

# Putting the magic back into design: from object fetishism to product semantics and beyond<sup>1</sup>

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#### Abstract

The present article examines some aspects of the relationship between form and meaning in artefacts. Exactly how do objects of art and design express ideas through their appearance, shape and use? The category of object fetishism is defined and analysed as a key to understanding such processes of signification. This category is subsequently applied to existing debates on product semantics, suggesting that many usual assumptions about form and meaning need to be re-examined in light of new conceptions of product life cycle and post-use.

Objects express meaning. This is clear to anyone involved in the study of design, architecture, art, archaeology or any of the related fields dealing with the production, reception, transmission and survival of artefacts over time and place. Just how they do so is one of the great questions, perhaps the great question, faced by the different types of scholars, experts and enthusiasts who choose to work with object-based research. What is it about certain artefacts that makes them more expressive of a given culture than others of similar origin? Why do some objects retain the power to dazzle, to thrill, to awe - in a word, to communicate - while others lose their eloquence and fall silent, becoming inscrutable or simply dull and uninteresting? The exact nature of the relationship between verbal meaning and visual/material expression is certainly complex, and perhaps never fully knowable; but the very real difficulty of the task

should not deter us from engaging in it.

If the histories of art and architecture are filled with examples of attempts to explain the relationship between form and meaning (among others coming immediately to mind, Lessing and Hegel, Pugin and Ruskin, Semper and Riegl, Wölfflin and Panofsky, Focillon and Gombrich), the history of design is much less prodigiously served. As Daniel Miller has noted, there is a curious discrepancy between industrial society's colossal capacity to produce material goods and its comparative reticence to engage with them theoretically.<sup>2</sup> The lack of any sort of overarching paradigm of visual form and material shape should be recognised as a conspicuous gap in an era so fundamentally obsessed with appearances and possessions as markers of identity. To some extent, this failure has been superseded in recent years by material culture studies and their efforts to examine the role of commodities in defining social relationships.<sup>3</sup> Yet, quite rightly, such studies have tended to take a piecemeal approach and, therefore, largely stop short of tackling the great question of how and why forms express meaning.

Serious art and design history of recent years has similarly tended to skirt the issue by preferring to examine the context in which significant objects were produced and received and not why they might possess some sort of inherent formal value. The break with connoisseurship successfully initiated in art history during the 1960s and 1970s has, since then, borne excellent fruit in the shape of a heightened social historical understanding of the circulation of cultural commodities, which very much became the paradigm of art historical studies in the 1980s and 1990s. To a great extent, design history, as it exists today, is a product of the so-called 'new art history' ushered in by the likes of TJ Clark, Michael Baxandall and Linda Nochlin. By unpacking the discourses and discursive structures surrounding objects of art and design, we learn much about the role they play in determining relationships of class, gender, race and other expressions of social power and control. Yet, this vital understanding is of little help in tackling the other, murkier, side of the equation. Formal values have become all but unmentionable as an object of study, though they clearly remain ubiquitous as objects of passion and desire.

The present text makes no claim to answer a question as pervasive and profound as the nature of the relationship between form and meaning. It merely constitutes an attempt to point in a potentially fruitful direction for formulating propositions in that regard. A number of the ideas underpinning this essay were published previously in a Brazilian article of 1998.<sup>4</sup> Assuming that few readers of the present text are able to read Portuguese, it will be necessary to recapitulate many of those propositions.

### 1 Form and meaning

If it is true that objects express meaning, it makes sense to begin by asking how they are endowed with such meanings in the first place. Are given meanings inherent to given forms and shapes? Or, conversely, is meaning attributed by context and use? This opposition may seem excessively schematic and simplistic, but the twentieth century's understanding of the nature of design was largely structured around such a crude dichotomy. The famous Modernist dictum that form follows function has as its hidden corollary the assumptions that form is inherently capable of expressing meaning and that certain forms are fundamentally related to certain meanings. Thus, sometime between the 1850s and the 1930s, forms simplified to a lowest common denominator of colours and shapes came to be considered expressive of abstract values such as efficiency, universality and even democracy, while complex and ornate forms came to be considered expressive of privilege and reaction. With the crisis of High Modernism after the 1960s, the flaws in this reasoning became evident. Blue circles, red squares and yellow triangles are no more representative of technological efficiency or democratic freedoms than, say, are pink blobs or paisley prints. Much of what has come to be thought of as Post-modern design - from Pushpin to Memphis, from Wolfgang Weingart to David Carson - has revolved around the countervailing presumption that meaning is attributed primarily by context and use, and not by some rigid grammar of form. The latter decades of the twentieth century were able to escape from the stranglehold of the International Style and Swiss-school typography mainly by denying that forms are strictly reducible to pre-determined meanings.

Liberal-minded readers have most likely already concluded (as they are wont to do) that neither position accounts for all the facts, that meaning is determined by a combination of formal values and cultural context. Yes, probably ... but how exactly? Unpacking this equation would seem to be the key to understanding the relationship between form and meaning. Let us begin by examining the issue of inherent meaning. Can given meanings be inherent to given forms? Anyone who has given attention to the 'new heraldry'<sup>5</sup> of corporate identity and logos will have noticed the recurrence of certain forms, shapes and colours in specific contexts, with clearly coincident meanings. Circles are widely thought of as signifying cycles and continuity; bold-faced type as signifying strength and dynamism; the colour blue as signifying cool reserve. Such associations tend to be verifiable from an empirical standpoint, yet exceptions abound. Even the simplest forms clearly cannot be equated to universal meanings. In fact, it would seem that the simpler the form, the more open it is to an arbitrary attribution of whatever meaning might prevail in the immediate historical context. Graphic symbols are the classic case in point: whereas the swastika was a symbol of stability and well being in Hindu tradition, it has become (perhaps irreversibly) a symbol of hatred and intolerance in contemporary society. A similar case can be made for the changing meanings attributed to the five-pointed star, the serpent, the acanthus leaf, the crescent moon or any other symbol endowed with hermetic or mystical import. Moving up the scale to more complex formal values, a better case can be made for inherent meaning.

Take a wristwatch, for instance. Practically anyone looking at any wristwatch will immediately be aware of at least two levels of meaning: 1) that it belongs to a certain class of objects worn around the wrist, and 2) that its intended purpose is the measurement of time. These can be considered, respectively, the ontology and epistemology of the wristwatch; and they are about as close to inherent meaning as an object can get. Even if I were to carry a wristwatch in my pocket and use it as a pocket-watch, taking it out every once in a while to check the time, that action would not negate the first level of meaning. And even if my watch stopped working and I chose to use it as a decorative item or as an element in a work of installation art ('101 Watches' might make a good title) that would not negate the second level of meaning. These two very basic levels of meaning - what an object is and what it is supposed to do - approximate what High Modernism used to describe disingenuously as 'function'. Of course, we know that the functions of an object are multiple and by no means reducible to its workings, outer or inner. If the only function of a wristwatch were to tell time while remaining strapped to the wrist, there would be no point in manufacturing different kinds of watches. There would be only one universal wristwatch (the Functionalist ideal). Rolex and Swatch, digital and analogue, antique and disposable, would all be nonsensical distinctions, which clearly they are not.

Even at such a basic level of meaning, however, subversion and distortion are possible. If I mimic the appearance of the wristwatch, blow it up to gigantic proportions and make a wall clock in the shape of a wristwatch, no one will be fooled by this silly visual pun. No one will confuse my wall clock with a wristwatch, but everyone will understand the camp humour behind the comparison, particularly if the object is made of shoddy gold plastic and reminiscent of the style of cheap imitations of expensive watches (which explains why such watch clocks have become ubiquitous in popular culture). Likewise, if I manufacture a candy dispenser for children in the form of a wristwatch, no one will confuse the two; yet children not old enough to tell time will enjoy the mimicry of strapping a pretend watch to their wrists. These simple examples of slippage between form and meaning are enough to alert us to the fact that visual/material forms - like any signs - are constituted by a complex relationship between signifier and signified. The question remains: can any formal signifier ever be equated with any conceptual signified all the time? This is the issue at stake when we ask if objects possess inherent meanings.

The better class of semioticians will tell us that the relationship between signifier and signified is never fixed but evolving, that a given signifier is capable of changing what it signifies over time, and that signification is really a dynamic process, more akin to a yinyang diagram than to the older schematic model of a word and the object it denotes. Words too evolve and change their meanings over time and place, which is why we take an interest in etymology. Given that fact, it would make little sense to speak of fixed meanings for objects and forms. What, then, are we to make of those basic levels of meaning cited above as inherent? The answer lies, perhaps, in a closer etymological understanding of what we mean by that word. Dictionaries generally define the adjective 'inherent' as: 'existing in something as a permanent attribute or quality' (OED), 'existing in someone or something as a natural and inseparable quality, characteristic or right' (Webster's), or 'permanently belonging (in or to), inseparable, innate' (Cassell). I imagine readers will be relieved to hear that I do not intend to dispute these definitions, but I would like to refine the nuances that separate 'fixed' from 'inherent' meanings. Although the OED actually uses the adjective 'fixed' in its definition of 'inherent', the etymology of the latter word holds a crucial distinction for the present discussion.

'Inherent' derives from the Latin verb haerare (to stick), from which we also derive 'adhere' (ad haerare) and 'adhesive'. Thus, something 'inherent' is intimately stuck to something else but is not, in essence, the thing itself. The relationship of an inherent meaning or quality to an object could be compared to the security plastic in a passport that covers the page with the bearer's identification details. If the plastic is removed, the special adhesive ensures that the photo and printed information are destroyed in the process, thus making it difficult to tamper with that page. This security plastic is important and is used in most passports today, yet it is not, strictly speaking, of the same essence as the rest of the document. Though a part of the passport, it is clearly an extraneous element added to the object in its final stage of production, and not of the same stuff as the printed-paper and card that, historically speaking, have always been the constituent elements of any object defined as a passport.

I would like to propose that any inherent meanings an object may possess are somewhat like the security plastic in passports: if forcibly removed, the object may be rendered useless; nevertheless, it is possible to remove them, if not physically, at least conceptually. Take the example of the wristwatch, cited above. If a watch were shown to the proverbial man from Mars of introductory philosophy texts, it is conceivable that he might not immediately recognise its use or purpose (particularly if he/she/it possessed no wrist). Thus, theoretically at least, there is a point at which the wrist-going nature of the watch becomes unclear. To reinforce the point, the annals of colonialism are filled with humorous anthropological accounts of the odd uses made by non-European peoples of found artefacts left behind by modern explorers and later appropriated with no apparent regard for their inherent purpose: buttons as earrings, guns as clubs, helmets as cooking pots. The most recent example coming to mind is the parable of the Coca-Cola bottle cast from an aeroplane into the Kalahari desert and found by a San inhabitant of the place, depicted in the 1980s film The Gods Must Be Crazy. Prized for its exceptional hardness, the bottle quickly finds all manner of uses, excepting the obvious one of containing liquids, a function little in demand in the middle of the desert. Thus, even so-called functional meanings are rarely, if ever, fixed and immutable. Barring meanings deriving from the actual physical properties of materials (hardness, smoothness and so on), it is difficult to conceive of any signified so essential and universal that it could transpose the barrier of purposeful obtuseness separating us from the man from Mars.

Given an absolute minimum of common culture, on the other hand, the guasi-universal sweep of inherent meanings becomes evident. A human being living today who would not recognise a wristwatch is a pretty far-fetched proposition, as anyone who has travelled the more remote portions of the globe will attest. Even more importantly, what I am here calling the inherent meanings of objects appears to get lost only very rarely over time, at least in terms of our collective knowledge. Though technologically superseded in the age of lasers and Zippo lighters, we remain actively aware of the use of matches, magnifying glasses, twigs rubbed together and even flint as means of generating heat and fire. Though few of us have had recourse to parchment as a writing surface, we do not fail to see the evolutionary connection between graven stone and paper spewing out of the printer. For all practical intents and purposes, such inherent meanings are as good as fixed, since, in thousands of years of human history, they remain basically unchanged. What, then, is the point of creating a hair-splitting distinction between 'inherent' and 'fixed'? The point is that, at some moment in time, every inherent meaning an object may possess had to be attributed by manufacture or use. Whereas a fixed meaning would be a product of the very nature of the object, essential and unchangeable over time, an inherent meaning is very closely aligned with that nature but does not arise from it. Rather, it has evolved over time and place as a function of the relationship between form and context.

A good many of the inherent meanings we attribute to objects arise from their presumed connection to the human body. We take as self-evident that chairs are for sitting, clothes are for wearing, rings are for placing round the finger, tools are for gripping, pictures are for looking, and so on. This is the essential proposition underlying the vast field of ergonomics, and few areas of human endeavour can be more self-consciously body-centred than design. As any designer knows, the problem of how to design a better hammer is intimately linked to questions such as: what are hammers for, how do we use them and how have they been designed in the past? If we go back to first causes, as designers have so often done in breakthrough moments, we find that hammer was not originally an object but an action, not a noun but a verb. The first humans to make use of a hammer took up whatever natural object was serviceable for the task and hammered away. The next step after that was to look for more suitable natural objects, and the next after that was to interfere in the object so as to make it even more appropriate to the task at hand. At some point in this continuum, humans crossed the threshold between being doers and becoming makers; and natural objects were transformed by human ingenuity into artefacts, that is, objects made by human hands. This is the natural scope of design in its broadest sense: to transform objects according to a plan.

Yet, what we have been calling inherent meanings (what something is, what it does) leave little room for design in the modern sense of the term. In the long run, purposefully transforming artefacts tends to lead to a point at which the original purpose is finally achieved. Someday, somewhere, someone came up with the idea of attaching a handle to the hammerhead for leverage, and the basic hammer form was perfected. From then on, most further structural improvements have been related to peculiar sizes and shapes for particular tasks or materials; but hammer design ceased to be a challenge from an engineering or ergonomic standpoint. This is the old idea that you cannot build a better mousetrap. If it were true, as the Functionalists argued, that the purpose of design was to perfect universal forms, then not only hammers and mousetraps but also chairs, rings, clothing, typography and nearly every object that does not involve radically new technology or materials in its production would have been perfected by now or would eventually reach a state of near perfectibility through the continual application of strict ergonomic standards and testing. This is clearly not the case. Historically, the more we develop as a species, the greater the variety we appear to generate of nearly everything. Far from the nineteenth and twentieth centuries' predictions of standardisation and type-forms largely based on the crude technology of the early industrial era - industrialism seems to endow us with the technical capacity to increase exponentially our delight in producing difference.<sup>6</sup> Even wine bottles, cited by Functionalist authorities as a perfect typeform, appear ever more inclined towards change as technology diminishes the cost of differing from the perceived norm. Shaping a bottle vaguely like a flute or like a jug wrapped in straw or like a fish (complete with detailed texture in moulded glass) is not prohibitive from a production standpoint and clearly does not interfere with the object's utility as a container of liquids designed to permit transport over long distances as well as storage over long periods of time.

This brings us back to Functionalism's disingenuous blurring of the distinction between function and operation. A wrist-watch without a strap or a wine bottle without a cork evidently do not fulfil their basic operational briefs; ie, they do not work. This is by no means the same as saying they cannot exercise other functions of various natures, including important psychological, social and cultural functions that many narrow-minded people still write off as being 'merely' aesthetic or decorative.<sup>7</sup> Let us imagine the strapless wristwatch in question once belonged to Winston Churchill and that he used it to check the time before D-Day during World War II. Strapless or not, operational or not, that watch is obviously imbued with a great deal of historical value and will probably find its way into a museum or other collection, fulfilling a new function not as a mere timepiece but as an exhibition piece. Let us imagine the corkless bottle in question once contained the wine drunk by Mr Smith on the night he proposed to Mrs Smith and they conceived little Johnny Smith. Presumably, that bottle fulfils functions more profound than the safe storage of perishable liquids during the many years in which Mrs Smith keeps it on her desk, using it as a vase to contain a single red rose, and even after that when, having been left by Mrs Smith for his philandering, Mr Smith makes use of the very same bottle to store paint thinner in the garage. Such notions of function and use are more in line with an environmentally-aware conception of product life cycle, stressing the idea that material objects never die but, rather, are reused, refashioned and recycled indefinitely, even if only as rubbish and waste. Thus, a single object may come to exercise a number of different functions over time, quite apart from the multiple functions it is capable of exercising at any one given point in time.

The premise of multiple functions stands apart essentially from the concept of inherent meaning, previously discussed. In stark contrast to the quasi-universal nature of those meanings we might justifiably refer to as inherent (for the sake of convenience), the meanings related to Churchill's wristwatch or Mr and Mrs Smith's wine bottle are eminently particular, circumstantial and context-specific. Ultimately, such meanings do not derive from the physical nature and construction of the object but from attribution and use. A good example to elucidate the point is the soccer jersey worn by Pelé during the final match of the 1970 World Cup, which was recently in the international news due to being put up for auction. Despite the fact that at least two or three persons other than the auctioning party also claim to possess the original jersey, it was eventually sold for a substantial amount of money. In this instance, we can attribute at least three levels of value to the object in question, each conveniently quantifiable in relative monetary terms: 1) an old soccer jersey in good state of repair, ie, still wearable probably worth about US\$20-50 in a vintage clothing shop; 2) a vintage soccer jersey for the world-champion 1970 Brazilian national team bearing the number 10 (Pelé's number) - probably worth US\$200-500 on an internet auction site; 3) the actual jersey worn by Pelé during the final match - apparently worth US\$20,000-50,000 at a New York auction of sports memorabilia. None of these three levels of value can be strictly equated to the inherent meaning of the object (roughly: jerseys are a type of loose-fitting shirt slipped on over the head and worn for sporting activities, bearing colours and numbers identifying the players on different teams). The variations between the three levels of value revolve around perceived significance attributed by social and cultural context. Thus, following the etymological logic used so far, such meanings are not inherent but adherent, ie, literally tacked on after the fact.

Strictly speaking, as noted previously, there are no inherent meanings from a rigorous logical standpoint. Practically speaking, however, there obviously are a number of meanings essential enough to be considered virtually inherent (though not fixed in time). Anyone choosing to eat soup with a fork or to wear boxer shorts on his/her head is rightly thought of as a lunatic or a buffoon. Inherent and adherent are probably best conceptualised as two ends of a spectrum, with the precise meanings of specific objects falling somewhere in between. As noted above, such meanings can vary from individual artefact to individual artefact, even if both belong to the same object type (eg, a Parker 51

fountain pen versus Granddad's Parker 51). What is interesting, from a design perspective, is that the vast majority of meanings deriving from the objects that surround us fall decidedly into the adherent end of the spectrum. That is to say, most of the meanings relating to most of the artefacts we know are attributed much more by context and use than by the physical nature and construction of an object. The same dreary desk will mean very different things in a school classroom, in a government office or in a trendy architectural practice. A caricatural illustration of this phenomenon happens every time someone walks into a museum with a design collection and sees an object he/she owns or once owned exhibited as an example of good design, innovative design or as a design classic. The value of that object will almost certainly be enhanced in the mind of the museum visitor by the simple act of taking it out of the context of use and placing it in the context of display. Stepping away from the caricature, and taking a more serious view, the way objects are displayed in catalogues, illustrated magazines and even Sunday newspaper supplements is not so different qualitatively. An object thus displayed often gains a particular status value entirely independent of its physical makeup. Once again, the process involves attributing meaning to an object by placing it in a given context.

Phrasing the issue of adherent meanings in terms of display touches on a raw nerve in design circles, for we are obviously stepping on to the terrain of how objects are advertised, marketed and sold. If a drinking glass that cost less than US\$1 to manufacture in Indonesia and approximately US\$1 to ship halfway around the world is sold in a design emporium in Europe or North America for US\$19.99, this is clearly not the designer's fault, many would say. Fault? The purpose of the present article is not to attribute blame to anyone, be they designers, marketing directors or businessmen, but, rather, to understand better how we attribute meanings to objects. It is true enough that a large portion of the spectrum of adherent meanings is attributed by advertising and marketing, just as a portion at least as large is attributed by the utterly fragmented and unpredictable nature of individual use. What designers have often ignored in the past is that an important portion of what I am calling adherent meanings is attributed by designers themselves as an integral part of the design process of configuration. Blinded by the Functionalist obsession with the purportedly inherent meanings of objects, designers have historically shunned the purposeful attribution of adherent meanings as extraneous, as cosmetic, as mere styling, denying in the process the fundamental nature of what they do. In more recent years, some of the world's most innovative designers have begun to tackle the problem head-on, provoking vital discussions related to the burgeoning field of product semantics. This is the direction in which the present essay aims to head; but, first, we must make a detour. It has been taken for granted so far that objects are endowed with meaning, but it is by no means clear how and why this is so. In order to argue that the meanings of objects are capable of being effectively manipulated as part of a planned design process (independently of marketing and personal use), the logical and conceptual bases underpinning the attribution of meanings to objects must be understood. This is where the term *fetishism* comes in.

#### 2 Fetishism and its objects

Fetishism is something of a dirty word. Beyond the obvious and overriding connotations of sexual deviance, it is also generally employed in a pejorative sense in academic circles and learned discourse. This is particularly true when the topic is 'commodity fetishism', a term originally coined by Karl Marx and still widely used in economics, anthropology and cultural studies. To cite an example, in his discussion of the relationship between material culture and mass consumption. Daniel Miller states that. 'The mundane artefact is not merely problematic but inevitably embarrassing as the focused topic of analysis, a practice which always appears fetishistic.' Further on, he makes reference to 'the kind of fetishism to which material culture studies are always prone, when people are superseded as the subject of investigation by objects.'8 Miller here touches on the crux of the fetishism issue: the very real danger that objects might take the place of people in a society increasingly prone to substitute material consumption for other forms of human interaction. Clearly, no one wishes to aggravate a state of things in which many human beings are considered less valuable than some commodities, as is already unfortunately the case. Nonetheless, the phrasing of Miller's objections is curious. His use of fetishism as a term of depreciation is vague and imprecise. What lies behind the knee-jerk reflex that leads us to reject fetishism outright, to flee from it as something shameful and threatening? I wish to contend here that fetishism is the expression of a particularly relevant analytical concept bearing upon the way in which subjects relate to objects, and abstract to concrete. Bordering on reification and alienation as philosophical categories, fetishism is perhaps the key to understanding how and why objects acquire meaning. A fuller discussion of the origins and meanings of the term may help shed light on this contention.

Fetishism is a curious word. The first use of the terms *fétiche* in French and *fetish* in English dates from the seventeenth century, originating directly from an appropriation of the Portuguese word *feitiço*, meaning a magical charm or sorcerer's spell. As the first Europeans to traverse oceans and encounter little known peoples in the late fifteenth to early sixteenth centuries, the Portuguese were also first to witness the cult of inanimate objects to which supernatural powers are attributed, a practice common in various West African cultures, then and now. Lacking a more appropriate understanding of religions other than Christianity, Judaism and Islam, those Portuguese explorers naturally established a link between such phenomena and their own cultural experience of witchcraft (a witch, in Portuguese, is feiticeira), tempered by the deep-seated fears of popular superstition in the late mediaeval period. When French and English writers began to devote attention to the same phenomena of attributing magical powers to idols and amulets, they made use of the existing Portuguese term, adapting it to its modern form. At the outset, then, the term fetish is related to two distinct but interrelated sets of discourses: firstly, the cult of fetishes, ie, idolatry or the adoration of material objects as expressions of supernatural power; and, secondly, the discursive structures establishing a difference between the colonising self and the colonised other on the grounds of deviance from accepted religious practice.

The term continued in sporadic use in French and English from its inception during the latter half of the seventeenth century until its definitive appearance in print in 1760 in a treatise by ethnologist Charles de Brosses. By 1835, fétichisme appears as an entry in the dictionary of the French academy. Auguste Comte made use of the term to refer generically to so-called primitive religious practices, a usage eventually dropped in favour of the term animism, preferred by British anthropologist EB Tylor in his writings of the later nineteenth century. Tylor restricted the term fetishism to the specific doctrine linking spiritual powers to certain material objects, the oldest meaning still current today. From the late eighteenth to the late nineteenth century, therefore, fetishism was used to describe the attribution of magical qualities to a class of objects produced by cultures other than those of Europe. It is possible to imagine a natural scientist or savant of the Enlightenment age holding up an amulet or idol, to him curious and grotesque, and explaining to his audience that this is what savages called a fetish. The enraptured audience might burst into nervous laughter, but certainly no European of the time was so divorced from religious belief as to avoid feeling a strange mingling of awe and fear in the face of the inexplicable.

It is precisely this sense of eerie mystery that led Marx to resort to the term in defining a crucial aspect of his theory of the circulation of commodities and money. The fourth section of the first chapter of Part One of Volume One of Capital (1867) is entitled, with purposeful obscurity: 'The Fetishism of Commodities and the Secret Thereof'. This section of the most solid and solemn work of the avatar of historical materialism commences with a surprising affirmation: 'A commodity appears, at first sight, a very trivial thing, and easily understood. Its analysis shows that it is, in reality, a very queer thing, abounding in metaphysical subtleties and theological niceties.'9 Attempting to elucidate this seemingly superstitious statement, Marx goes on to explain that objects take on a transcendent value upon being turned into commodities, a quality he describes as their 'mystical character'. This quality derives from the fact that the human relationships inherent to the expenditure of labour are reduced in commodities to an objective quantitative value; and, therefore, the relationship of the producers to the product of their labour is presented not as a social relation existing between people but between things. It is beyond the scope of the present essay to comment on the profound ramifications of this insight. What is of particular interest for the present discussion is the fact that Marx transposes fetishism from its then prevalent anthropological meaning to a new social and economic one. In so doing, he removes it in part from the discursive structures of difference and deviance which applied it strictly to a non-European other and uses it to analyse the intrinsic nature of capitalist society. Marx is thus responsible for shifting the application of fetishism from the realm of the supernatural to the worldly arena of commodities and consumption. Revealingly, however, even in this more materialistic denotation, the term fetishism is not stripped of its mystical character.

Once transposed from the study of other societies to the study of society at large, the next step was for fetishism to be brought even closer to home. Leaving behind the bustling world of commerce and commodities, the term found its way into the bedroom in the early twentieth century, ever redolent of mysteries and queer philosophies. The third major meaning of fetishism - and the most commonly recognised sense of the word today - refers to the practice of deriving sexual pleasure from objects not generally perceived as erotically charged. In the standard clinical diagnosis of this type of behaviour, these objects tend to be either bodily parts of a non-sexual nature (eg, feet, hair) or actual material artefacts, most often linked to bodily parts (eg, shoes, underwear), though certainly not restricted to these. This usage of the term began in the late nineteenth century, notably with Jean Binet, but the main author responsible for making it current was none other than Sigmund Freud. In Three Essays on the Theory of Sexuality (1905), Freud employs the term fetishism to define the practice of using 'inadequate substitutes' as a focus for sexual desire. Justifying the unusual choice of term, Freud writes: 'Such substitutes can, with some justice, be compared with the fetishes in which savages believe that their gods are incorporated.' The term recurs in 1910, in 'Leonardo da Vinci and a memory of his childhood', linking the origin of this practice to the castration complex. Finally, in 1927, the father of psychoanalysis devoted a complete article to unravelling the psychological basis of this sexual complex. The paper Fetishism argues, essentially, that the fetish object

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operates as a psychic substitute for the penis the little boy expects to encounter the first time he sees a woman (the mother) undress. Confronted with the absence of a penis and terrified by the possibility of castration, some little boys refuse to acknowledge the difference between sexes and undertake a powerful psychic effort to deny what they have seen. These future fetishists end up fixating on a given substitute object, generally linked to the last impression before the traumatic viewing, which would explain the popularity of undergarments, shoes and feet as fetish objects.<sup>10</sup> Once again, the merits or demerits of the Freudian model of fetishism are beyond the scope of the present essay. I wish merely to draw attention to the fact that Freud resorted to the term to encompass the idea of attributing a sexual aspect to ordinary material objects.

Recapitulating, then, we encounter three principal historical senses for the term fetishism, namely: 1) a type of religious cult in which supernatural powers are attributed to material objects; 2) an aspect of economic theory explaining the attribution of a transcendental value to a certain class of objects (commodities); 3) a type of sexual behaviour in which the individual attributes a sexual charge to objects commonly considered non-sexual. Thus set out, it is clear that a common thread unites all three senses: in all of them, fetishism is the action of investing objects with meanings not inherent to their nature. The different types of fetishism each attribute a symbolic value - respectively spiritual, ideological and psychological - to the concrete existence of material artefacts. Simply put, they bring things to life. This is to say, in other words, that fetishism as a concept describes the way in which we human beings attempt to include non-human things in our humanity while, at the same time, connecting ourselves to their essential nature and to what we sometimes suppose to be their divine essence. Taking fetishism in a broader sense than any of the three existing denotations of the word, it becomes a useful tool for thinking about the way in which people endow things with meaning. It is worth noting that, although all three senses of the term remain in current usage, none of them has ever managed to attain a positive connotation. Fetishism of any sort is still perceived as something taboo, if not explicitly blameworthy and pejorative. Is this not perhaps because the fetishistic attitude is much more common than we would care to admit?

In light of the previous section's discussion of inherent meanings, more attentive readers will not have failed to notice the obvious parallel between fetishism, as broadly defined above, and the design field. Design is, after all, also a process of investing objects with meanings not inherent to their nature. When someone designs a computer keyboard, for instance, he/she might introduce a number of possible meanings much more complex than what is often disingenuously described as function. Such meanings may range from something as simple as a warning of 'pay attention' by placing a red key in the middle of a black keyboard to something as subtle as conveying concepts such as 'easy to use' or 'modern' through the product's appearance. In the same vein, the design of any book or magazine expresses meanings infinitely more complex than 'open from left to right' or 'this caption goes with that photo'. Modern graphic design disposes of a veritable arsenal of techniques and instruments intended to evoke a given emotional response, and its success or failure depends to a great extent on its ability to carry out extraordinarily subtle tasks such as establishing user identification or transmitting recognisable identities. Thus, in examining any designed object, we are justified in asking ourselves how and why it has acquired the status or significance it may possess. Assuming that an object is capable of transmitting a given psychic charge or emotional content, how and when was this level of signification invested in it?

The parallel between design and fetishism may perhaps raise a few eyebrows, particularly in light of the negative connotations usually associated with the latter term. A further incursion into etymology may help clarify my position. Seeing as fetishism derives indirectly from the Portuguese word feitiço, it is worth considering that word more attentively. Feitico is related to the past participle feito (done) of the verb fazer (to do). Ordinarily used as a noun, feitiço means magical charm or spell, as mentioned above. In this sense, it derives from the conception, common in Portuguese usage, that a sorcerer's spell is 'done to' (in the sense of 'cast upon') someone. In some Afro-Brazilian religions, it is still usual to describe a hex as 'work done' (trabalho feito) against someone. In a more rare and almost forgotten sense, feitiço appears in dictionaries as an adjective, meaning artificial, fake or false - in a related word, factitious. This latter meaning points clearly in the direction of the word's etymological origin, namely: the Latin adjective factitius, meaning artificial. Underlying all these words is the idea that an object is made with artifice, that it possesses the power to do (L facere) something that fools people into thinking it is something other than what it is. The word factitius is defined in Latin as generatum est manu et arte factus. In other words, that which is 'artificial' has been 'made with art', in the sense of cunning. The Latin arte factus is, of course, the root of another group of words including the term artefact, which has been much used in the present essay. This is a different, and more positive, idea of something 'made with art', no longer in the sense of cunning but of displaying great skill and ability, a sense more akin to the modern conception of artistry.

It is perhaps not surprising that fetish and artefact are related by a very few intermediate links in the etymological arena. Schematically represented, the relationship is as follows: fetish < *feitiço* (Port) < *factitius* (L) < *facere* (L) > *arte factus* (L) > artefact

Not surprising, because the idea of an ancient relationship between magic and art is certainly not new. The classic formulation by Ernst Kris and Otto Kurz in Legend, Myth and Magic in the Image of the Artist (New Haven & London: Yale University Press, 1979) suggests that art has evolved historically from magical rituals; and the idea of the artist as someone endowed with the ability to evoke, almost by magic, wonderful things out of nothing is still cogent enough. Art and magic both partake of a process strictly describable as objectification, ie, the evocation of abstract ideas and their transformation into a concrete and palpable form. As part of their historical effort to distance themselves from the traditional arts and crafts, designers have often lost sight of this magical - literally, factitious - aspect of what they do, choosing instead to think of their activities as a species of engineering, guided not by anything as imprecise as creativity and artifice but rather by rigorous methodologies and protocols of a scientific and technological bent. This was particularly true of the various currents of design thinking emerging out of Functionalism between the 1930s and 1960s, some of which remain influential in design education to this day. To a great extent, the result of such thinking has been disastrous, imposing a stranglehold on designers that has only really begun to be broken in the past few decades.

Many, if not most, formally trained designers are still irked by the idea of meddling with the appearance of an object without altering its essential structure. This is especially the case if the object is of a type in which the separation between structure and appearance is extreme, such as an electrical appliance, an automobile or any other product in which the operational mechanism is capable of functioning to a large degree independently of its surface appearance or outer shell. The Modernist dictum against styling continues to hold a powerful sway among designers, stigmatising this type of interference as superficial, misleading and essentially wasteful. It is easy to take such a puritanical rejection of formal values as a positive guideline in this age of increasing environmental degradation and crisis. Historically speaking, design has often been used as an instrument to increase consumer demand for novelty and thereby accelerate cycles of product obsolescence, generating over-consumption and waste. This empirical objection based on past experience does not, however, constitute much of a case for the opposite viewpoint. Modernist design and Functionalist design, as much as any other kind, can be subjected to the same perverse logic of consumerism that dominates the marketplace in the era of late capitalism. Superficiality and waste are not restricted to any one style of design or even to an emphasis on style over substance or form over function. Even the sturdiest, plainest and most 'functional' objects exist within a broader system of production, distribution and consumption of goods that determines how and when they will be sold, used and discarded without much regard for the formal preoccupations so dear to the archaic ideology of 'good design'.

All of which finally brings us back to the issues of the attribution of meanings to objects and of inherent versus adherent meanings. As has been argued above, artefacts possess few, if any, fixed meanings. In the case of a glass bottle, for instance, the only meanings capable of passing the man from Mars test would probably be related to the physical nature of the object: eg, smooth, hard, cool, portable, breakable and so on. Moving on to those meanings termed inherent, the range of signification is still limited. The complex of ideas traditionally associated with the term 'function' comes to mind: eg, the purpose of the bottle is to contain liquids, the bottle can be corked shut, the bottle is big or small, and so on. Certain meanings relating to the bottle's desirability, fashionableness or style as an object (reception) might also be thought of as inherent, as shall be seen further on. Any other meanings the bottle may possess would tend to fall into the category I have labelled adherent; and, of these, there is an almost infinite number. Three random examples, chosen to help establish a range of possible adherent meanings: this is the bottle granddad used to keep his favourite brandy (personal context); this bottle is of sixteenth century Venetian coloured glass (historical context); this is a Coca-Cola bottle (social context). Where do such meanings come from? At what point in the object's existence do they arise? Presumably, different types of meanings come about in different ways.

Meanings are given to objects by their makers, sellers, buyers, users or any combination of these groupings. It is safe to say that virtually all meanings an object may convey derive ultimately from subjective intention, since even those meanings described here as fixed are the result of human activity bearing upon the raw materials of nature. An object in its natural state, such as a stone, only acquires meaning if human beings somehow interact with it. Meaning (as opposed to function or purpose) is essentially a guality of human self-awareness, possessing only an indirect relation to the natural organisation of matter.<sup>11</sup> How, then, are different meanings imputed to different objects at different times? I would suggest that there are two basic mechanisms for investing artefacts with meaning - attribution and appropriation – and, furthermore, that these correspond roughly to different phases in the object's existence, namely: production/distribution and consumption/use, respectively. The dividing line is the point at which an artefact effectively changes hands between maker and user; in modern society, this is the point of sale, the point at which a product becomes a commodity.

Attribution encompasses the various meanings invested in an object during the process of its genesis.<sup>12</sup> Said process begins with the original insight or abstract idea of what the object might be like and culminates in its production, distribution and exchange or sale. Attribution is mainly responsible for what has thus far been termed inherent meanings. The entire design process is evidently included in this category. It is perhaps less evident, though, that marketing and advertising also play a huge role in attributing inherent meanings to artefacts in our society today. Regardless of so-called functional concerns, manufactured products sold as commodities arrive at the point of sale loaded with meanings related to status, style, fashion and performance that are so deeply enmeshed with their structure and appearance that they can be considered inherent, for all practical intents and purposes. Thus, it is possible for a cell phone or a pair of trainers/sneakers 'to look' efficient, modern, sophisticated or even sexy based simply on principles of brand recognition, market segmentation and so on. At first sight, such meanings might appear to fall into the category I have labelled adherent, but they differ insofar as they are capable of being universally recognised across a broad social spectrum independently of the use people make of them. In other words, at the point of their immediate reception, such meanings are perceived as being a part of the object's identity. The fact that a Mont Blanc pen or a Mercedes-Benz automobile are considered elegant and dependable is not solely attributable to their structure and engineering, but also to their appearance, price and the mystique surrounding the brand name. To separate such aspects of their ability to signify meaning from the physical aspects of the artefact itself would be an exercise of extreme artificiality.

Appropriation, on the other hand, encompasses the virtually infinite range of adherent meanings that may be tacked on to an object once it has entered into use. In contrast to the inherent meanings deriving from attribution, appropriation includes all meanings not universally recognised at the artefact's immediate point of reception. These tend to come about on a case-by-case basis, arising from the experience, use and history of a given object. As previously suggested, even the most mundane artefact can acquire a privileged status by association to an important person or event (eg, the bullet that killed Martin Luther King.) A visit to any museum will demonstrate that artefacts are eminently and continuously subject to appropriation, interpretation, reinvention and subversion. Activities as different as using a knife as a letter opener or revising critical opinion regarding a work of art are examples of appropriation, of the way we wrench objects from their context of genesis and force them to conform to whatever purpose may suit us at any given moment. Appropriation is a continuous process of construction and deconstruction of meaning, comparable to the way words are transformed in linguistic usage over time through the delicate give and take between denotation and connotation, slang, colloquialism and erudite discourse. Like certain words (eg, gay), a given artefact may eventually come to mean something entirely different than what it was intended to mean at its initial point of immediate reception. Many artefacts originally produced for purposes of work, sport or warfare and used today as decoration for the home provide fitting examples of the extremes achieved by such changes of signification. No one is shocked to find an antique sewing machine, a duck decoy or a samurai sword adorning someone's sitting room; yet such a practice would be frankly nonsensical to the object's maker.

It may, perhaps, be useful to consider how closely the act of appropriation of an object conforms to the logic of the psychoanalytical concept known as cathexis. This awful word is used in English-language translations of Freudian theory to describe the process of concentrating and investing psychic energy in a person, thing or idea. Falling in love is a classic example of cathexis, since it involves devoting a large amount of desire and attention to the one beloved. even to the point of attributing imagined or imaginary qualities to that person. The term originally used by Freud is Besetzung, meaning 'occupation', especially in the sense of a military occupation of a territory. I find it useful to think of cathexis as a sort of colonisation of an object by the subject. The subject takes interest in an object and invests it with a range of personal meanings, desires, care and attention, expecting to reap the benefits of this effort by eventually taking possession of the said object. The motivation behind cathexis, as far as I am able to understand the concept, is to appropriate the object and absorb it into the ego of the subject, with all its perceived qualities. This is not so different from the logic of consumerism. The consumption of any commodity begins with desire (I'd like to have that) and ends up, budget permitting, with the acquisition of the product, along with all its perceived benefits. (Such a conception adds new depth to formulations like, 'I saw a dress I fell in love with today'.)

In the psychoanalytic sense, fetishism differs from cathexis insofar as the fetishist subject does not necessarily expect to appropriate his/her object of desire. The simple act of investing psychic energy (desire, meaning) in the fetish object is sufficient to gratify the fetishist subject. Once again, this points to a parallel between design and fetishism. As opposed to the consumer, who cathects the commodity and appropriates it to his/her very personal set of meanings, the designer fetishises the product and attributes to it meanings that may survive to a greater or lesser degree over time. Here, we come to the profoundly intriguing question, raised at the start of this essay, of how and why certain meanings endure and others do not.

What makes an inherent meaning more or less capable of resisting the adherent meanings subsequently tacked on to the object through its continued use? Clearly enough, there are different types of inherent meanings. Those invested by advertising and marketing, for instance, may tend to be shorter lived than those invested by design, though we still lack historical distance to gauge this empirically. Even if we restrict ourselves to those inherent meanings arising directly from the processes of design and production, important differences are noticeable from product to product. How can these best be understood and, possibly even, anticipated? This is where the debate on product semantics works into our discussion.

## **3** Product semantics, product life cycle and the ecological context<sup>13</sup>

On a recent visit to a physician's office, I made a detour into the lavatory and encountered an ill-tempered sign instructing patients on what to do and what not to do when using the toilet. Among other provisos, the sign curtly commanded: 'do not urinate on the floor'. This struck me as a good example of how verbal language can be used in a painfully redundant manner. Any human being participating in post-modern culture is aware of the fact that one is supposed to urinate into the toilet bowl. That some people (particularly men, according to occasionally enraged women) elect to do otherwise cannot be attributed to a lack of understanding of the operational principles underlying the water closet as an industrial artefact. On the contrary, the very design of the toilet - its shape, structure and surface, as these have evolved over the past 150 years or so - conveys an ergonomic (ie, body-centred) sense of how the object is to be used. A lid, a seat, a wide opening, a narrow outlet, the enamelled surface: all these elements conspire to suggest visually and haptically how the user should relate to the object. On a common-sense level, this capacity of the object to 'suggest' use or 'convey' meaning is what we have in mind when we speak of product semantics.

In his very apposite discussion of the subject, Richard Buchanan proposes that an object's ability to declare and argue its purpose and use is comparable to the function of rhetoric in verbal language. Thus, artefacts demonstrate themselves according to established notions of technology, character and emotion which Buchanan defines, respectively, as their logos, ethos and pathos.<sup>14</sup> Material forms, both visual and tactile, possess a subtle eloquence similar to that of language, insofar as it is experientially recognisable (we perceive and admire elegance in form, just as we do in speech or writing). Nevertheless, a purported 'language of forms' would also have to be considered very different from verbal formulations, insofar as it is resistant to simple codification, particularly in terms of words. Taking up the same issue from another perspective, Victor Margolin argues that this rhetorical/semantic function of artefacts is being rapidly transformed in post-modern culture. Up to the mechanical age, the traditional relationship of form to meaning established that construction and structure determined appearance to a very large extent. Now, in the electronic age, aggregate forms such as packaging, command systems and interfaces play an increasingly important role in communicating purpose, loosening up the causal ties between form and meaning.<sup>15</sup> A plastic compact disc, for instance, can be the bearer of many different kinds of information (verbal, visual, musical), and its real import is completely indiscernible from just looking at the object. Without the accompanying boxes and printed materials (with all the design challenges they entail), a shipment of CDs would be so meaningless as to be rendered almost useless. In light of such changes, context and environment come to play an even more crucial role in establishing how objects express meaning.

In keeping with the linguistic metaphor of semantics and rhetoric, it makes sense to

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think of objects as being capable of communicating meanings independently of the verbal discourses surrounding them. As Klaus Krippendorff argues in his classic defence of product semantics, objects are very clearly endowed with symbolic qualities that are neither referential nor representative, but immediate and present on a pre-verbal and pre-semiotic level. Artefacts are, of course, also capable of functioning as signs (substitutes), insofar as they can signify (refer to) concepts other than themselves. In fact, they do so constantly, referring to an origin, a type, a style, a maker, and so on. On quite another level, though, artefacts signify nothing more than themselves. They simply are. Setting aside the standard Platonic objections to the concept of physical reality, a three-dimensional object is very much a thing in itself, eliciting concrete responses in terms of touch, taste, smell. A bar of iron can be cold, heavy and smooth and signify little else beyond that. Referent and sign, signifier and signified, are thus fused in a manner markedly different from verbal language or from other systems of signification such as music or images. The self-reference of material objects, argues Krippendorff, makes them resistant to any simplistic attempts at semiotisation and can actually constitute something of an epistemological trap when trying to determine the limits between what an object is and what it means.<sup>16</sup>

Making sense of things, according to Krippendorff, is a circular cognitive process determined by the contextualisation of the object. He identifies four essentially different contexts in which objects may signify in different ways: the operational context, the sociolinguistic context, the context of genesis and the ecological context. This contextual view reinforces the affirmation made earlier that artefacts do not possess a given meaning, fixed in time and place. Rather, they are the concrete expression of intention; they are what Krippendorff describes as 'temporarily frozen manifestations of pattern', capable of supporting themselves to a greater or lesser degree and thereby of surviving successive transformations.<sup>17</sup> This is a crucial point for understanding how objects express meaning. If we consider that meaning is not a stable quantum but something in process, a flow of information given material shape, it becomes easier to make use of the distinction established above between inherent and adherent.<sup>18</sup> As far as artefacts are concerned, information and form stand in a yin-yang relationship, akin to that of matter and energy in physics. Taking up ideas derived from Krippendorff's contextual model, I would like to suggest that the process of signification in artefacts is governed by four essential factors:

- materiality (ie, construction, structure, physical form, configuration)
- environment (ie, surroundings, situation, social insertion, use)
- users (their repertoire, taste, ergonomic requirements, beliefs)
- time (ongoing historical changes in the above three categories).

Only by taking into account the totality of these factors can we arrive at anything like a given meaning for a given object in a given context.

The fact that meanings are susceptible to change over time is extremely important and often overlooked by designers. Traditional views of product life cycle generally situate an artefact's existence between the point at which it is conceived as an idea and the point at which it is discarded as rubbish or waste, passing through successive stages of planning, production and use. A typical schematic representation of such a life cycle might look something like the following:

conception  $\rightarrow$  planning  $\rightarrow$  design  $\rightarrow$  manufacture  $\rightarrow$  distribution  $\rightarrow$  sale  $\rightarrow$  use  $\rightarrow$  discard

In the case of most industrial artefacts, this

entire chain of events might take anywhere from a few days (a newspaper) to a few years (an automobile). The increasing environmental awareness of the past three decades has taught us that it is necessary to rethink the latter end of this scheme. Although a refrigerator may only remain in use for a decade or less, its environmental impact after use may take many decades or even centuries to overcome. Simply discarding an artefact is an obvious waste of energy and raw materials, besides contributing to the pressing problem of what to do with all the resulting rubbish. We are learning that product life cycle must be exactly that: a cycle, and not a linear chain. Recycling, reuse and disassembly are part of the solution; and underlying all such solutions is an awareness of the problem that artefacts do not simply go away when we stop using them. Some artefacts produced by the first known humans remain with us to this day, and environmentally sound design must take into account the possibility that an object designed for use during a relatively short life span might subsist for hundreds or thousands of years after that. Thus, the schematic representation above should be considered open-ended on the right-hand side, with the addition of a stage entitled 'post-use'.

Considering that artefacts can and do remain materially present for centuries or even millennia leads us to the logical conclusion that the above schematic representation should also be open-ended on the left-hand side of the chain, with the addition of a stage possibly entitled 'tradition'. After all, where does conception begin? Where do ideas come from? 'Nothing comes from nowhere,' writes Krippendorff;19 and this statement sums up concisely the historical aspects of the development of artefacts, which can be roughly subdivided into technology, genealogy and repertoire. Every new design is based on some pre-existing object, model or idea. Thus, designers often look at related artefacts when coming up with an idea for a new one. In the event that no similar artefacts exist – for example, when they need to come up with suitable forms for new technologies – designers tend to mimic the past or nature. The evolution of forms based on principles such as borrowing, adapting and disguising is common enough in electronic equipment and other objects that represent technological leaps.<sup>20</sup> If the linguistic metaphor is at all apposite, it stands to reason that no one can conceive forms unless they think formally, that is to say, in the idiom of pre-existing forms.<sup>21</sup>

The existence of trends and fashion is an even more evident aspect of how forms can influence forms, especially when artefacts that possess radically different purposes and structures begin to share common visual and constructive features (eg, automobiles and radios in the 1930s, space craft and furniture in the 1960s, trainers/sneakers and cell phones in the 1990s). Stylistic revival is an equally fascinating phenomenon, particularly when it is less than completely self-conscious or explicit in its motivation (eg, the use of Symbolist and Art Nouveau motifs and type forms in graphic design of the 1960s). Given these and other empirical examples, we must conclude that the schematic representation of product life cycle, shown above, is really nothing more than a brief intermediarv portion of the larger spectrum representing the existence of artefacts over time. In a sort of view from the longue durée, individual artefacts surface as temporarily frozen manifestations of a pre-existing pattern and subside again after use into a limbo state in which their mere existence conditions the broader environment for generating new objects. As Vilém Flusser brilliantly conceived it, every design/object is at once a solution to a problem and the creation of a new obstacle.22

Such a view of the relationship between form and meaning brings us closer to a dynamic systems model, of the kind used in evolutionary biology, than to traditional genealogies of technological progress with their linear teleology of design as continual improvement.<sup>23</sup> This is certainly what Krippendorff has in mind when he suggests the bold conceptual step of placing industrial objects in an ecological context and considering the idea of populations of artefacts interacting in vast cultural complexes governed by deep-rooted mythologies.<sup>24</sup> This more complex model of how objects and people interact paves the way for understanding the world as an artificial environment wholly mediated by ever more intricate interrelationships, purposefully designed. The idea of interlocking systems of designed complexity, initially formulated by Buckminster Fuller in the 1960s, encounters growing relevance in today's information-driven culture of intelligent objects and smart design, in which material form seems increasingly divorced from deeper levels of signification.<sup>25</sup> Form and meaning might, therefore, best be conceptualised as mutually conditioning elements in a dynamic and constantly evolving interrelationship, like hardware and software in the fast-changing world of computers. To use a more appropriate biological metaphor, their relationship is akin to that of genetics and physiology. If it is true enough that genes determine to a great extent what physical bodies will look and feel like, it is equally true that the genetic code only actually exists as a function of the action and interaction of those same physical bodies.

This view of form and meaning as flux is not particularly new. In his famous but little read book *Stilfragen*, Alois Riegl proposed just that: that ornamental forms must be understood as a historical dynamic. According to Riegl, the same form is capable of bearing various meanings over time, losing some, retaining others and acquiring others still. The driving force behind this process, Riegl labelled *Kunstwollen* (the will-to-form), which is, in essence, a combination between what a given form has expressed in the past (attribution, repertoire, tradition) and how it is transformed by the way people make differing uses of it (appropriation, creative adaptation, desire). Significantly, Kunstwollen is, for Riegl, a collective drive: not the product of individual effort, but a socially circumscribed phenomenon. This is not so different from Krippendorff's understanding of product semantics. Although the relationship between form and meaning is not causal and deterministic, we can safely conclude that it does exist on some level. Getting back, then, to the questions posed at the beginning of this essay, just how do objects express meaning, and why do some meanings endure while others do not?

The simple answer is that there is no simple answer. After all, as stated at the outset, such questions are the great challenge not only of product semantics but also of art history and other fields dedicated to objectbased research. We might try to tease out something of an understanding of the phenomenon by examining empirical examples of how the conventional relationship between form and meaning can be manipulated or even subverted. Let us begin by taking a primary example of the attribution of a transient meaning to an object based on purely formal qualities. When a child picks up a crooked branch or stick and pretends it is a gun, he/she is engaging in a type of formalistic mimicry. The stick is not inherently like a gun in any sense, except for the fact that it might be vaguely reminiscent of its general shape, size and form (Gestalt). Certainly, there is no functional or operational parallel; nor is there a connection in terms of the means of production, distribution or use. In point of fact, a stick is not even an artefact but, rather, a natural object. This is a clear case of the type of attribution of extraneous meanings to things that I labelled above as fetishism, in the broadest sense of the term.

Moving on to another example, still in the fertile realm of child's play, let us consider the

case of a plastic doll in the shape of a unicorn. Operationally speaking, the artefact is simply a toy, one among many. It is designed, manufactured and sold in a manner similar to any other plastic toy; and its functional purpose is certainly not restricted or determined by the fact that it is made to look like a unicorn. For the purposes of production, it could very well be shaped like a pony, a zebra or even an elephant. From the standpoint of the child, however, it is a unicorn. This essential and non-negotiable fact will determine whether or not the child takes an interest in the object, how he/she makes use of it and what meanings he/she attributes to it. Contrary to the example of the compact disc, cited above, the toy's real and profound meaning is almost completely bound up in its *material* form and physical appearance. As parents and manufacturers are aware, very similar toys may enchant or bore children depending on the range of meanings - essentially, of the adherent sort - attributed to them. This is why advertising and marketing have come to play such a crucial role in the toy industry. A cheap imitation of the desired toy will certainly not satisfy the post-modern child, regardless of the fact that it may be, for all functional intents and purposes, the same thing.

In both these examples, we encounter at work the fetishistic process of attributing extraneous meanings. Yet, there is clearly a difference of degree in the level of adherence of these meanings. As soon as the child puts down the imaginary gun, it goes back to being just another stick. The unicorn, however, will remain a unicorn so long as it remains present in a cultural context in which unicorns are seen to exist on some level, even if only as representation. This is a marvellous instance of the way in which artefacts are capable of collapsing the semiotic divide between sign and referent. In a very obvious and incontrovertible sense, the object is, in fact, very much a unicorn. Seeing as the referent notoriously does not exist, the sign or representation of it is clearly a thing-in-itself. It is indeed a toy, a doll, but not just any toy or doll. It is a unicorn, and certainly not interchangeable for the purposes of meaning with an elephant or a zebra. To revert to Marxian terminology, the artefact's exchange value is by no means equivalent to its use value or even its production value. Its true value can only be understood in terms of its relative meaning within an ecology of artefacts and users.

It takes no great effort to extend these considerations from children's toys to those of adults - to the realm of design as we know it in late capitalist society. Let us take as an example the infamous three-legged chair designed by Philippe Starck in the 1980s. Much criticised by design traditionalists for its lack of stability (apparent or real), this chair in tubular steel nonetheless partakes of the formal idiom of Modernist design. Reminiscent of Breuer at his best, it looks 'modern' but is anything except 'functional' in the conventional sense of the word. Just another Starckian joke ... apparently nothing more than a play on the slippage between form and function ... yet, is it? Henri-Pierre Jeudy has suggested that the chair's true meaning resides precisely in its negation of conventional function. According to Jeudy, nearly every home possesses a chair no one sits in: a chair used for piling clothes or books, or for some other peculiar purpose. Starck's chair transcends its function by denying it. It looks like a chair but is, in fact, something else.<sup>26</sup> In other words, chairs are for sitting in, except when they are not. The fact that an object upon which no one sits (whether due to its design, its situation or its state of repair) is still identified as a chair testifies to the nature of what I have labelled inherent meanings and to the way these can be linked to the persistence of certain forms.

The preceding examples are intended to demarcate something of the range of debates at stake in any discussion of how objects express meaning. The fact that certain forms may endure as bearers of certain meanings while other such relationships may remain eminently transient should alert us to the importance of better investigating the nature of the subtle and volatile process of signification in objects, often taken for granted as something stable and given. The concept of product semantics has already proven to be extremely useful in this sense, and I hope that the complementary notion of object fetishism may help flesh out the ways in which artefacts are endowed with meaning and these are subsequently transformed. I would like to close the present essay by pointing to the vital importance that a revised perception of product semantics might represent for the present age.

When we look at the ways certain objects are preserved in museums or private collections, we begin to glimpse the immense possibilities of shifting the semantic structures surrounding artefacts. A broken ceramic bowl is rubbish, but a broken ceramic bowl of Etruscan origin is a valuable museum piece. This is partly due to issues of scarcity, of course; but there is more at stake than mere supply and demand. Attribution of meaning is the prime consideration for establishing value in this instance, as in that of almost any other artefact that might appear for sale in one of the great auction houses of the modern era. What is 'provenance' except an account of origins, genealogy, significance? It is a mistake to assume that this sort of attribution of value is strictly the domain of objects dignified by their historical longevity. Many objects are born (genesis) as collection pieces; and any coin collector knows the value of acquiring and preserving a piece in mint condition. In post-modern society, this is true of brand names as well. Names like Cartier, Chanel or Porsche carry unambiguous cultural cachet, readily quantifiable in monetary terms. These are objects to be coveted, revered, preserved and passed on lovingly as legacies.

The contrast between the broken bowl

as collection piece and as rubbish is instructive of how product semantics can be manipulated for the common good. Collected objects are the extreme opposite of discarded objects; yet the material difference between them is often negligible. Is it possible to re-signify industrial artefacts in such a way that they may be made more resistant to being discarded as waste? Perhaps the fact that many people already collect bottle tops, used postage stamps or tacky souvenirs may help open our eyes to an almost infinite range of possibilities for rethinking our use of objects. This is where environmental conservation and the conservation of cultural heritage meet. Objects valued and valueless represent extremes of the way we attribute meaning to artefacts and help suggest how we might reverse the present tendency to consume our material surroundings.

As the ultimate materialist society, brimming with material culture like none other, we are paradoxically poised to discover the vast importance of immaterial culture – commonly labelled, in a reductive sense, as 'information'– in shaping what we call reality. I shall end by quoting Vilém Flusser, once again. The quotation is rather long but much more profound and definitive than any conclusion I could provide:

The prophets called this hold over us on the part of the objective world 'pagan', and objects of use that have a hold over people as objects they called 'idols'. From their perspective, the current situation of culture is characterised by idolatry. There are, however, indications that this attitude towards creating designs is starting to change. Such that designs are becoming less and less 'pagan' and more and more 'prophetic'. In fact, one is starting to free the term object from the term material and to design immaterial objects of use such as computer programs and communications networks. This is not to say that an 'immaterial culture' beginning to grow in this way would be less obstructive: It probably restricts freedom even more than the material one. But in

creating such immaterial designs, the point of view of those creating the designs is, as it were, spontaneously directed towards other people. It is instructed by the immaterial itself about how to create design responsibly. Immaterial objects of use are idols (and thus worshipped), but they are transparent idols and make it possible for other people to see what is going on behind the scenes. Their mediated, inter-subjective, dialog-ic side is visible.<sup>27</sup>

- 1 The present paper was originally presented at the workshop 'From Cyberspace to the Visual Culture of Interface' at the Royal Academy of Fine Arts/School of Architecture in Copenhagen, Denmark, which took place between 31 March and 4 April 2003.
- 2 Miller, D, Material Culture and Mass Consumption, Oxford: Blackwell, 1987: 85-86.
- 3 See, among others, Appadurai, A (ed), The Social Life of Things: Commodities in Cultural Perspective, Cambridge: Cambridge University Press, 1986; Lubar, S & David Kingary, E (eds), History From Things: Essays in Material Culture, Washington, DC: Smithsonian, 1993 and Attfield, J, Wild Things: The Material Culture of Everyday Life, London: Berg, 2000.
- 4 Cardoso Denis, R, 'Design, cultura material e o fetichismo dos objetos', *Arcos: Design, Cultura Material e Visualidade* 1, 1998: 14-39.
- 5 The term is borrowed from Wilkinson, H, "The New Heraldry": Stock Photography, Visual Literacy, and Advertising in 1930s Britain', *Journal of Design History* 10, 1997: 23-38. I have modified its use.
- 6 Whether or not we make use of this capacity is another issue entirely. Ruskin famously argued that industrialism would kill off delight in work, and he might very well still be proved right.
- 7 Any society willing to exclude beauty and pleasure from the list of potential qualities an object might possess or stimulate is very sick indeed. That influential voices of Modernist culture felt comfortable doing so for many decades attests to the troubling streak of paranoid Puritanism and the irrational fear of moral pollution that continue to bubble under the surface of the enlightened West.
- 8 Miller: 130,143
- 9 Marx, K, Capital [abridged edition], Oxford: Oxford University Press, 1995: 42.
- 10 Strachey, J, (ed), Standard Edition of the Works of Sigmund Freud, London: Hogarth Press, 1953: 7, 11, 21.
- 11 The Pythagorean idea of hidden laws governing the organisation of matter such as the Golden Section, the Fibonacci sequence, harmonic ratios, and so on affirms the opposite: that physical nature expresses universal meanings pre-existing human activity. Though tempting, and even plausible, it would seem that such ideas owe more to the human drive to discern order in disorder (seeing the face in the ink blot) than to anything we can use at present.
- 12 I am using the term 'genesis' in the sense established by Krippendorff, K, 'On the Essential Contexts of Artifacts or on the Proposition that "Design Is Making Sense of Things", in Margolin, V & Buchanan, R (eds), *The Idea of Design: A Design Issues Reader*, Chicago: University of Chicago Press, 1995: 173-175.
- 13 The contents of this section of the essay were largely developed over the course of a postgraduate seminar taught by the author as part of the MA programme in design at the Pontificia Universidade Católica, Rio de Janeiro. The author wishes to acknowledge the important contribution of students taking part in that seminar, namely: José Salmo Dantas de Alencar, Helena Cavalcanti de Albuquerque, Fernanda Ribeiro Coutinho, Isabella Vicente Perrota, Luciana Guimarães Preuss, Leila Lembruger Queiroz, Lívia Lazzaro Rezende, Irina Aragão dos Santos and Sérgio Sudilowsky.
- 14 Buchanan, R, 'Declaration by Design: Rhetoric, Argument and Demonstration in Design Practice', in Margolin, V (ed), Design Discourse: History, Theory, Criticism, Chicago: University of Chicago Press, 1989: 91-109.
- 15 Margolin, V, 'Expanding the Boundaries of Design: The Product Environment and the New User', in Diani, M (ed), *The Immaterial Society: Design, Culture and Technology in the Postmodern World*, Englewood Cliffs: Prentice Hall, 1992: 71-82.
- 16 Krippendorff, op cit: 158-159.
- 17 Ibid: 160-162, 174-175.
- 18 The notion of form as a process of 'in-forming' matter is not so divorced from the traditional philosophical opposition between ideal and real forms, bringing it up to date. Cf, Flusser, V, 'Form and Material', *The Shape of Things: A Philosophy of Design*, London: Reaktion Books, 1999: 24.
- 19 Ibid: 175.
- 20 Cf, Forty, A, Objects of Desire: Design and Society Since 1750, London: Thames and Hudson, 1986: 11-13.
- 21 For a fuller discussion of this issue from the standpoint of visual representation, see Bryson, N, *Tradition and Desire: From David to Delacroix*, Cambridge: Cambridge University Press, 1984: chapter 1.
- 22 Flusser, V, 'Design: Obstacle for/to the Removal of Obstacles', op cit: 58-61.
- 23 See Van Nierop, OA, Blankendaal, ACM & Overbeeke, CJ, 'The Evolution of the Bicycle: A Dynamic Systems Approach', *Journal of Design History* 10 1997: 253-268.
- 24 Krippendorff, op cit: 179-183. For an informed and perceptive critique of this concept, see Michelsen, A, 'The Artificial Environment: Smart Design: Design Semantics and Designer-Intelligence', in Weibel, P (ed), *Olafur Eliasson: Surroundings Surrounded. Essays on Space and Science*, Cambridge, Massachusetts: MIT Press, 2002.
- 25 See ibid, and Buckminster Fuller, R, *Utopia or Oblivion: The Prospects for Humanity*, New York: Bantam, 1969, especially chapters 2 and 3.
- 26 Jeudy, HP, 'Philippe Starck: ficção semântica', Arcos: Design, Cultura Material e Visualidade, 2, 1999: 48.
- 27 Flusser, V, 'Design: Obstacle for/to the Removal of Obstacles', op cit: 60-61.