# Obliteration versus Resemantization of References in Electrical Appliances

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Since signs are used to name or indicate objects and events, it is difficult to see how a theory of meaning can succeed without giving a central role to the concept of *Reference*. This is a concept that has provided semioticians with a basic source of inspiration for the study of content and the search for theories of sign production. However, it can hardly be said that there is a single definition of reference in semiotic studies.

For the German logician Gottlob Frege, for instance, *reference* is a synonym of that object a sign designates in a certain manner or *sense*; where reference is "neither a concept nor a relation but a particular object" (Frege, 1892: 51). Differently, Ogden and Richards name *reference* something closer to Frege´s *sense*. Indeed, they define *reference* as that "thought" which is registered in a *symbol* in order to express an object or *referent* (1923). Other authors, such as Nelson Goodman, prefer to treat *reference* as a more general term to talk about "all sorts of symbolization, all cases of standing for…" (Goodman, 1984: 55).

Therefore, it should be noted that the present study will use Nelson Goodman's approach. There are two reasons for this. On the one hand, because the reference of electrical appliances, as cultural objects is not necessarily subjected to objects in particular – as Frege suggests (Eco, 1976). As a matter of fact, within the theory of codes, signs can also be explained by signs without the intervention of objects. On the other hand, because serious flaws have been found in Ogden and Richards' model during the referential analysis of design objects. Umberto Eco, in particular, has realized that a search for the *reference* of design products using such a model can only lead to the indeterminacy of its *referent* or the replacement of this *reference* (Eco, 1980).

Thus, we will look at reference as covering all cases of standing for. Under such a definition, we must realize that almost anything may stand for almost anything else because this approach implies that resemblance is not necessary for reference (Goodman, 1976). This way of defining reference will rest on two assumptions: a set of *conditions* and a set of *relations*. By *a set of conditions* we understand the presence of certain communicative abilities, attitudes, knowledge and a common socio-cultural

system between encoders and decoders (Berlo, 1960). In other words, the idea that encoders and decoders share a common knowledge about the referential potentials of signs as well as about particular sign-types (Thrane, 1980). By *a set of relations*, conversely, we refer to the existence of discontinuities in the plane of our perceptions. That is to say, the discrimination of semantic differences and the discernment of relations capable of articulating such differences (Greimas, 1973).

Now, as the subject of this paper is electrical appliances, it is important to clarify the type of reference we are talking about. In this respect we should start by saying that *electrical appliances are utilitarian objects*. As such they have to fulfill a *function*. They have to display their capacity to serve a particular purpose in a certain manner. In the second place, we should acknowledge that *electrical appliances are cultural objects.* Indeed, they become part of culture when the function primarily assigned to them is recognized by a group of people and associated to a characteristic physical configuration (Barthes, 1964; Moles, 1975; Eco, 1976; Lacruz-Rengel, 1997). Therefore, *when we study electrical appliances the reference is inevitably of a functional nature.* It does not mean that other types of references cannot take place in such objects. This only suggests that all those other types of references are built on top of these objects' functional references (Moles, 1975).

## POSITIONS ABOUT THE OBLITERATION OF FUNCTIONAL REFERENCES

Studies on material culture such as those of Jean Baudrillard, Michael Thompson, and Gillo Dorfles explicitly state that in utilitarian objects functional references are or have been obliterated in order to give place to references of a different nature. Amongst all these authors, Jean Baudrillard is the one who has devoted more time to this subject. Indeed, his ideas about it have being presented in a variety of ways:

* In 1969, Baudrillard explains how the logic of functionality or the *use value in utilitarian objects can be progressively decontextualized* and left behind in order to impose other logics capable of leading them to their status of consumption. In this sense he asserts that "an object is not an object of consumption until it is released from… its functional determinations as an instrument…" (Baudrillard, 1969: 67).

* In 1976, Baudrillard visualizes *the death of reference* as a result of the revolution of value that characterizes our economical systems. That is to say, a revolution where the structural dimension of objects -or that determining the nature of their exchange value- becomes autonomous by excluding their referential dimension -or that built around their functionality- (Baudrillard, 1993).

* In 1978, Baudrillard foresees the instauration of an *"age of simulation"* that beginning with the liquidation of all references will pursue the substitution of "…signs of the real for the real itself" (Baudrillard, 1983: 4).

* In 1983, Baudrillard suggests that a *total obliteration of all those references traditionally linked to our objects* may lead us to a sort of commercial alienation that will transform our objects into fetishes, that is, objects without a function (Baudrillard, 1997).

Another position tacitly supporting the obliteration of reference is that outlined in Michael Thompson's so-called *"Rubbish theory"*. This theory studies the social control of value standing on the fact that "rubbish is socially defined" (Thompson, 1979: 11). According to Thompson, people in Western culture place objects either in a category he calls "transient" or in another he labels "durable". Objects in the *transient category* decrease in value over time and have finite life-spans, whereas those in the *durable category* increase in value over time and have infinite life-spans. Consequently, a used car falls into the transient category and an antique piece of furniture into the durable one. Objects that do not fit into any of these two categories, that is those of zero value, comprise the *rubbish category*.

Based on this conceptual framework, Thompson suggests that *transient objects* gradually decline in value and in expected lifespan, sliding across into the *rubbish category*. A category where they remain as if they were in a timeless and valueless limbo until they are rediscovered by someone, who assigns them a totally different value to that they originally had. In other words, it implies that mechanisms such as the dilapidation, *obsolescence and change of fashions can cause a value decline in utilitarian objects to the extent of obliterating their use value* (or functional reference) and even replace such a value for a totally different one within a matter of time.

Finally, we find a less holistic but no less important position in the writings of Gillo Dorfles (1979). The latter instead of relating the obliteration of the functional references to economic or social mechanisms links this problem to the directions followed by technological development. In this sense Dorfles has asserted that we are witnessing today the establishment of an *unmotivated technology*, where the function of objects is being wiped out from their appearance without any conscious purpose.

This is a position that coincides to a degree with the role bestowed on automation by Baudrillard. Indeed, to Baudrillard automation confers objects a similar status to that of their users: eradicating the traces of their presence from objects and, therefore, dissociating the functional "readings" traditionally assigned to many objects (Baudrillard, 1994).

## POSITIONS ABOUT THE RESEMANTIZATION OF FUNCTIONAL REFERENCES

Since the viewpoints regarding utilitarian objects in terms of resemantization cannot be summarized through the study of a few authors, we will try to group and present them chronologically. Our review will start from the 1960s onward because it was only at the end of this decade that the "semiotics of objects" was cohesively appraised (Krampen, 1979).

The most popular approach to the functional reference of utilitarian objects is that where they are seen as extensions of man (McLuhan, 1964; Dorfles, 1966; Morgantini, 1983; McLuhan and Powers, 1989; Kerchove, 1995; Groot 2000). Aristotle has been regarded as the creator of such a thesis (Dorfles, 1972) and the French anthropologist Leroi-Gourhan as its best known detractor (Leroi-Gourhan, 1993). But the most important thing is that such an approach defines a curious case of functional references of anthropocentric nature.

Maurizio Morgantini (1983) has divided this type of functional references into three interesting generations: (1)

PROSTHESES OF THE LIMBS - e.g. knives, spades, bows and arrows -, (2) PROSTHESES OF THE SENSES – e.g. telephones, television sets and machines to reproduce images and sounds -, and (3) PROSTHESES OF THE MIND – e.g. computers, holography and virtual reality. This idea of generations gradually replaced by new and more effective ones (Dorfles, 1972; Virilio, 1991), outlines a process of resemantization where the traditional materiality associated to certain functions is ignored a number of times in order to manipulate reality in more flexible ways (Toffler, 1983; Mangieri, 1998; Kerchove, 1999).

Another interesting contribution also from the 1960s is that of Roland Barthes. His work corresponds to that stage of general semiotics focused on cultural systems (Gandelsonas, 1974). Consequently, Barthes owns up to the task of approximating the semantics of objects as cultural manifestations whose understanding follows a process comprising three phases (Barthes, 1964). A first one, where the object presents itself as a functional one, that is, as "a mediator between humanity and the world" (Barthes, 1964: 189). A second phase, where the object enters the semantic field of equivalences (or other meanings), struggling between "the activity of its function and the inactivity of its signification" (Barthes, 1964: 189). And finally a third phase, where the object describes a sort of return movement from the world of secondary references to that of its functional reference. That is to say, a return from sign to function, describing a trajectory where functional references become the recurrent theme in spite of those contingencies the object may confront.

In 1973 Juan Pablo Bonta presented a process of resemantization for architecture which can also be applied to the resemantization of functional references. Stemming from the semiotic writings of Eric Buyssens and Luis Prieto, he argued that the information conveyed by design objects could assume three distinctive roles: as INDICATORS (or pieces of information where the relationship between form and meaning is natural or factual), as SIGNALS (or pieces of information where the relationship between form and meaning is conventional), and as INTENTIONAL INDICATORS (or indicators purposely created and used to communicate as signals do). Thus, according to Bonta (1973), the production of meaning in design objects begins when an INDICATOR is transformed into an INTENTIONAL INDICATOR, which ends up as a SIGNAL after being used repeatedly. This primary semantization is subsequently followed by several resemantizations due to the obsolescence achieved by signals within time. Then obsolete signals are taken as intentional indicators to restart the process all over.

In the late 1970s, the outbreak of critical controversies about mass media and popular culture provided new grounds for semantic theorizations. The most representative work of this period is perhaps that of Paul Levinson (1977) about mass media technology. Levinson, a professor of communication, focused his research on the changing usages and perceptions of film since its first appearance. From such a study he elaborated three principles that, according to him, could be extrapolated to define the development of any new technology as well as our perceptions about them. These principles take place chronologically, bearing some interesting resemblances with well-known models of human development such as Piaget´s sensorimotor, concrete and formal

(abstract) stages of intellectual growth (Levinson, 1977).

The first of Levinson´s principles puts forward the idea that all new technologies are initially visualized by people as TOYS, because their potentialities are poorly understood. This is a principle that characterizes a stage in the life of technological objects based on the projection of their own identity, where the content of the object is the object itself. Once the new technology is socially accepted and its nature recognized, a second principle named MIRROR takes place. Such a principle corresponds to a stage where the object's content becomes life, transforming the technological object into a surrogate of reality. Finally, when the technology stops being a mature transcriber of reality, a third principle comes to light. Summarized under the name of ART, this principle represents the moment when the passive copy of reality is replaced by a re-fashioning of it, where the triumph of form over content closes the technological dialectic of pre-reality, reality and post-reality.

Differently from studies such as this, the 1980s experienced an important conceptual shift in the theorization of utilitarian objects. Indeed, during that decade a semantic paradigm opposed the existing functionalism (Krippendorff, 1990) and the role of context was up-dated in terms of its contribution to the production of meaning (cf. Krampen, 1989; Krippendorff, 1989). Nevertheless no remarkable propositions were made in terms of semantic processes, besides the one already suggested by Morgantini (1983).

During the 1990s, on the contrary, similar ideas to those of Levinson are brought back in discussion but under a different methodology. As a matter of fact, historical accounts were replaced by propositions stemming from psychology and the sociology of knowledge. Thus, based on the writings about human needs by K.S. Young and Abraham Maslow, Ding-Bang Luh (1994) outlined a group of psychological indexes to typify the different stages of an object (product) along its life cycle. This is a work that ends up defining four different conceptual phases for our understanding of mass-produced utilitarian objects. Within these phases, we first perceive the object as a NEW TOOL, second as a piece of STANDARD EQUIPMENT, third as a means for STATUS-REFLECTION and finally as a SOURCE OF ENTERTAINMENT.

Likewise in 1997, I proposed a model to explain the mechanisms underlying resemantization in products along their life cycle (Lacruz-Rengel, 1997). In my approach resemantization was seen as the result of a social process comprising three stages:

* Externalization or the expression of the designer's ideas through the creation of objects.

* Objectivization or the stage where the designer's creations are submitted to social scrutiny so as to be accepted or rejected by its potential consumers. Here, social mechanisms will typify and justify the physical configuration given to such an object once it is accepted.

* Internalization or the stage of apprehension and understanding of what an object and its configuration are about.

Such a process suggests that, in order to be successful, mass-produced utilitarian objects should be manipulated by

designers first as SYMBOLS (or something whose function should be taught in order to be understood), then as ICONS (or objects that having their functional recognition granted present features that highlight or expand their functional understanding) and finally as INDEXES (or products that having their functional references clearly outlined, increase their semantic dimension through the incorporation of non-functional meanings to their physical configuration).

Finally, we find the work of the Italian sociologist Fabrizio Carli, published in 2000. Based on a methodology that combines history, psychology and aesthetics, his study is particularly devoted to the re-sematizations of electrical appliances. According to Carli throughout history this type of utilitarian objects has subsequently repeated a process comprised of five phases:

* INDIFERENCE or the allocation of these objects into existent aesthetic canons.

* GESTATION or the visualization of the object's physical configuration as being characteristic of certain aesthetic or technological periods of time.

* SEMANTIC DEVIATION and PRE-FIGURATION, where objects suggests ideas technologically too advance for their time. Therefore, this phase is characterized by an intense formal experimentation that reflects people's future expectations.

* HORIZON OF EVENTS and EPISTEMIC FRACTURE or the breaking of tradition to shake the beholder's perception. In this phase objects are deformed and regenerated by a slow sedimentation.

* REVISIONISM or the phase where previous designs to the epistemic fracture are taken over again and re-interpreted.

## A CRITICAL APPROACH TO TRANSFORMATIONS OF REFERENCE IN UTILITARIAN OBJECTS

Having presented the positions that support or deny *the death of the functional reference* in mass-produced utilitarian objects (products), it is important to acknowledge:

1. The supposed obliteration of functional references expressed in writings of authors such as Baudrillard, Thompson and Dorfles, can only be considered for people alienated by the economical or technological system where they live. In other words, *the idea that "some people", at a certain stage of an object's life, may cease to perceive its functional reference cannot be taken to mean that such a type of reference has been convincingly wiped out from the object.* The best proofs of this are the functional "readings" that still happen in people belonging to less advanced economical or technological cultures.

2. *The idea that the functional reference of "all" utilitarian objects can be obliterated because of a lack of shared or cultural knowledge cannot be generalized.* Research developed by well known psychologists such as Kurt Kofka (1935), Jean Piaget (1947), Rudolf Arnheim (1947), James Jerome Gibson (1979) and Donald Norman (1988) show the existence of a sort of non-cultural or intuitive meaning that helps people infer what an object is without being told about it. As a matter of fact, intuitive meaning played an important role in the creation of early tools. Unfortunately it does not

work for all utilitarian objects; it is of little assistance in the recognition of box-shaped appliances.

3. In relation to Michael Thompson's theory, *it is hard to support the idea that any utilitarian object can loose its functional identity due to a lack of use.* Indeed, a radio, for instance, will not stop from being a radio just because one does not turn it on.

4. The important point about all the positions in favor of the idea of resemantization is that, in all of them, the *general function will be part of the object's perception while changes concentrate at levels such as the reconfiguration of interfaces* (when they are seen as extensions of man), *subjective appreciations* (in Barthes' and Luh's propositions) *and the addition of secondary contents to the object's function* (like in Levinson's case).

5. Despite the fact that every process of production of meaning is indeed a recognition act, *rules of meaning recognition cannot be directly and linearly inferred from a "grammar" of meaning production* (Verón, 1997). In this respect propositions such as that of Pablo Bonta (1973) and Ding-Bang Luh (1994) most be discretely considered.

6. One should not forget that any semiotic "text" can have multiple and simultaneous "readings" by different people (Verón, 1997). Therefore, *the sequence proposed in most of the resemantization processes presented here may change according to the background and accumulated knowledge of each beholder or user.* Indeed, the difference between a virtuous "reader" and a less capable one is obviously significant (Chartier, 1991). The important thing then is to acknowledge that resemantization takes place beyond any particular kind of sequence.

The above theoretical propositions and observations should make us realize that *signification is an active psychic process* (Guiraud, 1976) where *reference* is not restricted to physical objects but rather to concepts and ideas within a person´s memory (Norman & Rumelhart, 1975). This is why *the understanding of any functional reference as a unique true value is impossible to substantiate.* In fact, the idea that every object or sign-vehicle refers to something does not imply that all signs *refer* to existing things (Morris, 1985). Therefore, the production of meaning does not necessarily stand on true things, neither does signification always pursue the production of truth (Eco, 1976).

This is why considering the world as an "ensemble of references opened up by the text" (Ricoeur, 1976: 36) have given Semiotics the task of revealing not the "real" world in itself but the alternative models that circumscribe the things we get to know about it (Sebeok, 1994). This happens to the extent that authors such as Ray Jackendoff (1983) have taken *reference* as a sort of projection of our awareness of reality rather than as a projection of reality in itself.

Having clarified some key points about the mechanisms of resemantization in utilitarian objects, I now want to suggest the use of a different type of model for this kind of study. For this purpose I will first take Fiske and Hartley's idea of "signification orders" (Fiske and Hartley, 1978). Then I will add a fourth order to the three already acknowledged by those authors. I will call this order *Sub-Notation.*

A notation is a system of conventional signs. A sub-notation refers instead to a signification order that works similarly to a notation but in an automatic, non-arbitrary way, where meanings appear naturally without the mediation of agreement. In the arena of utilitarian objects this subsystem is comprised of *dynamic characters* (Koffka, 1935), *perceptual concepts* (Arnheim, 1947) and *affordances* (Gibson, 1979). By *dynamic characters* we refer to Koffka's *demand character* (or that related to our needs), *physiognomic character* (that linked to the appearance of things) and *functional characters* (those alluding to our activities). By *perceptual concepts* we talk about general perceptions such as roundness and heaviness which are different from more precise *intellectual concepts* such as "circle" or "weight". Finally, by *affordances* we understand a kind of meaningful properties, neither objective nor subjective but both, that work as physical and geographical invariants perceived in objects by everyone, no matter the cultural background or education of the beholder.

Thus the model here proposed can be represented by the following figure:

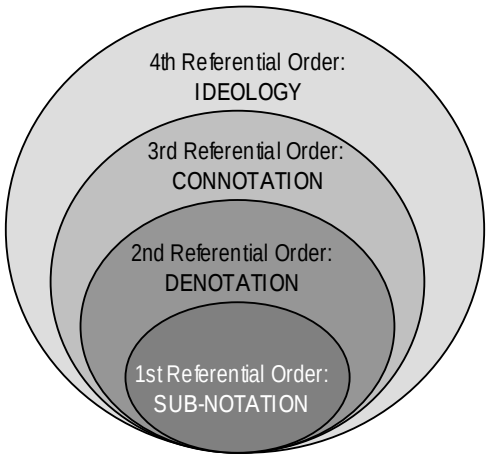


Figure1. Proposed model for the study of the resemantization of reference in utilitarian objects.

Such a model does not attempt to suggest a beginning or an end to any process of resemantization. Instead this model focuses on the idea that whatever the reading of the object is (intuitive, denotative, connotative or ideological) it will always be backed-up by an inferior order of signification and therefore, also, by an inferior referential order.

## OBJECT RECOGNITION AND REFERENCE IN ELECTRICAL APPLIANCES

Designers have been the professionals in charge of creating the visibility of technology in objects such as electrical appliances. In order to do this they have had to interpret what the potential consumer or user may expect. One way historically devised to achieve this has been the establishment of visual links with existing objects. This is a perfectly valid strategy if we consider that electrical appliances are products of mass-consumption and if we consider also the fact that masses think in analogical terms (Le Bon, 2000).

Particularly in the case of Western societies, such a situation has defined the imagination of masses as being focused on matters of appearance, where visual associations are based on *resemblance and continuity* (Le Bon, 2000). On the other hand, we should not forget that social convictions have a "religious" sense (Le Bon, 2000). This is the reason why some contemporary authors handle the communication problems of masses in terms of "beliefs" (Buchanan, 1989; Tyler, 1992). The interesting thing however is that a belief reflects a kind of certainty about something that is taken for real without knowing how and where it comes from (Ortega y Gasset, 1986).

Taking into account *the masses' analogical way of reasoning*, we can thus

perfectly understand why some early electrical heaters were shaped like sunflowers, sailing yachts or resembled Egyptian pyramids (Gordon, 1984). We also understand why early refrigerators looked like wooden cabinets, electrical frying pans like saucepans and kettles like tea-pots (Sparke, 1987). In all of these early examples one can hardly say that the form given to objects has followed a "lineal" process of semantization similar to those described by most of the models already reviewed. These cases show that the starting point for semantizations in electrical appliances does not necessarily stand on a "general" conception of their function, but rather on the way such a function has been encapsulated in similar objects or in free associations different to function. This dynamic process defines patterns of semantic elaboration that jump between the different referential orders of the model I am proposing in this paper.

Only in the history of electrical appliances that are without real formal precedents (such as toasters, radios, television sets and vacuum cleaners) can we find a semantic effort that follows a sequence starting at the first referential order of models such as mine, and climbing later into the other three orders. In this particular case, appliances only became really popular after several simplifications and thematic resemantizations of their originally complex appearances. Curiously, thematic resemantizations in these appliances tend to follow fashion trends instead of a rational sequence such as that suggested by Carli (2000).

The other important aspect that must be mentioned about electrical appliances is related to the *religious sense of social convictions.* Indeed, throughout the history of electrical appliances we can see how many unquestioned myths defined their appearance in different periods. This aspect refers to perceptual associations such as that of "streamlining" with progress, "cleanlining" with hygiene, and "black and white square looks" with modernity (Sparke, 1987). This shows that sometimes "beliefs", that is to say, the realm of ideology has played a major role in the resemantization of appliances, demystifying the presence of any rational sequence.

Consequently, we have to admit that there is a resemantization instead of an obliteration of references in the life cycle of electrical appliances. What we cannot substantiate is that such a resemantization happens within a totally rational sequence.

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