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

Richard Buchanan
What is rhetoric?

• The inventive and persuasive relation of speakers and audiences as they are brought together in speeches or other objects of communication.
• The domain of rhetoric in design:
  – The influence of designers and the effects of design on an audience of consumers or society at large.
  – The process of conceiving designs
  – The influence of a designer’s personal attitudes, values, or design philosophy
  – The way the social world of design organization, management, and corporate policy shapes a design
  – Form as a means of pleasing, instructing, and passing information; as a means of shaping the appearance of objects for whatever intended effect.
  – Design as a mediating agency of influence between designers and their intended audience.
What is rhetoric?

• Classical rhetoric: The way a speaker discovers arguments and presents them in suitable words and gestures to persuade an audience.
• An invention of arguments (logical, ethical, or emotional) that induce belief or identification in an audience.
• The goal is to induce in the audience some belief about
  – THE PAST (e.g. legal rhetoric)
  – THE PRESENT (e.g. ceremonial rhetoric)
  – THE FUTURE (e.g. deliberative or political rhetoric)
• The speaker seeks to provide the audience with the reasons for adopting a new attitude or taking a new course of action.
• Setting patterns for new action.
• Man-made objects have the power to accomplish something very similar.
• By presenting an audience of potential users with a new product, designers directly influence the actions of individuals and communities, change attitudes and values, and shape society in surprisingly fundamental ways.
• The persuasion here comes through arguments presented in things rather than words...
• **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.**
• 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 our everyday lives.
Elements of Design Argument

• The designer, instead of simply making an object or thing, is actually 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 design argument that provide the substance and form of design communication (they are interrelated):
  – Technological reasoning
  – Character
  – Emotion

• Designers draw on all three elements to some degree in every design argument, sometimes blending them with great subtlety in a product.
• The backbone of a design argument.
• 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:
  – (1) on an understanding of natural and scientific principles that serve as premises for the construction of objects for use.
  – (2) 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 here.

**SHARED PREMISES:**
- Mechanical
- Several obvious human premises: They are all of a size that fits the hand, and rely on the hand for power.

**VARYING PREMISES** (not so obvious, but directly affect the specific form in which the mechanical premise is presented):
- Attitude of potential users toward tradition (conventional / unconventional)
- The value of decoration (elegance / plainness of the social occasion of eating)
1
Technological reasoning
LOGOS
<table>
<thead>
<tr>
<th><strong>KRUPS COFFEE MILL</strong></th>
<th><strong>GINZA BOOKCASE (MEMPHIS)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Both are functional in a broad sense of the term...</td>
<td>Yet, in each case, the specific form of technological reasoning depends entirely on different <strong>human premises</strong>, premises held by designers and assumed to be persuasive with users.</td>
</tr>
<tr>
<td>Reflects classic design values suited to new ways of contemporary living.</td>
<td>Reflects values of novelty, surprise and emotion.</td>
</tr>
<tr>
<td>Gentle and unobtrusive, subordinating the display of mechanical reasoning and other qualities to a concern for use.</td>
<td>Playfully displays mechanical reasoning and virtually talks to us, commenting on itself with irony or satire.</td>
</tr>
<tr>
<td>Neutral rather than coercive and, hence, allows users to integrate it into a variety of life-styles.</td>
<td>Intensifies the environment, not to dominate users, but perhaps to offer an example of vitality and spontaneity that encourages independence and self-expression...</td>
</tr>
<tr>
<td>It demonstrates that technology can serve without dominating, leaving users free to use the product in a variety of settings of their own choice.</td>
<td>It demonstrates a lively mind controlling technology, not controlled by it.</td>
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</table>
• The human premises expressed in design logos: Beliefs and values always condition products, whether they are recognized explicitly, are implicitly assumed, or are ignored completely.

• Technological reasoning is persuasive in two ways:
  – (1) in process (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).
  – (2) in the accomplishment of something useful.

• Example: Dividers...
1

Technological reasoning

LOGOS
<table>
<thead>
<tr>
<th>LARGER DIVIDER</th>
<th>SMALLER DIVIDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>The technological reasoning of the large brass and iron instrument is apparent</td>
<td>In contrast, the reasoning of the smaller divider is not so readily apparent. The</td>
</tr>
<tr>
<td>at a glance. It depends, first, on a revolute pin joint that ensures a continuous</td>
<td>arms seem to work on a pivot post, but the mechanism that produces tension in</td>
</tr>
<tr>
<td>relationship between two pointer arms by allowing motion with one degree of</td>
<td>their relation and fixes their relation at a given point is not obvious with a</td>
</tr>
<tr>
<td>freedom. Second, there is the curved crossbar, attached rigidly to one arm by a</td>
<td>casual glance, as it is shielded by a small casing. When such reasoning is</td>
</tr>
<tr>
<td>bolt and passed through a slot in the second, maintaining stability of relation in</td>
<td>concealed, it speaks intelligently only to a small technical audience, perhaps</td>
</tr>
<tr>
<td>the motion of the arms. Third, there is a spring, serving to prevent play in the</td>
<td>as small as the engineers of the manufacturing company, and reaches a broader</td>
</tr>
<tr>
<td>crossbar due to any loosening of the bolt attachment; and, fourth, there is a</td>
<td>audience only in effective use.</td>
</tr>
<tr>
<td>wing nut that tightens on the crossbar and allows the relation between the pointer</td>
<td></td>
</tr>
<tr>
<td>arms to be fixed at any specific distance.</td>
<td></td>
</tr>
</tbody>
</table>
• There are obvious limits in the ability of audiences to follow complex trains of technological reasoning, but designers can use a 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.
Technological reasoning

LOGOS
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. The ostentatious display of technological reasoning (or of pseudo reasoning, 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. Bel Air armchair, by Peter Shire for Memphis is another example. 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.
• 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.
• 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.
• Examples: A designer label (extrinsic), qualities of character that are persuasive, such as good sense, apparent virtue, and goodwill toward the audience.
• Dividers?
Two dividers 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.
It is in the area of ethos (character) 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. 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.
3 Emotion
PATHOS

• 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.

• 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.
• 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 in the next slide...
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 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.
• PREVIOUS EXAMPLES...
• The **Krups coffee mill** and the **Braun cassette deck** seem self-contained and self-sufficient. These can be contrasted with the tense quality of the **Ashoka table lamp**. Although symmetrical, it seems to radiate outward in every direction. Similarly, **Shire's Bel Air armchair** reaches beyond itself and gives overtones to the surroundings and perhaps to the social context in which it 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.
The emotional appeal of products ranges from the trivial to the 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...