Design as a socially significant activity: an introduction

CLIVE DILNOT

Preston Polytechnic, Division of History and Theory of Art and Design, Corporation Street, Preston PR1 2TQ, Lancs, UK

In understanding design–society relationships it is crucial that we grasp what we are talking about when we use the word 'design'. Too often the term is used not to denote the activity of designing but either the results of that activity (designed products) or the problems which originate that activity or both. But considered in this way the design process disappears from conceptual view. This lack of reference to design activity as such leads to ambiguities in formulations such as design-and-society as to what is meant in a particular formulation of the term. At the same time the related use of analogical models to explain or account for design prevents real understanding of what design is. The significance of design can only be understood, it is argued, by focusing on design activity. But once we do focus on design activity we find it has a wider social significance than has previously been thought.

Keywords: design theory, society, design activity

What follows sets out the background issues to those that will be discussed in a paper at the Design Policy Conference. There are two reasons for this arrangement. Limitations of space in the conference paper restricts the depth of arguments that can be presented. Such presentations are excellent for introducing hypotheses but less good for explicating in detail why such a hypothesis should be necessary. Second, the positive arguments as to how design should be thought of as a 'socially significant activity' in some senses derive negatively from the problems of current design–society understanding. Only towards the very end of the paper does the subject which will form the content of the conference paper emerge—ie a new argument as to design's social significance.

THE PROBLEM STATED

In attempting to explore the social and political implications of design policy two things are essential. First we must try to comprehend the character of design–society relationships. By no means reducible to simple formulas which merely assume what we mean by either 'design' or 'society' or their coupling, this highly complex question necessarily comes, or should come, before any serious inquiry into the social and political implications of design policy, or indeed into attempts to formulate policies for design development. It is after all this relation which underpins both these general relations and the series of specific sub-relations—education, evaluation, political, etc—with which we are concerned.

This basic relation forms the context in which these other series of relations operate; it is the prior relation which in the wide sense determines the form these sub-relations take (even if we sometimes like to act and think as if these had an independent reality). Crucially too this prime relation determines the meaning we give to relations within these areas: design is after all a social activity carried out for social ends. Questions of evaluation, of education cannot be understood without an explicit or implicit model of design–society relations coming into play. (It goes without saying that the rejection of the social dimension is simply another version of this relation.)

Of itself this question requires that we try to define what is actually involved in this relationship, that we try to formulate how, exactly, 'design' relates to 'society' in our time, to ask for example whether this relationship is in anyway causal on either side—or reciprocal and interactive—ie, does design in any way form society? or does society impose its form on design? Is design determined by, or relatively autonomous from or wholly autonomous from, society? Is this relationship formed on or around a single linkage (say that of designed products and society) or on multiple relations—eg do multiple facets of the design process *in toto* relate in complex interactive patterns to a number of aspects of society—the economic, the technical, the cultural, etc—such that in the end the simple formula design-and-society becomes almost meaningless, a shorthand coupling that actually tells us almost nothing but which betrays, in its emptiness, our cultural situation of precisely not adequately understanding this complex relation?

What do we mean by 'design' ?

Before asking even these kinds of questions we must ask what we intend when we use a coupling like 'design-and-society', and we must ask what we mean by, and what

 0142–694X/82/030139–08 $03.00

content we think is implied by, each element of the term in the senses we commonly use it. This, also requires us to compare this content ie, that which we derive from reflection on how we 'naturally' or commonsensically use the terms, especially 'design', with that which reflection on what design is (or what design phenomena are, or what design does) gives us; to consider the gaps which appear between our tacit sense of design as a complex, multiple activity 'what many feel, touch upon, but hardly articulate'; 'design' as a term 'which is a noun and a verb, and also one which denotes a form of representation, an activity, a practice, a product, etc, at one and the same time', and its public explications (which in turn react back on our tacit sense distorting it and modelling it to fit the explication), the neat formulas (design is . . .) which at one and the same time both 'obscure the immensely complex and varied division of labour at the basis of any productive activity'[1] and prevents adequate formulation of what design as a generic activity is or is characterized by.

Gerald Nadler pointed out that 'those of us who believe design is a discipline have a major task to perform before acceptance can be expected in academia, in the world of practice, and amongst top management and government policy makers. This task is to define the phenomenon about which the design discipline is concerned'[2]. This necessity, and I think we can take it as nothing less, serves as a yardstick against which to measure the way in which we fairly indiscriminately use the term design.

Consider for example the way we use the term in the context of our usual discussions of 'design-and-society'. When we use the word here we seem to be referring either to the relationship of the design profession and/or designers' work to society (design-and-society as design work in society, design as improving or adding to, society) or to the relationship of designed products to society (designed objects as good for society—economically, technically, etc). Recently, following work done by Archer and others, a third possible referent—design-and-society as design skills in society—has been added to this list. But instead of clarifying possible ambiguities at the level of general usage this has merely added another level of possible ambiguity as to what is actually intended in any particular usage of the formulation.

Confusion in the design–society debate

At this point confusion can enter the debate. When we use phrases like 'Is design a political issue?' or 'How can design evaluation improve decision making?' or 'Will design education make public participation easier?' it is not at all clear what we mean by design in each case. Are we in fact talking about design skills in the sense of those elucidated by Archer *et al.*, or about the design activity either cognitively, 'creatively' or in relation to professional activity, or about the results of design activity, about products? Clearly there are problems here.

Even more problematic is the sense that latent in the phrase, in the ways we use it now, is the sense (and the paradox) that in referring to design, which is something that most of us tacitly understand as an activity, activity, ie the design activity, vanishes as such. We can see this in an example. If we ask the related question 'What is the social significance of design?' then the usual replies to that question will refer the questioner either to the products of design activity (the results of the design process; objects, systems and their social value) or to the problems design 'solves' (social, technical and human problems and needs which designers tackle and which are important as problems) or to the uses to which designed objects are put (the needs which designed products or systems satisfy, the social value of the material realization of these needs in forms which enable the maximum satisfaction given the available constraints). In other words design as such, ie design activity, what occurs in design, disappears. Design is defined in terms of something else. With the possible exception of those answers which might be given through reference to design skills, design's significance appears to be very difficult to pin down and to be capable of rationalization only through reference to things outside of itself.

Design as product design?

In a sense the formulations listed above, particularly the equation of design with the products (literally) of design activity, may be seen as right and proper. Is not design after all an ends-oriented activity, one defined by the this-sidedness of its thinking, by its ability to effect realizable solutions to concrete human technical problems, solutions that are realized of course in material form in products or systems?[3] Design is after all about the material transformation of the world.

But the obviousness, even the correctness, of the argument should not make us lose sight of its limitations in terms of understanding or explaining what design is or what design phenomena are. The obviousness of this empirical equation—design = products—makes it easy to forget that commonsense phenomena cannot be assumed to be objective. Commonsense relations do not possess any existential modality over and above the fact that they are first and foremost products of typification, that is to say of habit. The naturalness that commonsense relations accrue to themselves is in the last resort, spurious. (After all it is still commonsense that the sun goes round the earth, not *vice versa*.)

Commonsense relations are produced in our experience of the world but that experience may itself be false or incomplete and is certainly subject to social, that is to say, historical influence. The commonsense associations of design now are not those characteristic of say, seventeenth century associations, whcih would more immediately be with planning and order, as opposed to chaos: 'God's design appears in nature'. This point is useful to us in that it indicates that the natural linkage between design and its products may not be as it appears, that this obvious relation should not be allowed to obscure the fact that while design must, as a material activity, be thought of in a material not to say materialist manner, the identification we make between design and products may be obscuring some important aspects of design activity and design reality.

The weakening of design understanding

In pointing to the origin or results of design activity rather than to design activity itself, not only does the process so to speak disappear from conceptual view but it becomes then (as of course in one sense it merely is) simply a means to an end, a technique of doubtful value in itself, whose value lies only in its ability to effect a concrete solution to

an existent problem. But this leads to a number of problems.

The effective devaluation of the design activity in practice devalues the designed object. Or, more precisely, if mystifying the process of design in marginal cases increases the value of the designer (designer as mysterious, creative, problem solver . . .) and *in toto* the bracketing of design, its removal from the realm of the normal, of that which is talked about in the non-design world, marginalizes design activity. Design becomes something, as many will have experienced, on the outside, exterior to the 'natural' understanding of governments, industry, educationalists.

Obscuring the design activity obscures even professional understanding of what is taking place in the design process. However much we try to redefine the problem as the design-problem, the solution as the design-solution, much of the time our formulations include both the design content of these and their content as problems, as products etc. At the same time, in explicating design in this way such formulations tend to destroy or at the very least weaken, the fragile sense we have of design as a complex interactive activity.

Design as a process?

Since these are important implications its worth exploring them in a little more detail. First, as Archer points out, at least from the designer's perspective, problem and design problem cannot be equated;

> 'the problem' in a design problem . . . is not the 'statement of requirements' but obscurity about them. Nor is 'the solution' the means ultimately arrived at to meet those requirements

but

> a requirement/provision match that contains an acceptably small amount of residual misfit and obscurity.[4]

Thus if we are to talk about design as problem or design in terms of solutions, which do we choose to equate design with? In practice of course we have to model their interaction. Archer argues that two sets of axes exist in the design context, one which contains the 'traditional' problem (list of requirements) and solution (as product) and another which connects design problems as problems of clarification about requirements and design solutions as the process of fitting requirements and provisions to achieve the lowest possible mismatch between the two.

> The design activity is commutative, the designers attention oscillating between the emergent requirement ideas and the developing provision ideas, as he illuminates obscurity on both sides and reduces misfit between them

Archer's observation is of enormous practical import. It can explain, for example, problems in design in terms of design failures as failures to understand the difference between, or failures to relate dialectically the two notions of problem. (One thinks particularly of housing design where the search for clarity of requirements leads to simplification as clarity is taken at the same time to be a simple list of requirements; in the process the subtleties involved in both the list of requirements in the client's sense and in true clarification of obscurity with respect to requirements are lost).

In this context it is useful first because it breaks with singular notions of what design can be equated to, second because it helps throw attention on to design as a complex interactive process, third because, as we shall explore in more detail later, it breaks with the socially given definition of design in terms of static parallels and emphasizes instead design as an active process; from design as fit to the given (ie to the given list of requirements), to shaping the given in the process of clarifying requirements and matching clarified requirements with provision. This view, Archer's commutative model of design interaction, helps to reverse the assumptions common until recently, that the 'associated internal operations' of practical problem-solving activities like designing 'merely parallel concrete operations and are correspondingly simplistic'.[4]

Besides containing an extremely naive view of practical thinking/activity this view clearly models the culturally dominant opinion that designing–making is a second class activity in our cultures. C P Snow coined the phrase 'the two cultures' and referred to the alleged gap between the arts and the sciences. In all the references to this phrase since then—and to this alleged divide—hardly anyone has pointed out that whatever dispute within the academy between the arts and sciences, the real separation is not between them, but between literacy and numeracy accepted as academic disciplines or areas of research, of social and above all, cultural value, and the world of making, of 'imaging' which is not even allowed inside the walls of the academy and is given no cultural status. One significant example of this is Raymond Williams' book[5] *Keywords* which discusses terms dominant in present day discussions of culture and society. Williams, Professor of Drama at Cambridge University, UK, does not list 'design' or 'technology'.

This is of some consequence both for design practice (it indicates its consistent cultural underevaluation) and for design and especially design–society understanding. The pitifully thin and lowly regarded language which we possess to discuss design and/or objects and/or the complex cognitive-practical activities involved in design has led both to the lack of discursive power for design (ie it has no purchase in cultural conversation—and cultural in this sense includes the dominant social economic-technical culture) and also, because the concepts and categories available with which to conceptualize design virtually do not exist, to the attempt to give design method and design discussion credence both socially and theoretically, by using categories not drawn from or peculiar to design activity itself but from 'related' areas. These created categories and concepts—most obviously design-as-art, design-as-science and now design-as-technology—at best analogical, at worst metaphorical, have (as I have pointed out elsewhere) added little or nothing to true design understanding.

They have however, within the social context in which design operates, been destructive of our tacit sense of design. This context, with its own dominant form of reason (technical reason; 'commonsense rationality') metonymically selects aspects of the total process to stand for the whole; and seizes in this case on the most visible and obvious aspect, design-as-forming activity performed on products, reducing design to this equation. Thus the sense of design as a pluralistic and multiple activity, a synthesis of heterogeneous activities defined not by the separate activities but by their integration, is quickly reduced to a singular activity—design is . . . and, because design lacks its own conceptual establishment without

which it cannot keep intact the wider sense, design becomes associated, as we have seen with models outside of itself: design-as-art, design-as-product.

Lack of social dimension in design understanding

This in itself raises a whole number of issues which cannot be gone into here. In direct relation to the problem of design-society understanding, and to our underlying problem of defining design phenomena (for as Gerald Nadler rightly insists we must define 'the phenomenon about which the discipline is concerned', the assimilation of design activity to the models first, of design-as-art, second to design-as-science/design-as-technical activity, has developed tendencies within design to create a conceptual/categorical language, and attitudes of mind, which divorce design—or tends to do so—from its socio-economic context. Nothing illustrates this better than the lack of attempts to model design as a socio-economic activity. This remarkable lack, and it is when you reflect that design can only be a social activity, throws attention on to the background socio-economic determination of how we understood the design activity as a technical activity (whether as an art or science) ie one performed on objects rather than in the world. The history of this determination remains to be written. Of its efficacy there can be no doubt. Let me give some examples.

Of the articles that have so far appeared in *Design Studies* virtually none (to my recollection) have dealt with design–society relations in any depth (other that is than from an orientation to solving technical problems in the context of design activities which have an unavoidably social content). Of Archer's list of 10 significant areas of design research activity, as given at the DRS Portsmouth Conference in 1980, there is no mention of design sociology and no explicit sense of the social as a content in the other design research areas. In the universities, in sociology departments, while teaching and researching in the sociology of, say, art and literature, flourishes there is virtually no reference to design. To my knowledge there is only one postgraduate student currently studying the sociology of design. Lamentably the recent rise of the history of design as a disipline in its own right has not resulted, in general, in a wider understanding of this problem. As pointed out earlier[6] design history has followed design practice, has taken its a-social understanding of design as its own. Thus, by and large, though there are now important exceptions, this area is not yet contributing its full potential to the understanding of these relations.

It is important to grasp to what extent this is a cultural problem (in the widest sense) rather than simply a 'failure' of intellectual disciplines. As hinted earlier, objects (I include within this term all designed manifestations whether plans, models, images, products or environments) are not well regarded in our theoretical traditions. Intellectually they appear to be both of no interest—because they appear or, better, are maintained to be, without speech content, 'merely functional', 'the prop against which social action takes place'—and simultaneously, impervious to analysis (what is it that an object means?). The insight of a Marx for one that objects literally objectify us ('what they [men] are, therefore coincides with their production, both with what they produce and with how they produce it') has been largely lost to the human sciences. This insight has almost no bearing (yet) on the paradigms that dominate design theory.

This brings us to another of the paradoxes that bedevil design's attempts to understand itself. The equation of design with designed products and the use of the latter as the foci for explicating, rationalizing and justifying, design–society relationships; what might be called, not unfairly, the designers or the Design Council view of what design consists of, is not helped by this lack of object understanding. Again this is not confined to the design area.

Douglas and Isherwood, from the joint perspectives of anthropology and economics have recently discussed this problem at length.[7] To this we can add Susan Willis's comments in a review of the work of the French sociologist Jean Braudrillard.[8] Both, in essence, make the same point, ie that we are a commodity culture distinguished by a high ability to invent commodity form (design) and commodity vocabulary (advertizing) but with a low understanding, conceptually, as to what objects are, especially of what they are, what they do, in the social context. Hence, despite our stress on design-as-products we still find it difficult to understand them. This irony is exaggerated by the fact that we still attempt to base understanding of design and of design–society relations—and use this 'understanding' to underpin policies for design development—on product analysis even where, one might almost say especially where, the product is separated from the context of its operation, ie the social environment. It is hardly surprising then that we neither possess very satisfactory answers to the complex questions as to what designed products do nor much understanding of the design contribution to designed form.

This last appears wholly paradoxial—after all should not designers be at a stage of understanding what it is products do, if design thinking revolves so much around the product—until we realize that what is unique to designed products, as against non-designed products, is the specific contribution the designer and the design activity makes to the constitution and form of the product. In other words designed products are differentiated from non-designed products by virtue of the design activities materially embodied within their formal organization. But, if we are to read out, so to speak, these design activities, to comprehend design through its embodiment in produced form, if we are then to differentiate this contribution in order to be able to say this is design's contribution, this is what design has done here and this is significant for reasons *x, y* and *z*, then we need to have some prior model of design activity and of the latter in relation to a model of all the other forces constitutive of product form/product existence.

What does design do?

The significance of this in relation to our problem is given if we look at how we attempt to understand what design does. We have already seen the confusion—or, at the very least, potential ambiguity—that exists in regard to what design is, where it should be located. Precisely the same order of confusion underlies attempts to delineate what it is design does.

Perhaps two senses dominate ideas as to what

design does. On the one hand there is the clear sense of design-in-society, the sense of the design process or its results as benefical to society/industry, of the designer as therefore a technical, economic or social problem-solver, as synthesizer/organizer of product elements and of the designed product as that possessing good fit to its users, good integration and organization of constituent parts, high levels of clarity about requirements and about the requirements–provisions match possible in this context.

Here design is seen as a more or less instrumental activity, a necessary element in production, whose role, at least in economic terms, is even more confirmed both in terms of marketing and in terms of design's objective role in locking in assembly costs. In this sense design is a technical activity, precisely akin to, and with little more or no more significance than, say, production technology or marketing; an integral aspect of the instrumental production process.

Also implicit within our sense of design is the sense that the design activity has, and designed products are (thus) endowed with, values over and above those of the merely instrumental. We are all familiar with this sense. It is probably the raison d'etre of most of our involvements with design activity rather than technology pure and simple. Design we believe, explicitly or implicitly, is 'more than' mere technique; the sum of the synthetic or integrative activities performed in relation to a product or system has a greater significance, we feel, than the simple sum of their parts. Stanley Morison, for example, the great typographer, was in no doubt that design in typography or printing, what he called 'fine' printing 'adds something to what the careful printer has accomplished'.[9]

But the problem is how do we articulate what this 'something' is which the design process 'adds' to the product. Designers are notoriously weak at explaining this. Morison, in this example, just goes on to say that fine printing 'can be much more than' ordinary printing. Even when attention is focused on the products of this additive activity we get little further. To continue the example, Morison says of the works of fine printing only that they express 'logic, consistency and perhaps, personality'. Now we know what he means here, we can sense that 'logic, consistency and perhaps, personality' are appropriate terms to indicate, if not describe, the contribution design makes here. But the gap is precisely that opened up between the odd term or two which throws attention on some area of our tacit understanding of designed phenomena and which helps us recognize 'good design', and the adequate description of it. The problem is of course that the 'something' which the design process 'adds' to the phenomena to which it is applied is bafflingly difficult to quantify or even to describe.

This is a problem of practical as well as intellectual interest. If design, or what design does, cannot be described, how can it be justified, either within the production process or within society at large, or to educationalists? This problem was after all a spur to the very development of design studies. Archer recalled[4] that 'the motive for my entering the field 25 years ago . . . was essentially ends directed . . . I was concerned to find ways of ensuring that the predominantly qualitative considerations such as comfort and convenience, ethics and beauty, should be as carefully taken into account and as doggedly defensible under attack as predominantly quantitative considerations . . . '.

The impasse in design understanding

Archer goes on to recall that the problems that stemmed from his solution (design methods) had less to do with how 'correctly they may describe the flexibility, interactiveness and value-laden structure of the design process' than with the fact that they (mathematical or logical models in this case) 'are themselves the product of an alien mode of reasoning'. We are back at an impasse. Product analysis *per se* does not reveal the richness of the design process or the design activity in any conceptual terms than can be used to justify design or to ground design policy decisions.

On the other hand, analogical reasoning, though it might provide insight in the particular sense, similarly destroys the reality of the design process forcing the latter into moulds of its own shaping. There is a temptation then to reject reasoning. After all it appears possible to design without knowing what one is doing (see Jay Doblin, 'Although I designed hundreds of successful products for major corporations, it suddenly occurred to me that I didn't understand what I'd been doing').[10] The results of attempts at design rationalism are so ambiguous (and in some cases so negative) that an anti-rationalist argument like that recently revived by Abel[11], who argues that the project to 'rationalize' design, 'ie to make design explicit . . . to resolve the design processes which are at present unclear . . . is not necessarily the most appropriate or helpful interpretation available', can have some purchase.

Abel champions tacit knowledge, as in other circumstances I might. But the problem here is that when we are talking about design policy we are not talking just about designing, but rather about the external relation of the design world to worlds 'outside' it—society, industry, education, the technological disciplines, etc. In this context explication is vital; the 'resolution of design processes which are at present unclear' is a primary task in constructing a design vocabulary: a conceptual language that can ground our arguments.

Here it is crucial to understand the significance of concepts. As Raymond Williams has usefully pointed out words are not merely so. That is, words—or at least some of them, keywords—do not merely describe things, rather they work to circumscribe the activities, which they appear only to describe or cover. Keywords—in our case words like design, theory, objective—'are significant, binding words in certain activities and their interpretation; they are significant, indicative words in certain forms of thought'[5].

Words and problems then are tied together. If problems of conceptualization, of understanding, 'could not be all understood simply by analysis of the words . . . most of them could not really be thought through . . . cannot even be focused unless we are conscious of words as elements of the problems'. Words, then, structure experiences. A form of knowledge 'is a distinctive way in which our experience becomes structured around the use of accepted public symbols' and these—and we can instance design as one—constructed from words-as-concepts and which include massive aphoristic and tacit contents, 'generate in their cognoscenti distinctive and characteristic modes of structuring, experiencing, knowing, reasoning and operating'. If then we are to construct a design form of knowledge it is clear that this has to break the impasse noted above, to reconstruct design in its own terms. Central to this is the re-orientation to the design process, to the design activity since it should now be clear that it is this

element that needs to be brought to the surface, to be articulated.

We are aware that it appears to be much easier to discuss design with this element tacit (at best) within the discussion. But the foregoing discussion will have been wasted if that view can survive to this stage. If both the results of design activity and the problems that originate it have a good deal more material reality that the design activity, what has been discussed should have revealed this as a misleading path for design understanding. If we are to understand design–society relations, and satisfactorily construct the social significance of design within its own terms we must alter the case that by 'design' we will usually mean, or will mean in practice, discussion of a problem-solving, product-creating activity which is itself barely conceptualized, where it plays the minor rather than the major role in the discussions.

THESIS

The problem elucidated in rough form above appears to admit of only one solution, ie reversal of the conventional analogical cover set that incorparates design as a subset of something else. If recent literature has fortunately more or less finally demolished the possible theoretical case for most of the analogies in common use, in more general terms, the dominance of analogical thinking will no doubt continue until we can theoretically and 'conversationally' reverse this process.

One example is that the lack of ability to propose a counter cover set to the design-as-science model has led to the proposition of design-as-technology—an absurd notion but one given credence because of the obvious technological content within the design ambit. The example given here indicates that the necessity is not simply to propose design's reality, but more than this, to reverse the whole conceptual picture we have of this relation. The absurdity of the design and technology model, for example, lies not in the fact that design is not a technological activity, but that the assimilation of design to technology, design as an aspect of technology, has the relationship the wrong way round. Design is characterized precisely as more than technology. The characteristic of technology is its one-dimensionality, its orientation towards increasing technical efficiency and its inability to absorb criteria into the technological model which are not performance orientated. Design, by contrast, is a multi-dimensional activity characterized precisely by its ability to synthesize heterogeneous criteria from a number of different orders (technical, economic, humanistic, etc). Looked at in this sense design is the prime activity of which technology, the special orientation of technical activities towards increasing control over systems, is but a subsection.

The ground on which such a hypothesis is based must use the insights of Archer and others regarding the coherence and distinctiveness of design as an activity in its own right, ie 'that there exists a designerly way of thinking and communicating that is both different from scientific and scholarly ways of thinking and communicating, and as powerful as scientific and scholarly methods of enquiry, when applied to its own kind of problems'. As already argued it is this mode of thinking and communicating which distinguishes design. To be sure design is normally associated with a material subject, ie material culture, but clearly in itself this is not necessarily unique to design. Design thinking/communicating is, however, distinguished by its relation to its material embodiment in the world. This relationship is operational but also transformative and interactive or reciprocal, ie design thinking and communicating has its ends in the material transformation of the world, or better, has its ends in the desired transformation of human social relations achieved through (in design's case) transformation of the material surroundings.

Design in the world

However, what distinguishes the present moment in design thinking is that this relationship, or, more accurately, the pattern of this relationship, the sequence—design thought/design transformation of material world/change in human world—may be on the point of change, so that the future sequence will run: design thinking/change in social world at level of concepts/categories etc/change in material human relations (including physical change in material culture).

This possibility would change the potential significance of design, which historically has been seen as contained in the sense of 'planning', a sense that gradually declined with the onset of industrialization, where the notion of the product gradually came to play an increasingly significant role (design as the forming of the product). Movement towards a 'post-product' society, ie to one distinguished by a more explicit social management of man–environment relations, is likely to bring back this historic sense of design's significance. Design becomes once again a means of ordering the world rather than merely of shaping commodities. In this context the significant level of transformation lies at the level of concepts: ordering, planning, is centred upon, obviously, concepts of order and of transformation. In this context design thinking has the same operative value as design forming did in the age of products.

In so far as our own design realities anticipate this likely future hypothesis (and in a large number of ways they clearly do) this model of design significance is applicable to our current situation. This implies then a comprehension of design based not on the products of design activity (we would comprehend them separately as products and set up research projects with anthropologists, sociologists, economists to do this) nor on the problems design seeks to solve (which we would comprehend in an appropriate interdisciplinary organization) but the activity itself at the level of its operative, and transformative, thinking and communicating. We are taking design's 'reality' to be not primarily its material signifiers in the world (products) but its cognitive and communicative realities.

Design and forming

Ironically, far from breaking design's links with the concept of 'forming', the latter move actually leads to a reconstruction, and an extension of that concept. The notion of form, of design-as-forming is central to design self-understanding. At the level of product manufacture design is that which, if nothing else, endows products with form. It is finding the correct form (or pattern) which distinguishes 'good' design.

Form is part of our sense of design as more than mere technique, which is itself indifferent to the anthropocentric fit of form: stream-lined forms constructed from wind tunnel tests are indifferent to whether or not we find them beautiful. From a design point of view form models

(embodies) the complex fit achieved between requirements and provisions and the bringing of both to some kind of clarity first, and synthesis second. Form models the fit between the orders of requirements and solutions required by the problem. Socially, even in the slightly debased understanding we possess of it today, form expresses the social content of the designed phenomena. The product based understanding of form reduces it however, and allows it to succumb too easily to aesthetics on the one hand and to the consequent scientistic reaction that eschews form on the other. This loses, to a large extent, forms social significance.

Stephen Yeo, the historian, has shown how it is the forms in which needs are met (organizationally, materially) which characterize a society or a culture or the tone, or attitude, of a society (and of course in practice it is the form that a society takes that always concerns us as inhabitants of that society). Yeo gives a sharp example[12] in regard to forms of production. '"Co-operative factories of the labourers themselves", the Co-operative Wholesale Society (1863) and local retailing co-ops, have been ways of producing, distributing and using basic goods such as food, soap or clothes, as have Marks and Spencer and Unilevers. However they are obviously not the same ways . . . a society in which one was dominant and the other recessive would not be the same as one in which the rules were reversed'.

It would be a mistake to read this example of forming, social forming, as belonging to a different order of forming from that which design deals with. The comparison to product form notwithstanding, form here is to be thought of as the end of all design activity; forming is the activity which all design thinking undertakes. But forming in this expanded sense, conscious ordering of material and social materials for human ends, is basic to human activity and is related, indeed indivisible from man's 'essence' (in so far as we can use this concept) as a praxiological, ie a transformative being (one defined by his ability to transform his given environment, endow it with meaning and to form it in congruence with desired patterns of organization). Form is here a concept central to human ontology. All forming can be described as design activity. As an activity, forming links a reflective consciousness, which is practically and operationally orientated with the ability to imaginatively model possible tranformative solutions, to the ability to embody these models in actual material (or organizational relations). Put this way we can see that the design process as we know it is itself a model of wider processes. This in turn grounds the argument we made earlier regarding technology-as-an-aspect-of design.

Design and the social control of technical systems

The social significance of design then lies within this extended notion of form, a notion of it as extending from the material forming of products and other aspects of the environment (in the context of comprehending the social role that this plays—thus the necessity for a parallel theory of the activity of material culture in relation to social organization) through to the activity of forming-as-such (where design models human praxis in general).

This has some effect on how we think about society. To the extent that we think about it as coming about by random actions, accidents and suchlike, the concept of design is almost irrelevant, it is saved for those small areas of life where some control over the material environment seems possible. Conversely, to the extent we see areas of human life, material or not, as subject to human organization (either actually or potentially), then design as cognitive model of the forming process is highly relevant. Crucial border areas here are, for example, the question of technological systems and their control. The imperious logic of technology constantly threatens to persuade us to see large scale systems as unformable in this sense. But this is in part because we have little comprehension of how such systems can be controlled *from within.*

The mono-logic of the technical system appears to disallow social values from being considered except as 'ethics' or 'social control' brought in from 'outside'. Reconsidered from within the design perspective however, ie the technological project rethought as a design project, this problem of the exclusion of social values disappears. Design as a synthetic activity oriented towards anthropomorphic ends, an activity fundamentally defined by its ability to synthesize discrete areas of knowledge, value systems belonging to different orders and conflicting requirements, can assimilate the technological difficulties, balancing the prime technical requriement of increased efficiency against the wider requirements of technical efficiency in relation to the total social context.

The significance of design as a synthetic activity

Thus the second order of design's wider social significance is in terms of design activity's synthetic abilities. This is a far too rich and complex area to be developed here, but a few points can be made. If we are to ask: what is the unique cognitive-epistemological significance of design, we must locate it in three areas: first, in the area of cognitive modelling and all that involves (which opens up the possibility of exploring 'imagination' in new ways); second, in the self reflective yet operative orientation of design thinking (the interaction of thought and the world); and third, in the quality of synthesis. This last issues a challenge to the dominant western-analytical logos as it does to the conventional ways in which we split up and separate both the elements of discourse—norms, values, facts etc—and their interaction with other levels of information. Design is significant socially, in that it models synthesis, and materially embodies it, and acts *as* a model of synthesis in the wider sense. Above all, design models in actuality the synthesis of technical-instrumental and symbolic interactive-communicative requirements, and thus gives us a concrete model of how these apparently antithetical realms of human experience can be brought together.

Under the label of 'aesthetics', this was how Adorno and Benjamin saw the significance of design. As Susan Buck-Morss reports[13] for them 'aesthetics experience was the more adequate form of cognition' (more adequate that is than either rationalism or idealism) 'because in it subject and object, idea and nature, reason and sensual experience were interrelated without either getting the upper hand—in short, it [aesthetics] provided a structural model for "dialectical", "materialist" cognition'. In the widest sense, the possibility of aesthetics cognition was that it could model 'the dialectical relationship between subject and object'. Adorno and Benjamin, products of a

literary-aesthetic culture, naturally did not extend their insights into the realm of design. But there is little doubt that the synthetic model of aesthetic cognition they propose fits perfectly the tacit understanding of design we hold. Thus design studies are now left with two functions. The first is to explore these ramifications–in other words to explore design cognition's role in human thought and practice in the widest sense. The other is to use the insights that this 'enlarged' perspective of design activity/design cognition gives us to redefine or define, design phenomena in the sense intended by Gerald Nadler and to use this redefinition of what design is in a reconstruction of design–society relationships, where these relationships are seen as multiple and as complex, and as rooted in material transformation of the world but not, for all that, limited by the relationship of designed products to society—even though there seems the possibility here of re-understanding the nature of this relationship, of us at last beginning to come to terms with, the 'world of goods'.

REFERENCES

1 **Neymur, T** *The materiality of design* Block 5 (1981) pp 20–27

2 **Nadler, G** 'A timeline theory of planning and design' *Design Studies* Vol I No 5 (July 1980) pp 299–309

3 **Fox, B** 'Design-based studies . . . ' *Design Studies* Vol 2 No I (January 1981) pp 33–40

4 **Archer, B** 'Design as a discipline' *Design Studies* Vol I No I (July 1979) pp 17–24

5 **Williams, R** *Keywords,* Fontana, UK (1976)

6 **Dilnot, C** 'Design history as the history of industrial capitalism' paper given at the 1979 conference of the DHS at Keele University, UK; also 'Design, industry and economy since 1945: an overview' in *From a spitfire to the microchip, papers from the 1981 DHS conference,* Design Council, London (1982)

7 **Douglas M and Isherwood, B** *The world of goods,* Penguin, London (1980)

8 **Willis, S** Review of **Jean Braudrillard** *Les Systemes des Objets* in *Praxis* 2 (1976)

9 **Morison, S** *Four centuries of fine printing* Benn, London (1960)

10 **Doblin J** 'Talking about design' *Designer* (June 1979)

11 **Abel C** 'Function of tacit knowing in learning to design' *Design Studies* Vol 2 No 4 (October 1981) pp 209–215

22 **Yeo, S** 'State and anti-state: reflections on social forms and struggles from 1830' in *Capitalism, state formation and Marxist theory* Quartet, London (1980)

13 **Buck-Morss, S** *The origin of negative dialectics* Harvester, Brighton, UK (1978)