, but not of the essence of, the art.

The primary obstacle to such understanding is the belief that technology is essentially part of science, following all of the same necessities as nature and scientific reasoning. If this is true, technology cannot be part of design rhetoric, except as a preformed message to be decorated and passively transmitted. Design then becomes an esthetically interesting but minor art that is easily degraded into a marketing tool for consumer culture.[16] However, if technology is in some fundamental sense concerned with the probable rather than the necessary — with the contigencies of practical use and action, rather than the certainties of scientific

12) Rhetoric is both the practice of persuasive communication and a formal art of studying such communication, often in its most significant instances.

13) Of course, there have been many sociological and anthropological studies of the influence and effects of technology on social organization and culture, but none, to the author's knowledge, has specifically treated this subject as an example of persuasion.

14) Francis Bacon, *The New Organon and Related Writings*, ed. Fulton H. Anderson (Indianapolis: The Bobbs-Merrill Company, Inc., 1960). This fundamental work is the first to significantly use rhetoric to study the relation of science and technology. The goal of his new science, Bacon says, is not simply to understand nature but "to command nature in action." The focus of the work, however, is on the discovery of principles in nature, and subsequent studies have seen only this aspect, reducing technology to a handmaiden of science. No one has considered the implications of Bacon's work for a rhetoric of technology. However, valuable insights may be found in Richard McKeon, "The Uses of Rhetoric in a Technological Age: Architectonic Productive Arts," in Lloyd F. Bitzer and Edwin Black, eds., *The Prospects of Rhetoric* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1971), 44-63.

15) Aristotle, *The "Art" of Rhetoric*, trans. by John Henry Freese (Cambridge: Harvard University Press, 1967), 3.

16) Victor Margolin, "Consumers and Users: Two Publics for Design," in Christina Ritchie and Lorie Calcollari, eds., *Phoenix: New Attitudes to Design* (Toronto: Phoenix, 1984), 48-55.

principle — then it becomes rhetorical in a startling fashion.[17] It becomes an art of deliberation about the issues of practical action, and its scientific aspect is, in a sense, only incidental, except as it forms part of an argument in favor of one or another solution to a specific practical problem.[18]

Technologists discover ways to command nature in order to solve such problems and then attempt to persuade others that these solutions are likely to be expedient and lead to beneficial results. Their persuasion comes through arguments presented in things rather than words; they present ideas in a manipulation of the materials and processes of nature, not language. In addition, because there is seldom a single solution to a problem in human affairs dictated by the laws of nature, they do not provide necessary solutions. Solutions are only probable and can always be changed or set in opposition to others. In this sense, technology is part of the broader art of design, an art of thought and communication that can induce in others a wide range of beliefs about practical life for the individual and for groups.

This idea may be hard to accept, especially for technologists who see their primary affiliation, perhaps partly for reasons of social status, as science. But the bridge of exchange that exists between science and technology is not much different from the bridge that has existed between traditional rhetoric and the field of ethics and politics.[19] Rhetoricians are expert in persuasion, not ethical or political philosophy, even though effective persuasion may draw heavily from knowledge of such subjects. Such is the case for technologists. They are expert in a form of persuasive communication, not the natural sciences, despite that their manipulation of natural materials and processes may draw heavily from knowledge of such subjects.

Incidentally, technologists may also be scientists. The point, however, is not simply that technology is distinct from science. More impoetant, it is that technology is fundamentally concerned with a form of persuasion and, as with traditional rhetoric, speaks from no special authority about the good life. It provides only resources that are used to support a variety of arguments about practical living, reflecting different ideas and viewpoints on social life. Technologists themselves hold such ideas and have pressed them on the human community in many ways.[20] Until their work is recognized as persuasive and part of the practice of design, their ideas will remain implicit or naively unexamined. This aspect of the significance of design, being acknowledged only slowly, has direct consequences for the understanding of the environment of postmodern design communication. Design is an art of thought directed to practical action through the persuasiveness of objects and, therefore, design involves the vivid expression of competing ideas about social life.

This situation is made more intelligible when viewed from a rhetorical perspective. For decades, technologists have tried to

17) George Bugliarello and Dean B. Doner, eds., *The History and Philosophy of Technology* (Urbana and Chicago: University of Illinois Press, 1979). This excellent book is the result of an international symposium held in Chicago in 1975. To quote from the Editors' Preface, "Engineering schools continue to train generation after generation of possibly the most powerful agents of change that our planet has ever produced...." (p. vii).

18) Peter Caws, "*Praxis* and *Techne*," in Bugliarello and Doner, *The History and Philosophy of Technology*, 227-238. "Technology, after all, is not merely the theory of the practical arts; it is the practical arts themselves, regarded as an activity of reason — the *logos in the techne*, rather than the *logos of the techne*." (p. 227).

19) Aristotle, *Rhetoric*, 19.

20) David Dickson, *The Politics of Alternative Technology* (New York: Universe Books, 1974). This is published in Great Britain as *Alternative Technology and the Politics of Technological Change*. See, for example, chapter 2, "The Ideology of Industrialization."

persuade audiences of the expediency of their inventions and discoveries, producing objects that often seem to meet human needs and promote a better, well-ordered life. Yet, the life they have promoted has frequently proven to be harmful and discordant with human values. The concern is not with the outright failures of technological reasoning, but with those instances in which the result has been an inhuman mechanical order[21] or even a frustrating disorder and social chaos.[22] The concern rests with those examples where design has served as a tool to increase the power of political and social ideologies and has brought suffering rather than benefit, as with the weapons of war.

This is the postmodern environment, a period of disillusionment following exceptional confidence in the bright future promised by science and technology (as well as by various political philosophies and ideologies). It is based, in part, on the recognition by many that we have not gleaned from design (in the sense that it involves technology) a well-ordered life, and this perception has led to a dreadful and sometimes creative fascination with the unstable relationship between order and disorder.[23] Indeed, the nature of order in practical life is a central issue in postmodern design. In the relation of order and disorder, designers inventively explore new possibilities for practical life, and this relationship provides a way of distinguishing design voices in their current situation. Many continue to pursue classic ideals of orderly design, still seeking an harmonious integration of design and technology in the purposive activity of everyday life, even if their designs are consciously fashioned to be new expressions of older ideals.[24] Other designers look for order in new ways, and some even deliberately overturn conventional expectations of order, as if to challenge us to rethink the meaning of order in our lives. In all of these cases, however, design is a debate among opposing views about such matters as technology, practical life, the place of emotion and expression in the living environment, and a host of other concerns that make up the texture of postmodern, postindustrial living.

Elements of design argument

To examine this situation more carefully, several themes should be considered: one is the idea of the designer as a speaker who fashions a world, however small or large, and invites others to share in it. Another is the idea of an audience of users who may be persuaded to adopt new ways and means to achieve objectives in their lives.[25] Still another is the idea of practical life as the subject of design communication, however varied the conceptions of this may be and whether these conceptions are held consciously or are tacit and unexamined in the designer's mind. Most important, however, is the idea of argument, which connects all of the elements of design and becomes an active engagement between designer and user or potential user. This article suggests that the designer, instead of simply making an object or thing, is actually

21) The Pullman community in Chicago is one example. Designed and built in 1893 to be a complete, harmonious environment for 14,000 workers and managers of the Pullman Company, it combined the latest technology and a concern for esthetic quality, attracting visitors from around the world who marveled at its advance over then contemporary planning. Within months of completion, however, workers protested the rigidities and mechanical regularities that the design promoted and George Pullman was attacked for forcing his personal values and ideas about social life on the residents. He could hardly imagine that such ideas, derived from the mechanics of building railroad carriages, were questionable when applied to everyday life. The workers' strike of 1894, caused by a variety of factors, was one of the most bitter and violent in American labor history. See note 40.

22) The impact of various Western technologies on Third World cultures provides some of the most striking illustrations of this. More important for our purposes, however, such examples give glimpses of what moments of our own cultural history may have been like under the influence of technological change.

23) John A. Kouwenhoven, *Half a Truth Is Better Than None: Some Unsystematic Conjectures about Art, Disorder, and American Experience* (Chicago: The University of Chicago Press, 1982). See "Design and Chaos: The American Distrust of Art," 251.

24) Dieter Rams, "Omit the Unimportant," *Design Issues* 1/1 (Spring 1984): 24-26. This is an excellent and economical statement of one design philosophy. (Note also how the rhetoric of Rams' statement parallels the rhetoric of the *products* that he and the Braun design group produce.)

25) Margolin, "Consumers and Users: Two Publics for Design," 49. Margolin's characterization of users, in contrast to consumers, is more like the kind of audience discussed here. The user, he says, is more likely "to define the worthwhile life in terms of the actuation of values rather than the ownership of goods." Of course, consumers are a kind of audience, too, and many designers conceive of their audiences as groups of consumers in a narrow sense.

creating a persuasive argument that comes to life whenever a user considers or uses a product as a means to some end.

Three elements of a design argument are applicable here; they involve interrelated qualities of technological reasoning, character, and emotion, all of which provide the substance and form of design communication. Designers draw on all three elements to some degree in every design argument, sometimes blending them with great subtlety in a product. Nevertheless, these elements may be analytically distinguished to reveal the different resources that are available for persuasion.

The first element, technological reasoning, is the logos of design. It provides the backbone of a design argument, much as chains of formal or informal reasoning provide the core of communication and persuasion in language. In essence, the problem of technological reasoning in design is the way the designer manipulates materials and processes to solve practical problems of human activity. Products are persuasive in this mode when, in addressing real needs, they meet those needs in a reasonable, expedient way. Technological reasoning is based, in part, on an understanding of natural and scientific principles that serve as premises for the construction of objects for use. It is also based on premises drawn from human circumstances, that is, from the attitudes and values of potential users and the physical conditions of actual use.

Both kinds of premises are evident even in the simplest objects. For example, all spoons use the same mechanical premise, employing the principle of the lever as a way to transport contents held in a small bowl (figure 1). They share several obvious human premises, which explain why they are all of a size that fits the human hand, are made of inexpensive materials, and rely on the hand for power. But they also use a variety of human premises that are not so obvious, but directly affect the specific form in which

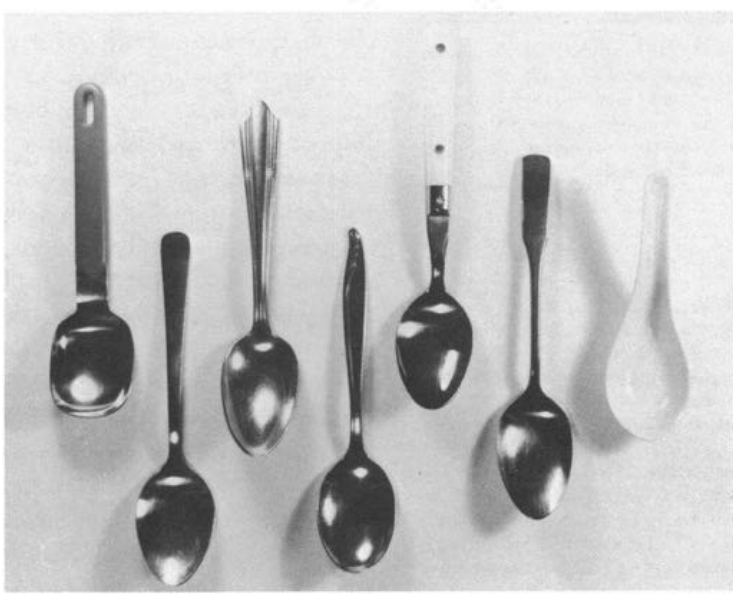


Fig. 1) Utensils differ in the quality of character that they project while sharing the same mechanical premise.

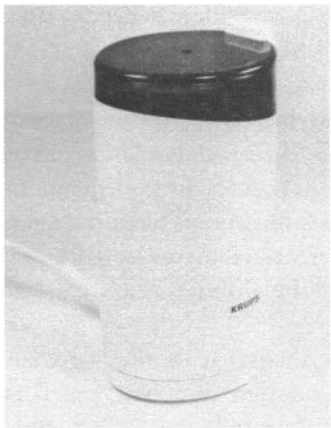


Fig. 2) This Krups coffee mill exhibits classic design values, emphasizing function while seeming neutral and unobtrusive. Character and emotion are important but carefully subordinated to use.

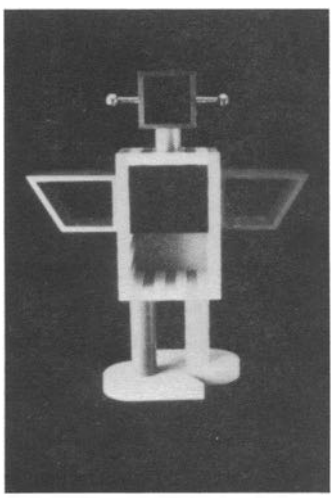


Fig. 3) This Memphis bookcase, Ginza, a robot made of wood and chrome, should be seen in color for full effect. Its emotional excitement and humor animates the environment. Design: Masanori Umeda.

the mechanical premise is presented. For example, there is a premise regarding the attitude of potential users toward tradition: two of the spoons are highly traditional and conventional within their respective Oriental and American cultural contexts, two are rather unconventional. There are similar premises regarding the value of decoration, the elegance or plainness of the social occasion of eating, and perhaps even subtle moral values that are associated with these aspects and that people are hardly aware of in objects so simple.

Premises drawn from human circumstances are what make technological reasoning an element of rhetorical art for communication with specific audiences rather than a deductive science concerned only with universal principles. Such premises serve to distinguish not only different audiences and the kinds of design arguments that are most likely to be persuasive with different groups, but they also characterize different approaches taken by designers themselves in the postmodern environment. Consider, for example, the Krups coffee mill and the Memphis bookcase, Ginza, by Masanori Umeda (figures 2 and 3). Both are functional in a broad sense of the term (although the usefulness ratio of materials used to space occupied in Umeda's bookcase seems to stretch the idea of function, perhaps intentionally). Yet in each case, the specific form of technological reasoning depends entirely on different human premises, premises held by designers and assumed to be persuasive with users.

Indeed, design is an art of communication on two levels: it attempts to persuade audiences not only that a given design is useful, but also that the designer's premises or attitudes and values regarding practical life or the proper role of technology are important, as well. The proof is a demonstration in a product. The coffee mill reflects classic design values suited to new ways of contemporary living. It is gentle and unobtrusive, subordinating the display of mechanical reasoning and other qualities to a concern for use. The object is neutral rather than coercive and, hence, allows users to integrate it into a variety of life-styles. It demonstrates that technology can serve without dominating, leaving users free to use the product in a variety of settings of their own choice.

In contrast, the Ginza bookcase reflects values of novelty, surprise, and emotion. Umeda's design playfully displays mechanical reasoning and virtually talks to us, commenting on itself with irony or satire — a robot holding books created by the unmechanical human mind? It intensifies the environment, not to dominate users, but perhaps to offer an example of vitality and spontaneity that encourages independence and self-expression, something important for many people in the postmodern environment. It demonstrates a lively mind controlling technology, not controlled by it.[26]

These are two important directions in postmodern design, but they both vividly demonstrate how the designer's argument is more than technological reasoning dressed up. The argument in

26) Barbara Radice, *Memphis: Research, Experiences, Results, Failures, and Successes of New Design* (New York: Rizzoli International Publications Inc., 1984). Virtually a manifesto of Memphis design philosophy, couched in a relatively flamboyant and whimsical style that reflects Memphis attitudes. This style of writing may be contrasted to the efficient, economical prose of Dieter Rams' statements of Braun design philosophy, with the same result as comparing Braun and Memphis products.

each is only partly controlled by mechanical premises, and if the logos or reasoning of the design is reduced to mechanics alone, the designer's real argument, which is a unique synthesis of mechanical and human premises, is lost. The human premises expressed in design logos, as varied as such premises are from audience to audience and from designer to designer, are fundamental sources of persuasion in all design arguments. They give intelligibility to designs that otherwise may seem to be superfluous indulgences. It is one thing for designers to throw up their hands at the prospect of designing products for the Amish, for whom all but the most basic forms of modern technological reasoning are unpersuasive. Yet this is different only in degree from the problem faced in every other instance of technological reasoning, where beliefs and values always condition products, whether they are recognized explicitly, are implicitly assumed, or are ignored completely.

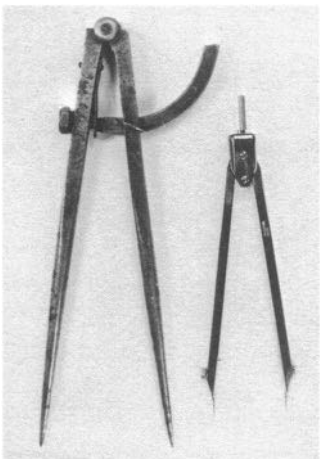


Fig. 4) Although similar in function, these dividers use quite different persuasive arguments.

Technological reasoning is persuasive in two ways, related to the two kinds of premises on which it is based. It is persuasive in process, as well as in the accomplishment of something useful. In the former, audiences are persuaded when the reasoning is clear and provides a likely solution to a problem. This involves active contemplation of a product before and during use. For a simple example, consider dividers designed to measure distances of a certain scale, perhaps on a chart or map (figure 4). The technological reasoning of the large brass and iron instrument is apparent at a glance. It depends, first, on a revolute pin joint that ensures a continuous relationship between two pointer arms by allowing motion with one degree of freedom. Second, there is the curved crossbar, attached rigidly to one arm by a bolt and passed through a slot in the second, maintaining stability of relation in the motion of the arms. Third, there is a spring, serving to prevent play in the crossbar due to any loosening of the bolt attachment; and, fourth, there is a wing nut that tightens on the crossbar and allows the relation between the pointer arms to be fixed at any specific distance.

In contrast, the reasoning of the smaller divider is not so readily apparent. The arms seem to work on a pivot post, but the mechanism that produces tension in their relation and fixes their relation at a given point is not obvious with a casual glance, as it is shielded by a small casing. When such reasoning is concealed, it speaks intelligently only to a small technical audience, perhaps as small as the engineers of the manufacturing company, and reaches a broader audience only in effective use. In complex modern systems, design logos is directed to two distinctly different audiences: specialists who can actually follow and judge the reasoning as a process and general users who are concerned only with results. This is a fundamental issue in design: whether and how much to involve a general audience of users in the process of technological reasoning.

There are obvious limits in the ability of audiences to follow complex trains of technological reasoning, but designers can use a

Fig. 5) This Braun cassette deck and hi-fi system masterfully displays technological reasoning in a fashion that is readily accessible to users. And it shows careful control of character and emotion. Design: Peter Hartwein.

variety of ways to convey this reasoning suggestively rather than directly. In complex systems, the alternative may be to suggest the logical connection of large sections, without attempting to convey the detailed reasoning of each part. This can be done through an articulation of functional components, as in the new classic design of the Braun cassette deck (figure 5).[27] Similarly, designers can present the control features of a complex system so carefully and clearly that audiences grasp the technological reasoning without actually seeing its details. This is essentially a metaphoric relationship, juxtaposing control knobs, buttons, and levers as an abstract, yet visually clear, symbolization of the real processes at work in a complex machine. The new area of product semantics is closely related to this aspect of persuasion in its attempt to engage the mind of the audience and make the workings of a product more readily accessible.[28]

Product semantics and similar approaches work within broader design arguments concerning the relationship between users and objects, but there are other approaches that serve quite different

27) Rams, "Omit the Unimportant," 29. "... items should be designed in such a way that their function and attributes are directly understood.... Of course, getting products to 'talk' by means of design is a demanding task."

28) Klaus Krippendorff and Reinhart Butter, "Product Semantics: Exploring the Symbolic Qualities of Form," Innovation 3/2 (Spring 1984). The entire issue is devoted to the theme "Semantics of Form."

arguments. For example, the Memphis table lamp, Ashoka, by Ettore Sottsass, not only directly displays the balance of forces used in supporting the light bulbs, a playful balance that is an important part of the design logos, but also metaphorically suggests the flow of electric current (figure 6). The ostentatious display of technological reasoning (or of pseudoreasoning, as in the case of functionless elements that are associated with machinery, such as basic geometric forms, pipes, struts, and so forth) is a significant feature of many postmodern products. The table lamp by Sottsass or the Bel Air armchair, by Peter Shire for Memphis, (figure 7) are examples. Such ostentation, however, is not simply a decoration; it is part of the logos. An audience is invited to consider the mechanical aspect of our world when they use such a product. In the case of the Ashoka table lamp or the Bel Air armchair, the audience is encouraged to participate actively in the argument of the design, to recognize and think about mechanical and geometric relations, rather than ignore them or take them for granted.

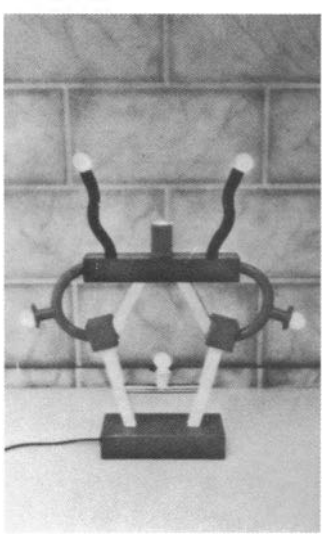
Consider the Quisisana ceiling lamp, by Ettore Sottsass, from the Memphis collection (figure 8). It also uses metaphor to suggest the flow of electricity and makes an ostentatious display of mechanics, but it engages users in a broader argument that expands the idea of function in everyday life. Not only do products function, humans function as well. This complex design argument, while meeting narrow demands of utility, also frees us from narrow purposive activity; it encourages our more complex imaginative processes, our emotional and intellectual functioning freed from an immediate task. It reminds us, perhaps, that imagination is the source of technological inventions and that a free play of imagination ought to be an ongoing part of daily life.

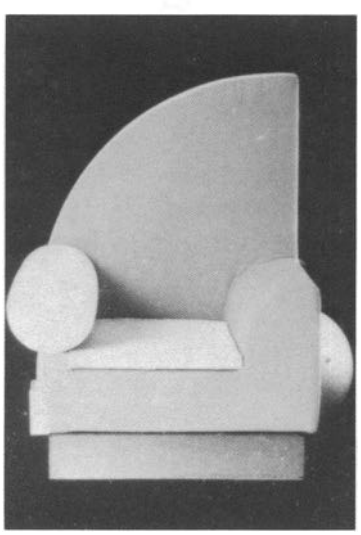
All of these approaches, however, are concerned more with the appearance and accessibility of technological reasoning than its truth or validity, which, in the case of design, is a question of

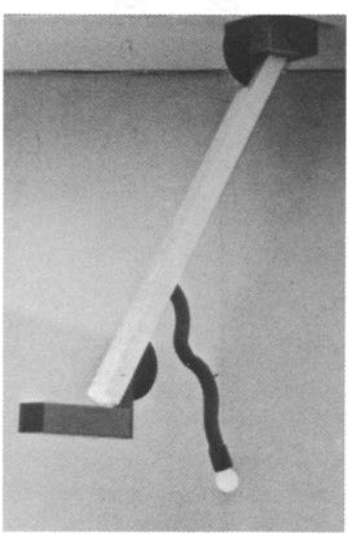
Fig. 6) Ashoka table lamp by Memphis. Design: Ettore Sottsass.

Fig. 7) This Bel Air armchair made of wood by Memphis, is upholstered in contrasting, bright color fabrics. Design: Peter Shire.

Fig. 8) Quisisana ceiling lamp by Memphis, with two light sources: a red bulb and a halogen lamp tilted toward the ceiling. Design: Ettore Sottsass.







whether a product will actually work. Audiences will tolerate a great deal of discomfort and outright suffering if only a product will do something useful. This is evident in the early history of the automobile or the rise of medical technology, when general audiences cared little for an understanding of the details of products and wanted only results. But if practicality is the truth of design reasoning, and if such reasoning is contingent on so many factors of use that there is no way of judging its effectiveness in abstraction, we are reduced to estimates of probable success, the advice of experts, and a willingness to take chances. And, through all of this, there is also a continuing awareness of how often poor technological reasoning is concealed, much as a politician may cover a poverty of ideas and rational arguments with pleasant phrases and a forceful personality. This leads to consideration of the other elements of a design argument, elements that may conceal poor reasoning or, in fact, complement good reasoning and enhance the persuasiveness of a product and satisfaction in its use.

The second element is character or ethos. Products have character because in some way they reflect their makers, and part of the art of design is the control of such character in order to persuade potential users that a product has credibility in their lives. In essence, the problem is the way designers choose to represent themselves in products, not as they are, but as they wish to appear. Designers fashion objects to speak in particular voices, imbuing them with personal qualities they think will give confidence to users, whether or not the technological reasoning is actually sound. This may involve something so artless and extrinsic to design as a designer label, but in its significant aspect it involves qualities of character that are persuasive in any example of effective communication, such as good sense, apparent virtue, and goodwill toward the audience.

Character can be a subtle mode of persuasion, but it is exceptionally important for design. Consider the different qualities of character projected by some of the objects already discussed. The

Fig. 9) Bowl and quail sugar shaker, perhaps persuasive for the intended audience.

dividers (figure 4), for example, speak in very different voices. The larger instrument, by presenting its reasoning clearly and simply, is both intelligent and efficient in accomplishing something useful. It speaks in a sensible voice and displays the virtues of a practical, sturdy, plain character. In contrast, the character of the smaller instrument is a little more mysterious or remote and, perhaps, superficially more elegant. There is less direct connection between the technological reasoning of the design argument and its ethical aspect. This instrument, too, speaks in a sensible, intelligent voice, but such a quality comes more from the object being perceived as an instrument than from any immediate display of its own sensible workings. With respect to character, it persuades by looking authoritative, and authority is a virtue prized by many audiences over good sense or intelligence.

The problem of character in products is a fundamental issue of design in the postmodern environment and one on which designers and design critics have yet to focus precisely. It is in the area of ethos rather than technological reasoning or esthetics that some of the sharpest conflicts and differences are evident. Consider, for example, the vast range of mass-produced objects that fill our product culture and are regarded by many as kitsch (figure 9).[29] Such objects are persuasive not because they possess beauty, but because they show a concern for beauty. They speak in familiar, believable voices that display esthetic sensibility as a virtue, whether or not reality matches appearance. Perhaps most objects of mass culture are persuasive in a similar way, not because of any special substance or even clever emotional appeal, but because they speak in familiar voices, show concern for commonplace virtues and, hence, seem authoritative.

[29] Gert Selle, "There Is No Kitsch, There Is Only Design," *Design Issues* 1/1 (Spring 1984).

Ironically, designers who believe they are advancing cultural standards or challenging the imagination in constructive ways have relatively little authority with mass audiences. Their designs often seem hostile and intimidating or are so subtle that they go unappreciated. This is true of the avant-garde, whose works present an ethos of spirited, unruly, and sometimes intelligent imagination but that lack virtue or trustworthiness as judged by the standards of mass audiences who suspect themselves to be the butt of a joke. This is also true of designers such as those at Braun and Krups, whose designs are often so modest and unobtrusive that they almost go unnoticed. These designers compensate by emphasizing user-friendly products, using goodwill as the persuasive force of their ethos; modest as the Krups coffee mill is, it is also delightfully easy to use. Avant-garde designers most often ignore the problem or counter it by going even further in cultivating an eccentric ethos that is intended to appeal to a limited audience of supposed trend-setters. After all, the avant-garde has always been a character type, romantic, virtuous (by their own standards), and heroic in standing against conventional tastes, refined or otherwise. Yet both groups of designers continue to

grapple with the problem of ethos and virtue, and in the broader cultural debate, they are often the less persuasive voices.

Perhaps in frustration an audience otherwise sympathetic to sophisticated design ideas has come to prize the "camp."[30] For this audience, irony is the virtue that is most persuasive, and some designers now deliberately attempt to play on this by imitating objects of mass culture. However, such design arguments are only superficially amusing; in fact, they are nascently bitter expressions about the postmodern environment. They reach honest and direct statement perhaps only in recent punk styles, whose design argument is essentially one of protest.[31] The technological reasoning in punk styles is either destroyed outright or grudgingly presented, as in clothing, with rips and tears that are metaphoric expressions of what are perceived to be the moral consequences of contemporary life.

The third element of a design argument, emotion or pathos, is sometimes regarded as the true province of design, giving it the status of a fine art. Certainly, some designers think of themselves as essentially fine artists, and perhaps this is why they acquiesce in the equivocal role assigned them by those art historians for whom design is only a minor art concerned with decoration. But emotion is only a bridge of exchange with esthetics and the fine arts, just as technological reasoning is the bridge with the natural and social sciences and character is the bridge with ethics and politics. When emotion enters design, it is not an end in itself but a mode of persuasive communication that serves a broader argument. The problem for design is to put an audience of users into a frame of mind so that when they use a product they are persuaded that it is emotionally desirable and valuable in their lives. Design provides an organization of the way we feel in a direct encounter with our environment; it provides a clarifying and fulfilling experience that may even remind us of fine art, although the objective is practical and perhaps mundane.[32]

The resources for emotional persuasion are the same for all design arguments, coming from physical contact with objects or from active contemplation of objects before, during, and after use. Much feeling is conveyed in the experience of movement, whether in the gestures made in using an object or in the shift of visual attention across its lines, colors, and patterns. This is what makes the emotive argument of a design so powerful and persuasive: it collapses the distance between the object and the minds of the users, leading them to identify with the expressive movement and allow it to carry them where it will.

What helps to distinguish different design arguments is where the movement carries us. Consider the wrench pictured here (figure 10). Whatever the technological reasoning that requires such a configuration, the simple curve is so compelling that even people who would have no occasion to use the tool may feel something of its emotional appeal. It seems to send the mind of the observer

30) Susan Sontag, "Notes on 'Camp'," in *Against Interpretation* (New York: Noonday Press, 1966).

31) Dick Hebdige, *Subculture: The Meaning of Style* (London: Methuen and Co. Ltd., 1979).

32) John Dewey, *Art As Experience* (New York: Capricorn Books, 1958) 35. In this major statement of esthetic philosophy, Dewey attempts to restore continuity between artistic objects, which have been separated from the conditions of their origin, and the esthetic qualities of everyday experience found in encounter with our environment.

Fig. 10) The compelling curve of this wrench conveys subtle emotional persuasion.

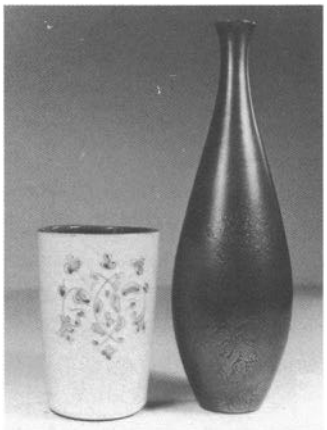


Fig. 11) Handmade Moroccan cup and mass-produced Japanese vase give different qualities of space and motion.

back and forth in a dynamic balance that is visually satisfying and when the tool is held, physically satisfying as well. Emotion here, as in classic design, serves and enhances use, but it also defines the object as an independent, autonomous whole. The Krups coffee mill (figure 2) and the Braun cassette deck (figure 5) seem self-contained and self-sufficient. These can be contrasted with the tense quality of the Asboka table lamp (figure 6). Although symmetrical, it seems to radiate outward in every direction. Similarly, Shire's Bel *Air* armchair (figure 7) and Sottsass's ceiling lamp (figure 8) reach beyond themselves and give overtones to the surroundings and perhaps to the social context in which they will be used. Emotion here intensifies the environment, perhaps capturing the social occasion of dining, even as the objects perform their simple functions. Instead of appearing self-sufficient, they seem to seek connections and relationships with other objects or people around them, because the emotional excitement is directed outward. Contrast both of these uses of emotion with the spirited, playful lines that are patterned on the cup (figure 11). The boundaries of the cup itself seem gentle, but the animation of the pattern holds us with surprising intensity; some elusive regularity or symmetry is sensed, but users are too caught up in the vitality to worry about balance. The cup seems to reach out to us, and we are tempted to pick it up. Emotion here has neither classic calm nor outwardly expanding excitement; instead, it involves a quiet and delicate play that reaches subtly into the mind of the user and sets loose the imagination.

It is surprising to realize how far we are led into figurative language to express the persuasiveness of lines. This occurrence is a sign of the strong identity achieved between observer and object in the emotional aspect of design. As the art historian Joshua Taylor remarked, "To say that a line in a painting twists and turns is, of course, a highly figurative statement. It does nothing of the sort. It is we who twist and turn looking at it."[33] How far such an identity can go in design is evident when understood that in the strength of a design argument's emotional appeal, objects for use are sometimes transformed into objects for pure contemplation, valuable in themselves rather than as the means to some other end. The vase and cup pictured (respectively from Japan and Morocco) and other objects previously discussed could be regarded as works of art, valued without regard to their use. And this is true for the handcrafted mask (figure 12), as well. Designed for practical use, with obvious control of the elements of technological reasoning and ethos that make it suitable to be worn in rituals and festivals important in the everyday life of the people of a so-called primitive culture, it makes use of an emotive argument that reaches deep into human nature and across cultural barriers; it compels us to quite a different kind of contemplation — if not of the beautiful, then of the grotesque and terrifying.

The emotional appeal of products ranges from the trivial to the

33) Joshua C. Taylor, *To See As To Think: Looking At American Art* (Washington, DC: Smithsonian Institution Press, 1975), 85. This is from an essay called "Persuasion." See also the essay "The Pure and the Impure" for esthetic theories that have interesting relevance to design.

Fig. 12) This handcrafted mask from Bali displays a persuasive emotional argument that transcends the rhetorical purpose for which it was designed. It becomes sculptural art and speaks to a universal audience.

profound, and in the postmodern environment the full range is encountered. Some designers use emotion in a superficial and coercive way. They try to excite the passions of potential customers with trivial gimmicks that have little connection with technological reasoning or character. The arguments of such designers are hardly arguments at all, but only attempts to impose unexamined attitudes and marketing messages on passive and captive audiences, without concern for whether the product actually accomplishes the purpose for which it was intended. Other designers, who make many of the objects of our product culture, rely on weak and often sentimental emotions that are adapted to the existing tastes of audiences and to popular beliefs about what is artful or beautiful (compare such objects in figure 9 with the unconventional Memphis porcelain table service by Matteo Thun in figure 13).

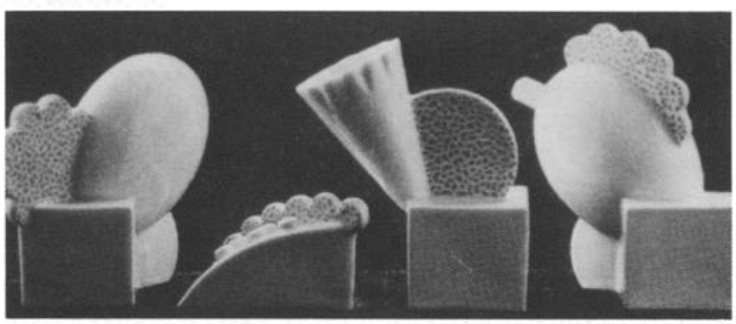


Fig. 13. Compare this Memphis porcelain table service with the bowl and sugar shaker in figure 9. The objects are, from left to right, a pepper shaker, Ontario; a toothpick holder, Erie; an appetizer holder, Superior; and a salt shaker, Michigan. Design: Matteo Thun.

The strongest designers, those who are most articulate if not always most persuasive, are concerned with discovering new aspects of the utility of emotional expression in practical life. Their products attract and hold audiences in surprisingly different ways, and in this lies the importance of emotion as a mode of persuasion. It offers no conclusive proof of a designer's ideas about technology or social life, yet it helps an audience to entertain new possibilities for practical living and to remain open to the technological reasoning and character of a product.

Purpose of design arguments

Having identified the elements of a design argument and shown how they are interrelated in a variety of products, the next question is, what do such arguments accomplish? Do design arguments accomplish the same things as rhetorical arguments in words?

To answer these questions, I want to return for a moment to the earlier discussion of the relationship between rhetoric and design. I suggested that our understanding of rhetoric has been limited to the rhetoric of words, but that the vast output of man-made objects in the present represents another, unrecognized mode of communication, a rhetoric of things. There seems to be little question that some kind of communication exists in designed objects. This is evident not only in the influence of rhetorical themes in shaping methodologies in the history, theory, and criticism of

design, but also in the growing body of specific information about how rhetorical considerations actually guide the practice of design.

The significant question, however, is what the nature of such communication is. Does a designed object communicate simply in the sense that it is a sign (or set of signs) of the conditions of its production, much as smoke is a sign of fire? Is an object communicative to the extent of its styling, which is expressive of emotion and esthetic qualities? Or, is there bound up in the idea of design a kind of communication that involves all aspects of the making of objects for use, so that design itself, whatever the type of object produced, is not an art of adornment, but a rhetorical art that creates objects persuasive in every aspect?

The primary obstacle to the latter view lies in our understanding of the nature of technology. If technology or technological reasoning is regarded merely as a deduction from scientific principles, there is no significant sense in which it can be seen as persuasive. Technological development would be regarded as an inevitable process growing out of scientific advance, and questions of value and social consequence would be regarded as irrelevant to the essence of design, more properly left to politicians and the public than included as a consideration for designers. However, as important as science is in the development of technology, the activity of technological reasoning inherently involves human values selected knowingly or unknowingly as important premises that directly affect the essential characteristics of objects, not just their superficial appearance. If this premise is correct, a rhetoric of design becomes a distinct possibility, even if its precise nature and qualities yet remain to be discovered. It is possible because technological reasoning, the core aspect of design that may appear objective and remote from human values and opinions, is, in fact, developed in terms of an audience. Its success is not judged theoretically by appealing to the knowledge of a small group of experts, but practically by appealing to the interests, attitudes, opinions, and values of users.

Based on this, the feasibility of a rhetorical study of designed objects has been shown in this article by applying the themes of rhetoric that are traditionally used in the study of verbal communication. The result is a concrete illustration of ways in which objects can be persuasive and designers can deliberately control the three elements of argument to shape objects and achieve some kind of persuasion. But what kind of persuasion is it? Surely it would be fatuous to suggest that we interact with objects in the same ways that we interact with words. If we did, what distinctive value would there be in words and why would human beings have instinctively or knowingly, and over such a long period of time, designed the language system as it is?

Persuasion in language can be oriented in any of three directions. It can be oriented to the past, as in a law court, where we are persuaded to make necessary judgments of fact. Also, it can be

oriented to the future, as in political debate, where we are persuaded to make judgments about contingent courses of action. And, finally, it can be oriented to the present, as in a variety of social ceremonies, where we are persuaded to consider something as valuable or worthless and, hence, to praise or blame the matter offered for consideration. The latter is known as epideictic or demonstrative rhetoric and is perhaps the most puzzling of all rhetorical forms because it grows out of materials from the past and hints at possibilities for the future, yet is most concerned with attitudes in the present.[34]

34) Chaim Perelman and L. Olbrechts-Tyteca, *The New Rhetoric: A Treatise on Argument* (Notre Dame: University of Notre Dame Press, 1969), 47-51. Perelman argues that epideictic is central to the art of persuasion because it increases adherence to values and, hence, strengthens the disposition to action. The speaker establishes a sense of communion around values recognized by the audience.

Of these three orientations, design arguments and the rhetoric of things are most like demonstrative rhetoric. They are demonstrations or exhibitions, growing out of the past (as in traditional shapes and forms or in already known scientific principles that provide the premises for construction) and suggesting possibilities for the future (as in future activities that a given object may make possible), yet existing primarily in the present as declarations. Products are important to us in use and, hence, they exist significantly in a kind of omni-present. Unlike words, which can persuade people to specific judgments about the past or future and assert attitudes, ideas, and values that are recognized in the present, designed objects primarily assert their own existence and, through that existence, the attitudes that are an integral part of an object's present being.

In this respect, the products of design share a rhetorical status similar to works of fine art. As critic Harold Rosenberg said of the art object, "Its nature is contingent upon recognition by the current communion of the knowing. Art does not exist. It *declares itself*."[35] What he means is that the existence of a work and its status as fine art is not something that can be taken for granted; a work in the present culture must declare itself to be a work of fine art and persuade an audience to recognize its status as such, otherwise there can be no way of distinguishing fine art from any other type of man-made object. As Rosenberg seems to suggest, designed objects declare a status other than fine art — the attitudes and values asserted are different, for the designed object declares that it is fit for use, whereas the work of fine art asserts a freedom from specialized utility — yet the rhetorical form is the same in both cases.[36]

35) Harold Rosenberg, *The Anxious Object: Art Today and Its Audience* (New York: The New American Library, 1964), 20. This important study of the fine arts falls well within the rhetorical tradition that regards painting, poetry, and other modes of fine art as epideictic rhetoric.

36) Rosenberg, *The Anxious Object*, 21.

If products affect and shape attitudes, they do so only through persuasive assertion, which may be recognized or not. Beyond this, users must then carry out their own deliberation about whether or how to use products in the future. For example, the Krups coffee mill (figure 2) is a gentle assertion or demonstration of an effective way to grind coffee. It is quite persuasive as an object, and the sources of that persuasion come from the character and emotion of the argument, as well as from its technological reasoning. Yet it is only an assertion; users may then begin their own deliberations about whether to buy it and how to use it in

their lives. In this case, the object is so gentle in its assertion and demonstration that how to combine it with other objects in a home environment can easily be seen. Indeed, one of its virtues is that it combines easily and well with many kinds and styles of objects. And the fact is, people have changed their daily routines because of what the product asserts and demonstrates that it can do for them. As trivial as this example may seem, the situation is little different for any order of design product or technological complexity: the assertoric rhetoric of the product quickly becomes part of the broader verbal rhetoric used in deliberating about the future or judging the past.[37] In effect, the product asks for recognition through all of the modes of argument that have been discussed, but then we are left, and even required, to place it in a broader social context where verbal rhetoric has full force in determining the implementation of the product.

37) Consider, for example, the role of public policy formation, a classic situation for verbal rhetoric, with regard to the development and implementation of technological systems. See, for example, Robert F. Baker, Richard M. Michaels, and Everett S. Preston, *Public Policy Development: Linking the Technical and Political Processes* (New York: John Wiley & Sons, 1975).

Rhetoric and design as architectonic arts

One important implication concerns the nature of architectonic arts in our culture today. Architectonic arts are those that organize the efforts of other arts and crafts, giving order and purpose to production.[38] For example, architecture has long been an architectonic art with respect to the host of specialized disciplines involved in construction because it orchestrates their contributions and rationalizes their individual products into a single, whole product. In essence, it provides the thought or idea that is the soul of production. There are many indications, however, that architecture is only one form of a broader architectonic art that has emerged in the modern world. Indeed, the term *architecture* is used in a variety of new ways as a metaphor for structure and organization of many things other than buildings: for example, the architecture of computer systems or the architecture of the three vast, interconnected technological systems that distinguish our historical period, the electric power grid, the transportation system, and the communications system. The natural word for this new, modern architectonic art surely is *design*. Design is what all forms of production for use have in common. It provides the intelligence, the thought or idea — of course, one of the meanings of the term *design* is a thought or plan — that organizes all levels of production, whether in graphic design, engineering and industrial design, architecture, or the largest integrated systems found in urban planning.[39]

38) McKeon, "The Uses of Rhetoric in a Technological Age," 45.

39) Not accidentally, this list is quite similar to something in the Middle Ages that was called the *quadrivium*, the four arts of things that dealt with successively larger and larger integrative problems. The discovery of a modern quadrivium through a rhetoric of things is one of the most intriguing aspects of the rhetorical approach to design, suggesting again that design is a primary architectonic art in our culture.

But if design is an architectonic art with respect to things, its efforts and products are guided in turn by another architectonic art that further integrates objects into social activities and even guides the practice of design at every turn. This architectonic art is rhetoric — not simply the old verbal rhetoric but, rhetoric as an art of thought. Rhetoric is architectonic with respect to thought as it is formulated and presented for an audience, whether in words, things, or actions.[40] This article has alluded in passing to some

40) The expansion of the art of rhetoric to architectonic status in the twentieth century follows our growing awareness of evidence for significant rhetorical considerations in many areas previously neglected. We are discovering, for example, that scientific discourse involves serious rhetorical features. For one study, see Ricca Edmondson, *The Rhetoric of Sociology* (London: The MacMillan Press Ltd., 1984). Evidence for a rhetoric of things is found in the demonstrations discussed in this paper. Evidence for a rhetoric of action is found in phenomena such as civil rights marches or other protest actions that are demonstrations of grievances or injustices. For the use of actions to communicate protest, see, for example, Saul Alinsky, *Rules for Radicals* (New York: Random House, 1971). In this respect, it is interesting to compare the rhetoric of George Pullman's demonstration in the buildings of the Pullman community and the worker's demonstration in their protest strike (see note 21).

aspects of the architectonic art of rhetoric as it may unfold in verbal rhetoric, but this concept can be illustrated a litle more in the practice of design. Consider John Pile's definition of design, not as a noun but as a verb:

"We do not have an ideal word for the processes of choice and decision-making that determine how *things* are to be made. *Design* will have to serve us, although its many meanings — from *decorative pattern*, to the selection of sizes for plumbing pipes — can be a source of confusion. The word is used here to mean the making of decisions about size, shape, arrangement, material, fabrication technique, color and finish that establish how an object is to be made. The object can be a city or town, a building, a vehicle, a tool or any other object, a book, an advertisement or a stage set. Designers are people who make such decisions, although they will, most often, have some other name describing their specialized concern: architect, engineer, town planner or, possibly, craftsman."[41]

41) Pile, *Design*, 6.

It can be seen that the sense in which design, through thoughtful decision, is architectonic with respect to making things, but the role of rhetoric in guiding that thought can also be noticed. When asking for the bases of decision in all of the areas that Pile identifies, we are at once caught in a web of human factors, attitudes, and values that are of central concern to rhetoric. The skillful practice of design involves a skillful practice of rhetoric, not only in formulating the thought or plan of a product, through all of the activities of verbal invention and persuasion that go on between designers, managers, and so forth, but also in persuasively presenting and declaring that thought in products. From the smallest, most incidental object to the largest, integrated technological system, designers are providing an amplification of ideas through man-made things.[42] Hence, instead of regarding the history and current practice of design as the inevitable result of dialectical necessity based on economic conditions or technological advance, we may do well to regard the apparent confusion of our product culture as a pluralistic expression of diverse and often conflicting ideas and turn to a closer examination of the variety and implications of such ideas.

42) Amplification is a well-known device in rhetoric, today usually meaning the expansion of a simple statement into more elaborate or complete language. However, Aristotle refers to it as a topic of invention and also as a form of argument specially suited to epideictic (demonstrative) rhetoric. Furthermore, he regards amplification not merely as a verbal device, but as a way of elaborating the qualities of a subject. See Aristotle, *Rhetoric*, 105, 343. As used in this paper, amplification is a way of elaborating the living environment to enhance the quality of life.

There is no reason to believe that the architectonic art of rhetoric is any better understood at present than the similarly emerging architectonic art of design. Rhetoric is undergoing a new development in the twentieth century, and designers are among those who are shaping it to meet modern problems. If designers can benefit from explicit talk about rhetorical concerns, those who are interested in rhetoric can benefit even more from studying how design continues to influence and shape society by its persuasive assertions. We are left with an inescapable conclusion that designers are discovering an entirely new aspect of demonstrative rhetoric that will significantly affect our understanding of rhetoric as a modern architectonic art.