SEMIOTICS OF DESIGN

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I. INTRODUCTION

" We shall take language, discourse, speech etc. to mean any significant unit or synthesis whether verbal or visual: a photograph will be a kind of speech for us in the same way as a newspaper article; even objects will become speech if they mean something " (I).

Roland Barthes, "Mythologies"

Language is generally taken to be the predominant means of communication in society. But we also communicate by non - verbal means. We transmit messages through the languages of posture, gesture, clothing, hairstyle, perfume accent etc. which may sometimes even contradict what words actually say. Also other languages crowd in on us: lights flash, horns hoot, laws restrain, tastes delight or disgust, smells attract or repel. Mans role is one of communication.

Kantian philosophy dictates that perception is not a passive process with the mind as pure receptor but an active proces in which the mind is an agent. Therefore our understanding of meaning in objects does not derive its laws from, but prescribes them to nature. In fact our method of preceiving, which is a contingency of the type of creatures

we are contains an inherent bias which affects what is percieved to a significant degree and therefore a wholly objective view of world is not possible. Language is not merely an incidental means of solving specific problems of communication or reflection but a means by which we adjust to reality. We encode our experienced reality through the use of our specific language and other patterned behaviour characteristic of our culture. We can only understand what is presented to us in this code. Therefore reality is differently punctuated and categorized by different cultures. Actually the entire field of social behaviour which constitutes a culture represents an act of encoding based on the linguistic model, or at least similar to, through which the culture comes to terms with nature. In itself it is a language.

The world does not consist of independently existing objects whose features can be described clearly and individually in terms of aesthetics and techniques and whose nature can be classified accordingly. The true nature of objects lies not in the objects themselves but in the relationship which we construct and perceive between them.

Industrial design then,which is the creation of forms to serve human needs, can emerge as a complex social affair consisting of a structure of codes which generate meaning in a way close to the way language itself imposes its own mediating, shaping pattern on what we like to think of as an objective world. We could therefore claim that the way a designer of a particular culture designs will largely depend on the language of his culture. Since no two

languages are ever sufficently similar to be considered as representing the some social reality this would explain the existence of national design identities; for instance one could claim that the logical modularity of the German language is reflected in their designs or that the increasing vagueness of the American language almost allows the objects they produce to be interpreted in whatever way one may wish to. A detailed study of the relationship between national design identity and language would be quite vast and require a specialized knowledge of languages which is beyond the scope of this thesis.

So nothing can be merely utilitarian: even the most ordinary objects, however artless or innocent of conscious speech on the part of the designer, organise matter in space and in doing so they signify; they issue some kind of message about societies properties concerning human nature, politics, economics, trancending their overt concern with fulfilling their practical aim.

First of all an industrial designed object can be useful and the shape and materials, and every component of shape and material are evaluated with respect to the aim which the object serves. Secondly the object may proclaim its purpose and how it is to be used. Thirdly the object can have an aesthetic fuction in that it is organized in such a way as to attract the perceivers attention to itself and arouse in the perceiver a sense of pleasure. Last of all a designed object can have symbolic functions which allows for a multipilicity of meanings which allow the object to be used as anything from a symbol of social status to an expression of cultural values and beliefs to an exposition of a design philosophy.

The language in operation here, to convey this information belongs to the province of a general science which is semiology. Semiology is the study of sign systems. Its field is enormous ranging from the study of communicative behaviour of animals (zoosemiology) to the analysis of such signifying systems as human bodily communication (Kinesics and proxemics), olfactory signs (scents) and rhetoric.

Semiology postulates a relation between two terms, a 'signifier' and a 'signified'. The relation is one of equivalence and what we grasp is not one term after the other but the associative total of the two which is the 'sign'. In this thesis I shall attempt to formalate a semiology of design by applying the results of linguistics to the domain of industrial design and differentiating this domain according to its special features.

2.THE COMMUNICATIVE ACT

Applying concepts by Roman Jakobson, a prague school semiotician, to the nature of the communicative act in design we can say that it consists of (I) a message concerning the products identity, intended by (2) the designer whose destination is (3) the user. The message is received mainly through the visual sense eked out by tacticle corrections. This is (4) the contact. The message is formulated in terms of (5) a code which is the visual language "spoken" by the product. The message refers to (6) a context (which includes where the object is to be used, the type of objects it is, who is to use it)which enables the message to be understood. For instance the controls one might use in domestic hi-fi might be unsuitable for a cooker because they may not tend to describe the objects identity as a cooker.

The message does not supply all of the meaning and a good deal of what is communicated derives from the context and the code. Meaning,in short,resides in the total act of communication;it will depend on the fact that the six elements mentioned above are never in perfect balance. Meaning may be orientated towards the context in one situation or towards the user in yet another.

Each of the elements has a functional role. The nature of the message is finally determined by the fact that it takes on the functional character of whichever of the elements happens to be dominant. If the meaning is orientated towards the context then

the "referential" function dominates. This can determine the general character of the message such as why the product is used, how the product works,and where it is to be used (e.g. The tungsten halogen tasks lamp (fig.I.) by Keith Crawley). If the communication is orientated towards the designer then the "emotive" function dominates. The products expresses the designers emotional response to a particular product rather than a purely referential description of it. e.g. the " Sistema 45" secretary's chair (fig 2) expresses Sottsass' response to the office environment by giving the chair a humourous, animate image. If the communication is angled towards the user of the product then the "conative" function dominates and the product displays to the user how he should use it. Glen Johnson's electric shower (fig.3)expresses its use and functions psychologically to provide for the user the impression of warmth, comfort and security by using visual words such as temperature gauges, metal levers, valve wheels, taken from the steam engine. If the communication is inclined towards the contact then the 'phatic' function dominates. The purpose of this function is to establish contact (whether visual, tactile or acoustic) between the user and the object. An example of this would be the use of warning light, flashing lights,or buzzers. If towards the message for its own sake then the "aesthetic" function dominates. The object is observed for itself and not in relation to any aim external to the object. If towards the code (the visual language) then the "metalingual" function dominates. The metalinguage speaks about the code. We no longer consider the construction,composition, or details of the first language. The product is a single sign which allows it to be used as anything from a status symbol to an example of a design theory.

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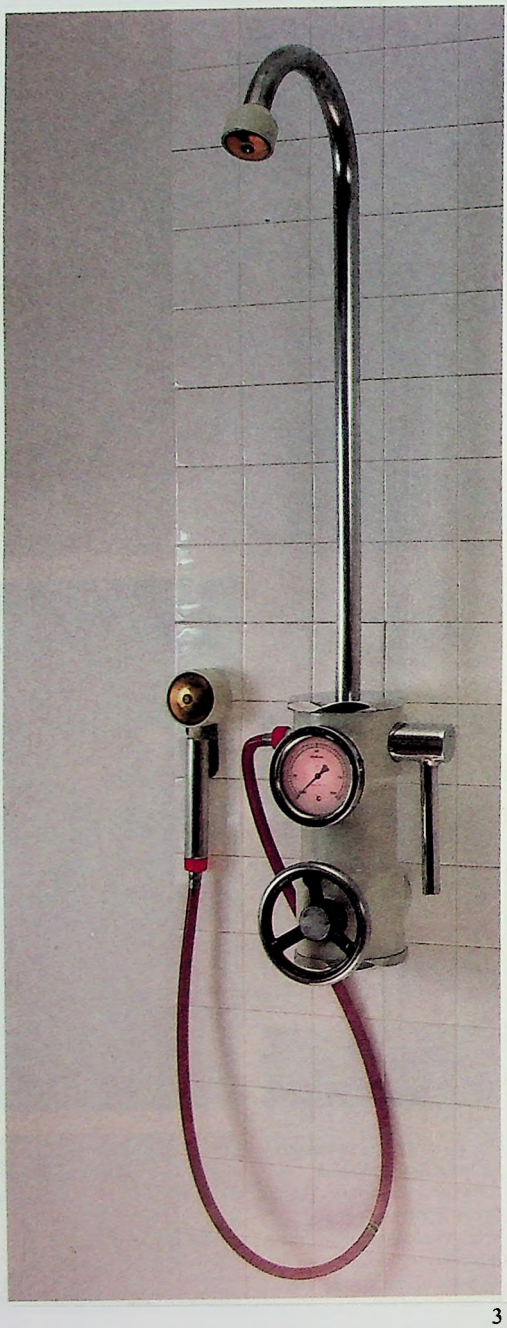

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3. AN ANALOGY OF VERBAL AND DESIGN LANGUAGE

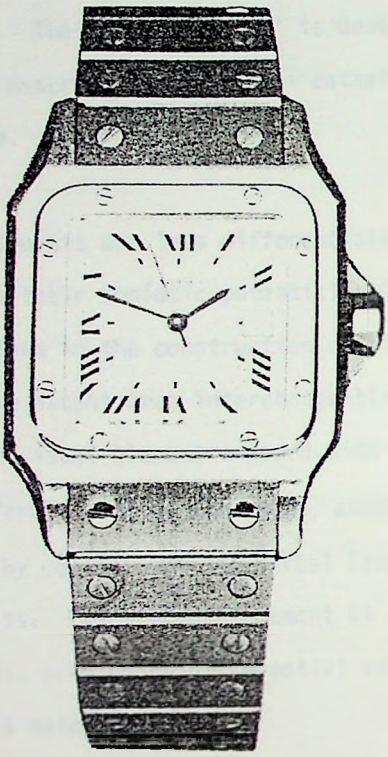
"Whether the different aspects of social life..... cannot only be studied by the methods of and with the help of concepts similar to those employed in linguistics but also whether they do not constitute phenomena whose inmost nature is the same as that of language." (2)

Levi Strauss

The analysis of verbal language suggests an appropriate model for the analysis of design language. One can draw an analogy between the two sign systems. However it is important to point out the differences as much as the similarties as the analogy has only an illustrative value.

Design language has a 'lexicon' of basic visual elements. These are few in number - shape, texture, colour, tone, dot, line, direction, dimension, scale,movement. These are combined in selective choices by the designer to form visual 'words' which are signs that identify the object. Some visual words can be said to have the grammatical quality of being the major statment and therefore have the character of nouns. Some act as adjectives or adverbs in that they modify and enhance the meaning. They are decorative.

There are many different kinds of visual 'words'. We can have old and new words, words of native and foreign origin, colloguialisms, slang, cliches, vulgarieties, witty or shocking words. for instance the instrument panel of the "Tank" watch (fig.4.) uses



archaic words taken from Victorian clocks. Before the First World War wrist watches had been considered effiminate, but after they were used by German gunners, who did not have time to fumble for pocketwatches they gained greater acceptance. The "Tank" watch introduced in 1917 in both name and style reflects the romance of the machine age. The concept 'watch' is described in words originally used to describe the machine - catapillar tracks, nuts, screws, metal plate.

The visual elements are less differentiated than those of verbal language as regards their semiotic potential. Consequently the functions they perform in the construction of visual words are very variable and to some extent even interchangeable. For example, the function of a basic visual element endowed with a relatively independent meaning can be performed once by the shape, another time by line, and still another time by colour. Unlike verbal language, design language is not found on units. Every visual element as soon as it combines with others to form words, acquires a differential value which it does not have in itself, as a material fact.

In verbal language syntax means the orderly arrangement of words in their appropriate form relative to each other. The rules are defined and only need to be learned and applied intelligently. Syntax in the context of design language can only mean an orderly arrangement of parts. There are no absolute rules but there are rules. These are governed mainly by kinesthetic criteria but there are also technical, ergonomic and ethical considerations (within set economic constraints.) So there is a great deal of understanding of what will

occur in terms of meaning if we make certain arrangements of the visual elements. The agencies of kinesthetic syntax are the visual techniques which manipulate the visual elements with shifting emphasis depending on the character of what is being designed and the message to be conveyed. These techniques exist in binarily opposed polarities such as contrast- harmony, balance - instability, symmetry - asymmetry, simplicity - complexity, unity - fragmentation etc. They are not only operative in extremes but can be expanded into subtle steps on a continuum from one polarity to another.

The rules of visual syntax change quite substantially through time. This of course affects the appearances of products. The winds of change are technological advancement, ethical changes, changing lifestyles and the designers own aesthetic preferances, his idealogies, his originality. At any given stage of evolution the syntax of design appears as a co-occurance of older and newer, higher and lower, more stable and less stable norms and rules.

The design group Memphis has done a lot of experimentation with the syntactical requirements of design. They concentrated mainly on furniture as in this area the designer is only subjected to a few basic ergonomic and structural rules and has more freedom to explore kinesthetic syntax. The work of Memphis has some similarities with that of Kandinsky. He realised that the visual language of abstract painting had to have its own laws of construction, grammer, syntax, and his theoretical writings in "Point and Line to Plane" are attempts to formulate these detailing the way in which complex symbols can be built up from simple geometrical elements. But whereas Kandinsky wanted his composition to induce a spiritual and emotional response

in man, Memphis intend a purely sensorial response where many of the visual 'words' they use are emptied of any meaning other than their sensory response.

Usually syntax has been used to create a surface which is a single unit. But Memphis designers have a tendency to see a design not so much as a unit but as a sum of parts. As Andrea Branzi noted they are "putting behind the myth of the unity of a project and concentrating on a free discontinuity of parts with respect to the whole." (3)

Many of the syntactic guidelines for understanding meaning in design stems from the investigation of the process of human perception, an area to which Gestalt psychology has contributed valuable research and experimentation. They investigated how the human organism sees and organises visual input and articulates visual output. They discovered many of the psychophysiological elements of visual syntax and how they influence perception in recognizing meaning in abstract form. Amongst them are man's need for balance in form and structural factors that measure balance; the use of stress (or its absence) to attract attention and reinforce meaning; our preference for the lower left hand area of any visual field; the use of"positive and negative" form in influencing our sequence of seeing and absorbing information.

Visual information in design is not all abstract but may have definable form either through attached meanings in symbols or through imagry drawn from the environment which we recongise through shared experience. We respond to these whether consciously or not with some conformity to their meaning.

Unlike verbal language in which the relationship between signifier and signified unfolds during the passage of time, the visual means is direct in its transmission of messages. Seeing an object sometimes provides enough knowledge to evaluate and understand it. If verbal language is committed to time then design language is committed to space as its major structuring agent in the production of meaning, although the experiencing of time does occur whenever a representation of motion is concerned or if there is a temporal progression in which the user is compelled by the shape of the structure to perceive certain parts in a certain order according to its use or to its aesthetic or symbolic qualities.

To be verbally literate one must learn the basic components of written language, the letters, the words, spelling, grammar, syntax. These elements are principles allow for infinite expression and once in command of the skill in using them one can explore ones imagination and develop a personal style. And so too in order to use visual language effectively the industrial designer must be visually literate. Although there is no absolute external arbitrary structural system as there is in verbal language there is an expansive body of knowledge available to him from which he can learn about the characteristics of the basic visual elements, the structural forces that exist in the interactive relationship between the visual stimuli and the human organism that function both physically and psychologically as the syntax of design language, and also the vast world of coded symbols which man has created arbitrarily and to which he has attached meaning. The visually literate designer can govern his solutions by intended meaning through style, whether personal, company or cultural, or even all three. Visual literacy is at the very scource of the industrial designers identity.

4. THE COMMUNICATIVE SIGN

" The word, in its normal, nonpoetic usage serves communication. It has an external aim: to depict some event, to describe something, to express some emotion, to stimulate some behaviour in the listener, and so on. All this goes beyond the word itself ..... language is therefore a sign-instrument serving an external aim." (4)

Jan Mukarovsky.

A designed object also has a communicative aspect and is therefore a sign-instrument. Concrete, objective information can be conveyed about how the product works, how it is used, why it is used (its purpose), and its relationship with other products, in short, information on the products identity. The object can also be an emotional expression on the part of the designer. The signs that communicate this information I shall call communicative signs. The communicative sign thus consists of a relationship between a signifier and a signified which govern the orientation of the products material in space such that the referential, conative, emotive and phatic functions of the object can be manifested effectively according to the designers intention. The communicative sign operates by refering to a distinct reality and is signified by external factors and relationships.

There are three types of communicative sign that function to and generate meaning. These are the icon, the index and the symbol.

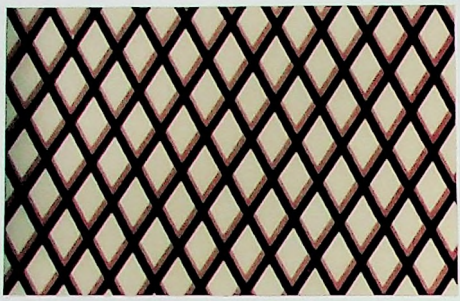
In the icon the relationship between signifier and signified manifests, to use C.S. Pierce's pharse, a "community in some quality":

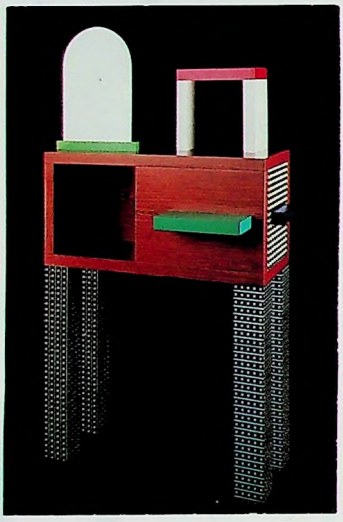
a similarity of resemblance proposed by the signifier to be acknowledgeed by the user. Thus a form can be iconic and express the function of the object in so far as it resembles how the function is provided or in so far as it resembles the perceived idea of what that function is. Using industrial materials and technologies, colours and patterns, Memphis use iconography as a reference to the themes and motifs of contemporary industrial and urban culture in an attempt to communicate with the consumer through familiar forms. (fig.5.)

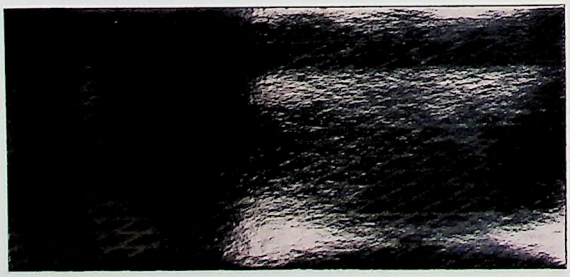
"To draw the fearful face of our time with a hopeful smile,.. ... to understand the young people who drift about with mauve hair and trousers back to front to show that there's something wrong with society.... to enjoy oneself and to relax with the ultra-rapid evolution of style... to go out in the dark to encounter the "fireflies of the night" that flit through the lower part of the city.... where television is everlastingly on.... icons of confusion resting on "crude colours" (5)

Also the diagram is defined by Pierce as a variety of icon in which the resemblance between the signifier and the signified pertains only to the relations between the parts of each.(fig.6)

In the index the relationship is concrete, actual and usually of a sequential, casual type. A flashing light is an index which can direct ones attention to a particular situation, a weather-cock is an index of the direction of the wind, an arrow can be an index of the direction a particular control is to be moved.







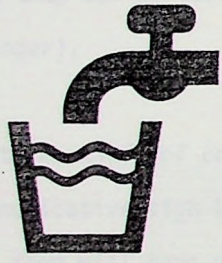
Windshield wiper and washer

Horn

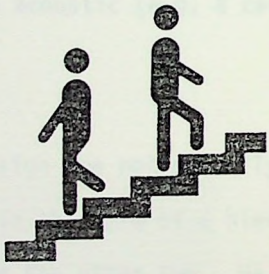
Headlamp cleaner

Rear window demisting and defrosting

Do not extinguish with water



Drinking water (on tap)



Stairs

Waiting room

In the symbol the relationship associating signifier and signified is arbitrary. The signifying connection is made, once it is established by social convention, through habitual usage which leads to its familiarity. There is a "codified contiguity", to use Roman Jakobson's term, between the symbol and what it stands for. The relation is not one of similarity. For example in our society today a mans razor would not sell if it were pink as this is a symbol for femininity. Black metal finishes are most universally used to signify 'serious' and 'professional'. Pastel shades are for toys or for products that want to be used as much for pleasure as for business. Yellow has become the symbol for underwater products (fig.7.), applied now to cameras, binoculars and personal cassette players (Sony "Splashables"). Of course the vast catalogue of symbols in society is not limited to colours. Symbols can be graphical, three dimentional, they can be tactile and even acoustic (e.g. a car horn can symbolize danger).

These three kinds of communicative sign are not mutually exclusive kinds of communicative sign but co-exist in the form of a hierarchy in which one of them will have dominance over the other two. We can therefore have, as Roman Jakobson observes, symbolic icons, iconic symbols etc.

A method of increasing the semiotic potential of the object is to allow the structure of the meaning to be dominated by thematic elements. Creating themes involves putting together a particular combination of visual elements in such a way that there is intelligible structure. Themes are numerous. We can have products that carry themes of high-technology (e.g. the "logica" sewing machine by Giugiaro for Necchi (fig.8) products that look durable, efficient, speedy, 'sexy', etc.

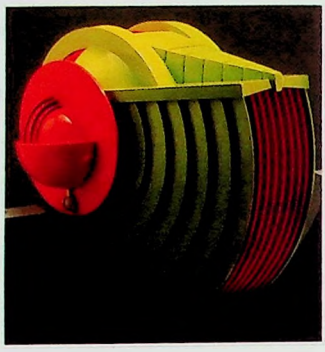
Themes can be applied to a product through the use of metaphor and metonym both of which propose different entities as having equivalent status to that which forms the main subject of the design. The use of themes is evident amongst many of the projects currently being produced by students of industrial design. They are striving towards reintroducing meaning into objects,in revolt against the "black-box' concept of design that characterises so many products nowadays.

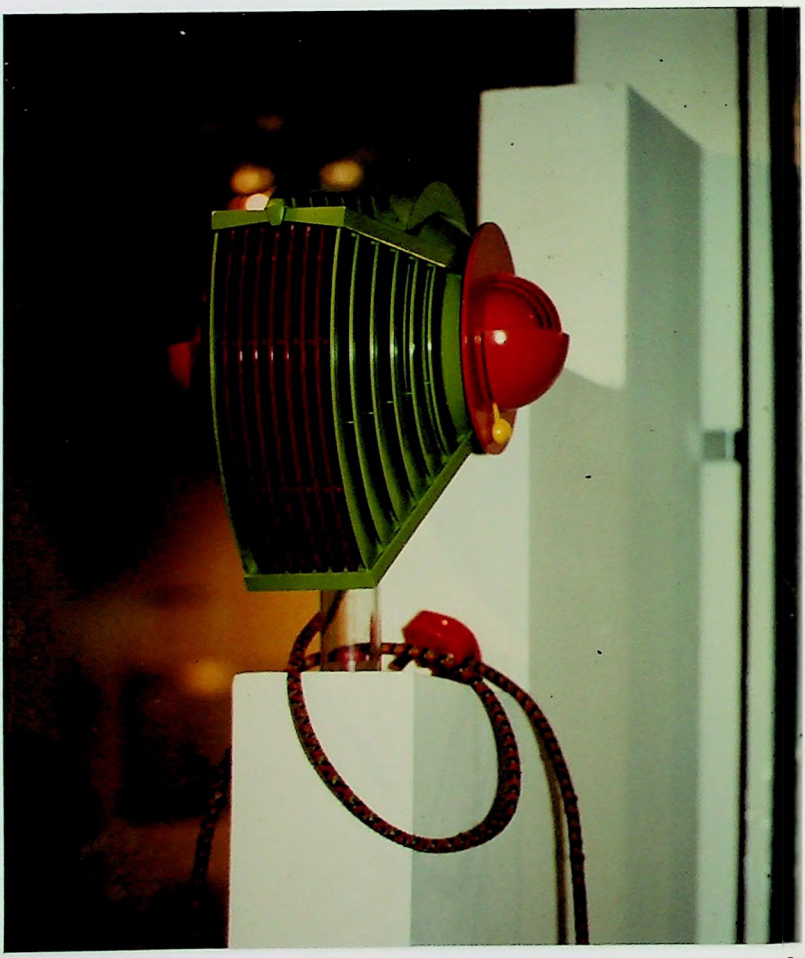
The"Dragon" fan heater (fig.9) by Philip Stanley (student, RCA I985) uses a proposed similarity or analogy between the objects identity as a fan-heater and its metaphorical substitute, a fire-breathing dragon. The yellow switch develops the metaphor; it symbolises a pearl, and when it is pulled the dragon responds to the attempted theft by 'breathing fire!'

Many of the Memphis pieces of furniture confront us with metaphors of the contemporary world. Their busy patterns, myriad colours, and combinations of unlikely elements mirror the hyperactivity, variety, and unpredictability of the electronic age. Even within a single piece we may recall West African patterns, forms reminiscent of American I940s streamline style and colours resembling those of Italian "Sorbetti".

Marco Zanini's ceramic "Colorado" teapot (fig.I0) as well as being a perfectly functional serving piece,offers a kind of metaphor for oral gratification with its combination of nipple and breast and ring-pacifier shapes.

Metonymy is based on a proposed "sequential" (as opposed to





metaphor's "similarity") association between the objects identity and its adjacent replacement. For example, The compact disc player (fig.II) by Keith Crawley, is given the identity of an object that produces music by proposing an equivalence to a french horn,which is a musical instrument. The analogy is made by cross-refering the object with another object which has a family relationship with it.

However, when using themes the designer must not neglect the rules of syntax which allows for a subtle and elegant portrayal of meaning. For instance, if when designing the "Dragon" heater, Philip Stanley had organised the object to be a direct, detailed representation of a dragon (i.e. the rules of syntax are lost) then in all probability the project would be considered kitsch. But by using syntactical guidelines such as the use of the minimum degree of contrast such that contrast remains discernable (the first time we see the object we may not be aware of its metaphorical assocation),the use of economy of structure and other relationships among various elements, extraneous detail is removed, distinguishing features are emphasised and the meaning is conveyed simply, subtley,and elegantly,with an animate rather than mechanical vitality.

The use of themes is a way of moving away from style and towards meaning. This can be a very logical process but as Kandinsky said "the composition can never be entirely rational but a balance of reason and intuition" (6). We are in an age of conscious creation. Callit legitimized styling if you like.

Another method of increasing the semiotic potential of the communiative sign is through the introduction of verbal language. Some times this is done to label controls and describe how to use the product,all of which

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would be fairly meaningless otherwise. But verbal language can also be used to enhance the meaning of an object (e.g.stencil serial number logos signify militaria,with all its macho, rugged implications) by increasing the semiotic potential of the various elements. This is evident in Daniel Weils attempt at demystifying the radio (fig.I2) coloured wires curve like veins inside a transparent envelope, linking internal organs that appear, on closer inspection, to be circuit boards, switches,and speaker grilles.Printed across the enevelope in large black capital letters is the word radio.

The communicative sign also has the capacity to convey meaning through the phychological and the physical effects produced by the object itself organised into visual words that produce rhythms, harmonies, contrasts, etc. This is the most clearly illustrated by certain semiotic effects produced by different colours independent of their symbolic referential function and whether or not the object has a aesthetic function - warm and cold colours, advancing and receding colours and so on as well as the phenomena that may broadly be called synesthesia which is the ability of colours to arouse " affective responses" (the experiencing of sensation of taste smell etc.) and the so called physiognomic perception. These meanings like those conveyed by music can be vague. They can sometimes be described in words subjectively but cannot simply be translated into words. They are different from verbal meanings.

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5. THE NEED FOR THE COMMUNICATIVE SIGN

The Modern Movement was a revolt against deceitful distinctions: the characteristics of one family of product borrowed and applied to members of the other unrelated families. They created rules which did not attempt to explain the problem but simply ensured it would not recur. So they ruled against the use of symbols and decoration which industrial civilization continued to churn out in hollow imitation of a vanished craftsmanship. It was not that decoration was necessarily wrong but because designers had shown that given half a chance their decoration would deny the true identities of their products. The rules were founded on misthrust.

But today new advanced levels of technology allow for an enormous range of formal possibilities, including decoration. The "state of necessity" from which the Modern Movement derived its rigid form has been eliminated. Decoration provided it is controlled and related to the structure and expressive purpose of the form, is permissible and even desirable. Kandinsky said that decoration and meditation, seeming antithesis, are in fact closely related and can enrich one another, as in Oriental and Byzantine Art. In "The Hot House" Andrea Branzi says that decoration can be seen as a producer of information in it own right, consisting of cultural information about the product as well as information on its use, and "linguistic and visual" information.

So too, did the Modern Movement rule that form should follow function. The product is the arbiter of its own design. The free play of instinct and imagination of the designer is overruled. However this

ideal worked very well for so long and is reflected in their simple and elegant use of construction and materials. But this is largely because mechanical products help themselves. When a designer develops a form that follows the function of the products components and 'follows' the physical demands of the user then the product will in most cases inevitably express how it works and how to use it and therefore why it is used - its purpose. From the common ground of engineered components we get the common ground of form.

But there is nothing here to say that, for example, a computer used to track satellites should not look exactly like a computer used to design cars, or even like the word processer used to type this thesis. Yet these are vital considerations. The problem is amplified because industrial designers relish pure form of obscure purpose. Their values, instincts and habits do not apparently favour a proper expression of product identity.

Indeed what is called post - Modernism has gone a long way towards solving this problem, often by borrowing 'words' from the past and using them in a slightly distorted or exaggerated way. But we need common beliefs which reflect the fears, hopes, and values of our times. The future would seem to offer a boom in variety of products, fuelled by the electronics revolution. Not just extra members for established product families but new families of products, things which are altogether unfamiliar. And because the rate of evolution will also increase it will be impossible to argue that on obscure-looking product will become understandable and familiar if it is given time. It is possible to conceive electronics seeping in to almost every product field. There are already solid state watches, solid state touch switches, solid state weighing pads, ultrasonic solid state cleaning action to go with your

solid state washing machine and any number of replacements for the load bearing wheel; magnetic levitation,linear induction, air cushions.

And in a solid state world there will be no longer self-generating sterotypes because the mechanical constraints from which they spring will vanish and the function of electronics may not offer us new constraints in their place. The solution comes through a broader understanding of function. The form of a product no longer needs to have as its priority the expression of size, weight, speed, technical principles, power, method of manufacture, materials, price or any other quantifiable characteric. Instead the product should seek to communicate unquantifiable, symbolic values which express its place in the world, its identity. Of course part of the products identify may still be intrinsic, in that it is say electronic,and every extrinsic value may not be unquantifiable. It is not a new meaning we are looking for but a new bias in the understanding of function. As Sottsass comments "Function is not one measurement more nor one screw less. Function is the final possibility of connection between an object and life." It is evolution of the idea of function not revolution. You could say that it is an extention of the idea that 'form follows function' to 'form follows content.'

6. THE AUTONOMOUS SIGN

Insofar as we view an industrial designed object as a practically designed object, we judge its properties with respect to the aim which it serves. But we can also look at the object in a different way - we can observe the object itself and for itself. All those properties which may have no relation to the practical aim, and were previously overlooked, will come to our attention. Even those properties that have a practical use and were formerly the centre of attention now appear to us in a different light. Being deprived of the relation to the aim external to the object these properties enter into relation with one another within the object itself. The designed object seen thus is not referential in mode. It does not function as a 'window' through which the observer may encounter the objects meaning. Its mode is anto-referential; the object is its own subject; it has an aesthetic function.

We can assert that the object as an aesthetic object is an "autonomus " sign in that it signifies itself.

The designed object is meant expressly to serve as an intermediary between its designer and a multitude of consumers. Jan Mukarovsky explains how the meaning of an aesthetic object is communicated "equally" to a community of people. He defines the sign as " a reality perceivable by sense perception ", for which in the "collective consciousness" there is a corresponding signified. This signified is a "second reality", whose relationship to the signifier is given by what is common to subjective states of mind aroused in individuals of any particular community. Asserting that the aesthetic object is an

autonomous sign would be neglecting the connection with the reality to which it refers. If signs not relating to a distinct reality are possible still a sign must always refer to something if it is to be understood. Mukarovsky claims that for the autonomous sign this "something" is an indistinct reality which is "the context of all phenomena that way be called social, for example, philosophy, politics, religion, economics, and so on." So the understanding that the autonomous sign establishes among people does not pertain to things but to a certain attitude towards things, an attitude on the part of man towards the entire reality that surrounds him. Products can act as stage props for a particular culture or social group, amongst which their social dramas can be played out with the fullest help to the community of actors.

Connection with the total context of social phenomena may be weak as regards certain products. They may be alien to the contemporary system of values and precisely for that reason they are not accepted by society until such time as, in the course of evolution of the social context, they became capable of expressing it.

This was the case with the Sharp QT50 portable stereo radio-cassette-recorder (fig.I3). When introduced to the market in I984 it was fairly radical in its appearance in relation to similar products. It employed neo-fifties imagry (maybe because of the idea that people feel a certain nostalgia for the era in which they are born) reminiscent of functional streamlining,and using "borax" a formal cliche used by American stylists during the forties. The idea behind the QT50 was to replace the hard, sharp-edged "black - box" with a friendlier pastel "soft-box", based on the belief that the public no longer needed,

SHARP
MADE IN JAPAN

nor wanted, to be reassured of the techincal complexity and high performance of their audio equipment. They were wrong and the product was withdrawn.

However, since then Sharp have introduced a similarly styled mono radio cassette player, the QT 2I2E (fig. I3), which has been quite sucessful (especially in the U.S.). It is smaller, assymetrical, and on its initial introduction to the market was coloured differently to the QR50 (red instead of pastel pink or green). But now,it too is produced in pastel colours. The QT2I2 has a 'cute' image that is altogether less alien to contemporary society, and this is the reason for its sucess. Perhaps it is the stepping stone that the QT50 skipped over, an evolutionary stage the QT50 missed. We could yet see the re-introduction of the QT50 and already in Japan there is a flood of "copycat" coloured and sculptured products in the land of pink microwave.

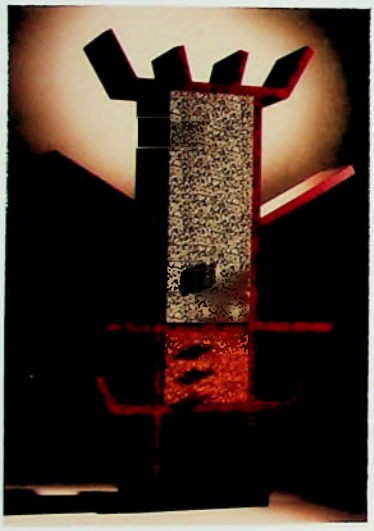
The effect of the aesthetic function of the industrial designed object is to generate a language peculiar to the object. This language manifests a high degree of ambiguity in that the object can be seen as an implement employing denotations about its use etc. and also as a work of art whose central characteristic is connotation ('saying something other than what is overtly 'said') Umberto Eco suggests that the aesthetic message operates as a "multi-order system of signification" which induces in its audience a sense of moving from one level of meaning to another, of continuously transforming denotations into connotations in a kind of infinite progression. Consequently we never reach a final decoding or understanding of the aesthetic message. This has obvious affinities to Roland Barthes account of myth where what has been established as a sign on one level of signification can be "emptied" so that it becomes a signifier

on another level, denotation forming the basis for a"second order semiological system" of connotation.

The aesthetic function of design language is analgous to the poetic function of verbal language,the essence of which, in relation to the total act of communication, is that it is self-conscious and concerned above all to draw attention to its own nature, its own sound patterns, diction, syntax,etc. Poetry makes use of sound not to represent sense but as a meaningful element in its own right.

Much of the furniture produced by Memphis designers could be said to use design language poetically (fig. I4)." It may be defined as the designing of objects but also of colours, domestic perfumes, environmental music,and decoration." (7)

Memphis choose their visual 'words' not because of what they signify but because of what they 'sound-like'. They empty signs of any meaning other than their sensory effect. They have developed a catalogue of signs consisting of colours, patterns, textures and ornament which decorate the surfaces of many of their objects, imbueing them with a sensorial significance unrelated to the objects primary function. They give rise to fantasies,and seem to have emerged from fantasies as much from the study of pop and acient artifacts. Memphis objects as poetic objects are akin to the surreal objects as defined by André Breton; "nothing less than the objectification of the very act of dreaming, its transformation into reality". (8)



We very readily cease to "see" the world we live in and become anaesthetized to its distinctive features. Poetry counteracts the habituating process encouraged by routine everyday modes of perception, it "defamiliarizes" that which we are overtly familiar, by forcing us to rethink the whole arrangement of semiotic possibilities and ultimately that of reality itself. Some of the Memphis storage pieces look as if they could hold about a third asmuch as a far less expensive piece of equal size, bought at your local furniture shop . Yet these pieces encourage us to examine our conventional attitudes towards possessions,to ask ouselves why we own as much as we do; wheter we need to store it all in a orderly manner dictated by mass produced storage pieces. Sottsass has siad, " You have to live with furniture. It should not only surround you " (9).On looking at his "Carlton" bookcase (fig.I5) we see that it can hold only so much. One is forced to simplify his or her library, to pare it down to its essentials. This personal selection of books would fill up the shelves of the totemlike "Carlton " (a weird hybrid of stylized person and tree) which would endow them with the special unity, radiance and magic they have in the readers mind. Memphis challenges us to question the way we live and wants to cure us of our nostalgic yearnings and conventional expectations about objects and about that perfect little world of the domestic interior we so often wish to go back to when confronted with the "messy vitality" (as Robert Venturi calls it) outside.

Memphis designers have an anthropocentric view of the world. Man is at the centre of things controlling objects by embueing them with a

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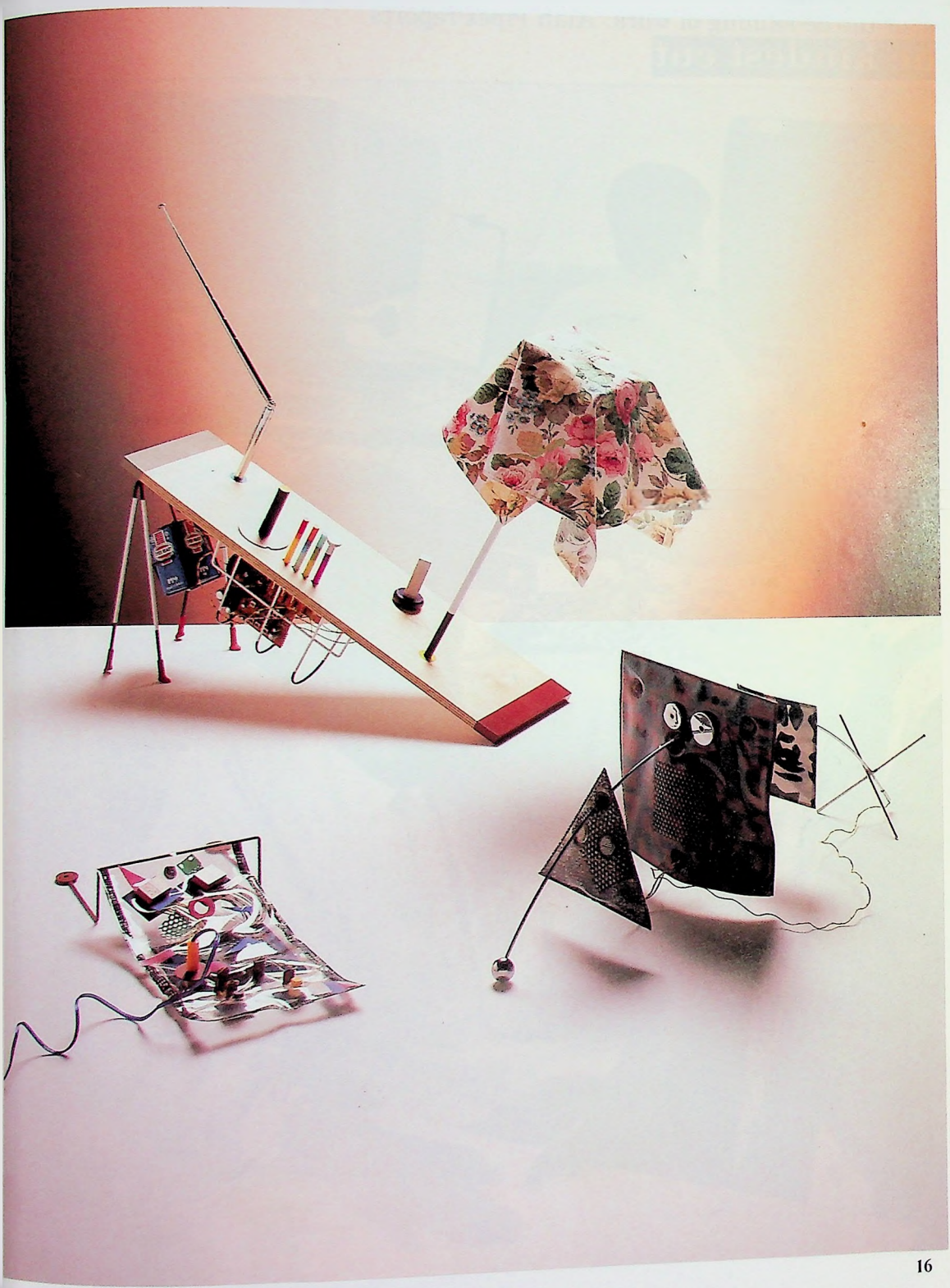
consciousness. They give the consumer a role, a contribution to make, they do not render him idle or redundant with no more to do than to either accept or reject the product.

"As long as consumption is the sole mediating factor man will be alienated from the object "(I0).

Another designer working to combat the isolation between design and the people it effects is Daniel Weil. He considers the users experience of his objects to be part of the design process. His work questions the form of products whose functional components are minute or, in the case of software invisible, adding an aesthetic dimension to the hardware by exposing chips, wires and knobs as objects of interest and pleasure in themselves. This "demystification" of electronic consumer products gives new life and meaning to radio's and clocks (fig.I6) that were previously bland black boxes. In demystifying products Weil is employing a 'regressive semiological system' in that he is filling "empty" signifiers with meaning. Memphis, on the other hand, are concerned with emptying existing signs of their conventional meaning so we can appreciate them for their sensorial qualities alone.



7. THE METALINGUISTIC SIGN

When the meaning of a product is orientated towards the code (which is mainly visual language but can also be tactile and acoustic) the "metalingual" function dominates. This allows the product to be anything from a symbol of social status to an example of a particular theory of design.

Using Roland Barthes concepts,in his account of myth as a metalanguage,we can say that metalangauge in design,is constructed from a semiological chain that proceeded it: it is a "second-order semiological system" . All those signs that signified the products function, method of use etc.,in the first language are summed together to form a "global" sign. This final term becomes a mere signifier, which Barthes calls the "form" in the second semiological system which is associated with a signified, which is the "concept" (e.g. social status) to form a "signification" (e.g. status symbol). I shall call this the metalinguistic sign.

The "Red and Blue" chair (fig. I7) by Gerrit T. Rietveld is a good example of design language as metalanguage. The metalinguistic sign communicates the designers philosophy

The meaning conveyed by the communicative signs of the first linguistic system is complete: it is a comparative order of facts and ideas that postulate a knowledge that this construction of shapes are legs, armrests, a seat and a backrest that constitute a chair.

However you cannot possibly sit on the "Red and Blue" chair and

be under the impression that this is just any old seat. The metalanguage is given priority over the language of the object. The meaning of the first linguistic system is put at a distance by the metalanguage. It is impoverished to become the 'form' of the metalinguistic sign for which the signified concept, philosophical exemplarity, is the driving force that enriches it. We can see the primary colours, the vertical, horizontal, and diagonal intersecting planes as a supreme example of the simple visual language of the de Stijl movement. The meaning of the object as a chair is distorted although not obliterated (we can still call the object a chair). A whole new history is implanted in the object and "you can't help noticing that you are in the presence of art with a capital A, especially when you bark the back of your shins if you try to get up too quickly while overcome with admiration."(II)

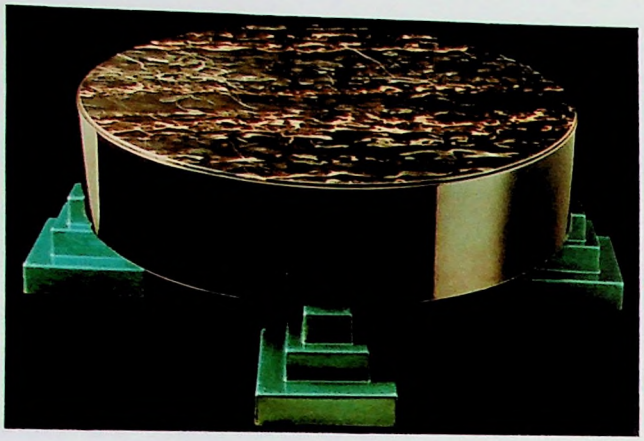
Of course this metalanguage only calls out to those who have a certain knowledge of this history. But this chair can appeal to people ignorant of any of its history. The language is still a "second -order semiological system" but it is diffuse and indistinct. It is the language spoken by an aesthetic object discussed in the previous chapter. The "Red and Blue " chair has also turned out to be a member of that curious class of objects known as "cult objects".

Metalanguage is often used in design to allow products to act as indicators of taste, wealth and social class signalling membership of a particular way of life. Some even may not be especially useful. Yet what were the uses of Palaeolithic man's cave paintings, Neolithic

man's green eye-shadow, and an early Egyptian's jewellery. Does one buy a Rolls Royce car primarily because of its superb quality and reliability, long life, performance, and comfort. The car is more likely to be bought to signify a particular social position or way of life. Yet if it lacked the superb engine qualities and quality of workmanship for which it has become renowned, it would not have the symbolic values that we ascribe to it.

But now in a world where products are mass produced in abundance rather different attributes than quality of workmanship and preciousness of materials have become important. Design, which is capable of creating objects made to perfection, has taken over from craft in determining our precious possessions. These are "cult objects". The creation of a cult object may not be a conscious process. But it may also be a highly self-conscious and deliberate business.

What must be one of the most sucessful products of all time, the Sony Walkman (fig. I8) is definitely a cult object. The Sony "Splashable" range uses metalinguistic signs borrowed from nautical and watersport imagry. For instance it is finished in deep sea diver yellow, a traditional aqua sign for location of lost equipment. The window is similar to early deep - sea diving helmets or portholes in a ship. It also uses rubber covered controls and rubber seals to prevent sand and splashes getting inside. The idea is that there is now enough people to constitute a market sector who spend a lot of their time at the beach or involved in water sports. But the "Splashables" are also bought by people who are not involved in these activities. The Walkman can give the impression of being a sporty, athletic, fun-loving person.



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Some Memphis designs use metalanguage to make political statments. They are a criticism of social hierarchies and the power structures on which these hierarchies rely. This is reflected in their use of materials - a mix of high class and low class elements. For example the "Park Lane" coffee table (fig. I9) by Ettore Sottsass is made of the unlikely combination of fibreglass and marble. By juxtaposing an expensive material with an inexpensive material, Sottsass tries to laugh off the hierarchies of powerful and powerless by which most societies are organized. The conceptual movitation, which is the political statment, as in all uses of metalanguage contains an analogy supplied by history. (the symbolic association of marble with wealth and status, of fibreglass with cheapness and the "tacky masses", the social political situation). This piece also has an aesthetic appeal and the approach at this level is"natural" whereas on the level of metalanguage it is intellectual and imaginary.

8. STYLE

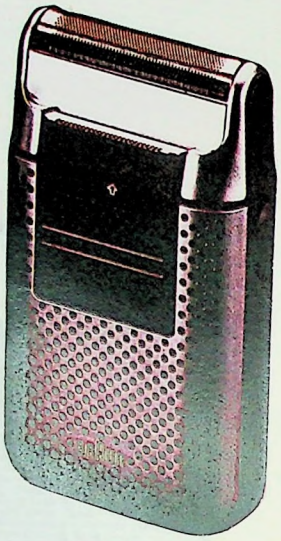
Style in a product is the way the design language is used. It is the designers choice of elements such as colours, materials, shapes, textures,and his synthesis of these according to his syntactical techniques, his intention, imagination, beliefs, experiences, ideologies, his culture. However, the designer performs only one part in the creation of a style; the other part is up to the consumer, whose response or interaction completes the creative cycle.

Style can be individual where the designer creates his own language of design as in the case of Luigi Colani or Daniel Weil. The products produced by a group of designers or by a company can reflect a stylistic unity. One can recognise a Braun electric razor (fig.20) or a Memphis design immediately. Also a particular culture can develop its own style. For instance Finnish designers such as Aalto and Kukkapuro have found a definite style that expresses their national identity, with their respect for natural materials, their subtle sense of proportion and a feeling for quality. Style can be reflective of a particular historical era such as American 'streamlining', de Stijl, the style of the "Golden Age" of Italian design during the 1960's, and the modern 'high - tech' style. Styles often consist of references to other styles. The Post-Modernists often use styles borrowed from the past in a slightly distorted or exagerated way.

Some designers may seek to abandon style altogether. But a styless way of designing proves impossible to achieve since it quickly becomes style in itself. Designing is all style. Such is the case with the work of Chris Barlow who applies sculptural wit to what was hitherto dull consumer electronic products (fig. 21)


BRAUN


BRAUN

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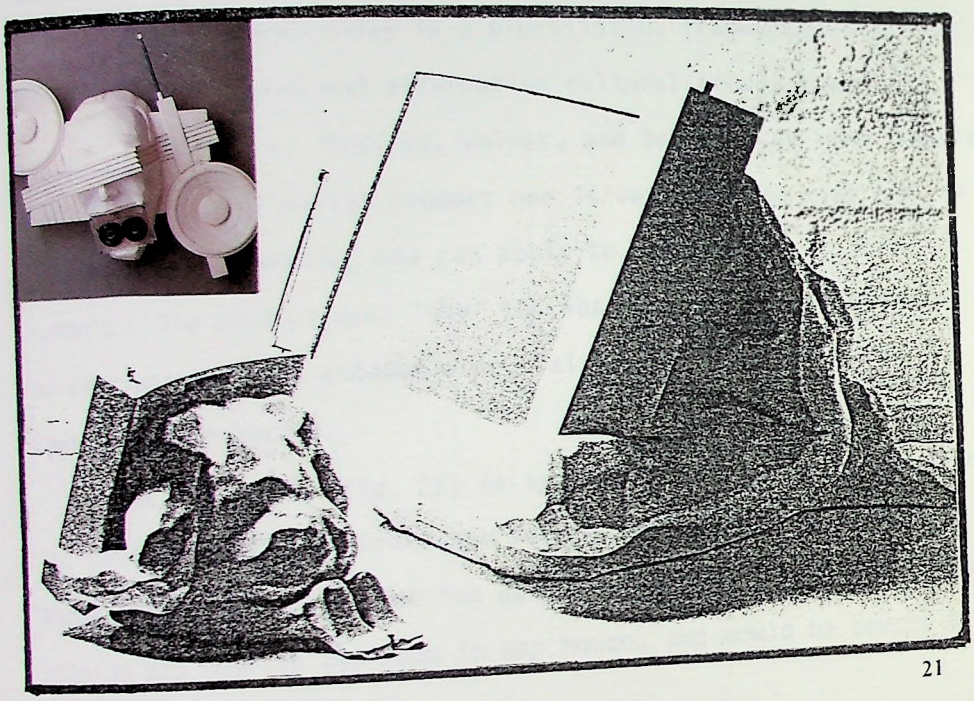


Most products are and have been designed for the mass or global market. Indeed standardization and mass production techniques with their urge to transform different types of behavior into fixed universal modes owe their origin to the existence of these international markets. Designing for these markets means primarity attempting to create products that satisfy everyone. But to do so proves very difficult. Our world today is a pluralistic, fragmented one, full of semantic sub-cultural and alternative cultural groups known as 'lifestyle' markets. Desires, values, and beliefs can vary immensely. To create a global market product one is very limited with regards to the intelligible meaning one can apply to the product in terms of symbols. The product must 'say' the absolute minimum in order to appeal to everyone and thus assumes a neutral image devoid of a definite identity or character.

The Ross radio (fig. 22) is typical of this bland style of design. The design consultants Brand New were given, according to Graham Thomson (director), a brief "to design a product that would look at home in any home in any room in any house, and would be bought by most age groups " (I2).

A questionaire revealed that many of us tend to leave portable radio's permanently tuned to our favourite station so on the new Ross radio all tuning controls are neatly tucked away and protected by a fascia cover. This has added to the products immediate success in the global marketplace because the controls (now hidden away) have always been the radio's main source of semiotic expression. The only real source of expression in the Ross radio is in the form of large radii reminiscent of forties of fifties styles similar to the sharp QT50, but to a lesser extent.


ineering
ineering
neering


M MW LW
1600
1400
1200
1000
800
700
600
530
270
260
240
220
200
180
170
160
VOLUME
AFC
BASS
TREBLE
FM MW LW
TUNING

Much hope is offered to the designer in terms of creating styles for'semantic' groups of people. These groups are not defined according to their level of income or geographical location but according to such cultural similarities as tradition, beliefs, and religion. By seeking out such groups designers can load products with rich and meaningful symbolic information based on the particular groups semantic nuances. For example, in architecture, buildings in which semantic components (like grandeur, prestige, religious meanings) come to the fore - as in palaces, public buildings, churches and like - can acquire a highly symbolic even artistic style more easily and more directly than buildings in which semantic aspects are backgrounded - purely utilitarian structures like factories commerical buildings, and so on.

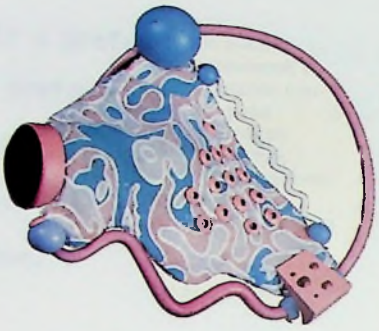
Style may not simply reflect the values and beliefs of a particular semantic group. It can act as an institutionalized carrier and encoder of the particular way of life it proposes to reflect. to respond to the style of such a product is to accede to, to confirm,and to reinforce the nature of that way of life.

One area through which the connection between art and design is made, is fashion, where sensuality and awareness of the 'spirit of the times' combine. Product design is generally a slow process in relation to other areas of fashion. The time - scale between the initial designing of a product and its launching on the market can be up to a year,and even more. But that is now changing.

"Fashion picks up and extracts the more immediate signals of the anthropological condition. Design picks up and redevelops slightly

longer waves. But on the whole everything seems to suggest that the difference in wavelengths is tending to disappear " (I3).

The benefits of globally standard components, in combination with the variety afforded by new flexible manufacturing processes and the introduction of computer aided design, all can speed up the design process and allow for more imaginative, artistic, even fashionable products to be produced in smaller quantities to suit the physical and emotional needs of semantic groups. The hair - dryer (fig.23) by Ken Dixon, uses a soft silicone rubber casing that can be printed with different patterns to correspond to changing fashions. Matthew Archer, an RCA graduate has turned the computer into a fashionable item (fig.24). The pouch is leather and contains the segmented components for a miniature computer. The white discs store the data and the dagger -like instrument is a single - handed keyboard. This opening-to-art in product design is significant because it represents the first signs that the super - rationistic, anti - nature, mechanistic world view of designers is beginning to soften.



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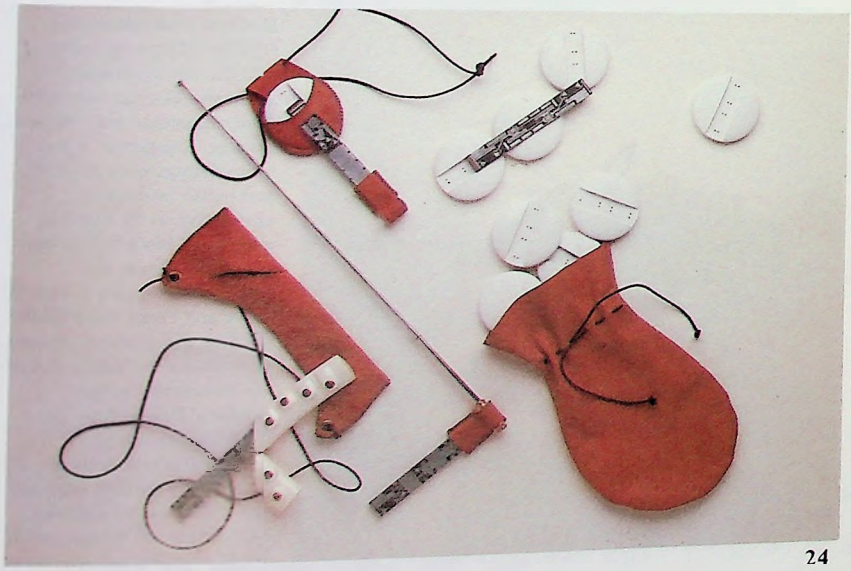

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9. CONCLUSION

This thesis is only a preface, a preface to the semiology of design language. As all prefaces it is incomplete,and aspires only to lightly trace a path which leads no further than to show its importance. It only hints at the semiotic potential of the designed object to convey rich linguistic information.

I have discussed the various types of signs and the different levels of signification in design language. On the plane of analysis these could not be confused whereas it may very well be that on the plane of reality they overlap, interact, enhance the individual qualities of each other and are therfore inseparable.

In the very nature of things form and function have always been united. And so too can the industrial designed product emerge as an ambiguous object expressing this duality; as an implement of use and as an object of beauty, as structure and as symbol, as practical function and as meaning. Yet still the information conveyed by this complex semiological system is essentially practical while more meaningful information is confined to art.

The need for meaning through expression remains constant in every culture. Man must have meaning, value and purpose. It is the role of industrial design to provide these and like the other arts it is very capable of doing so, especially because of its wide dissemination throughout society. It can enhance every dimension of human life by influencing the ergonomic, aesthetic, psychological and social qualities.

Designers can take one of two routes. They can present an established view and perpetuate an 'establishment' scheme of values, serving as an out-of-date model for our world, or he can look at the nature of communication itself and get involved in the dangerous, exhilerating activity of creating our world now as we go along, bridging the final gap between design and art.

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