

# **useful and critical**

**the position of research in design**

International Conference

September 9-11, 1999

## **conference programme**

*The University of Art and Design Helsinki UIAH*



## Saturday 11 September

9.00 – 10.30	<b>parallel seminar sessions</b>						
	<table><tr><td><b>I design and cultural studies (cont.)</b> auditorium</td><td><b>II cultural knowledge and practice production (cont.)</b> room 2</td></tr><tr><td>Howard Riley Faculty of Art and Design, Swansea Institute, University of Wales "Style, Taste and Fashion in the Prism-House of Meaning"</td><td>Leong K. Chan School of Design Studies, College of Fine Arts, The University of New South Wales "Cultural Context and Graphic Design of the 'Chinese' Communities in Hong Kong, Kuala Lumpur and Singapore"</td></tr><tr><td>Aleksander Jakovlev Department of Industrial Design, Estonian Academy of Art "Research on Design in a Cultural Context: How Can It Contribute?"</td><td>Mark Roxburgh School of Design, University of Western Sydney, Nepean "Design Research: Networks in the Culture of Artifice"</td></tr></table>	<b>I design and cultural studies (cont.)</b> auditorium	<b>II cultural knowledge and practice production (cont.)</b> room 2	Howard Riley Faculty of Art and Design, Swansea Institute, University of Wales "Style, Taste and Fashion in the Prism-House of Meaning"	Leong K. Chan School of Design Studies, College of Fine Arts, The University of New South Wales "Cultural Context and Graphic Design of the 'Chinese' Communities in Hong Kong, Kuala Lumpur and Singapore"	Aleksander Jakovlev Department of Industrial Design, Estonian Academy of Art "Research on Design in a Cultural Context: How Can It Contribute?"	Mark Roxburgh School of Design, University of Western Sydney, Nepean "Design Research: Networks in the Culture of Artifice"
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10.30– 10.45	<b>break</b>						
10.45 – 12.45	<b>plenary session</b>						
	Ph.D. Elisabeth B.-N. Sanders, President, SonicRim, Columbus, OH, USA "Postdesign and Participatory Culture" Prof. Jan Verwijnen, Department of Interior Architecture and Furniture Design, University of Art and Design Helsinki UIAH "Diagrammatic Reasoning and the Notion of Concept in Design"						
12.45 – 13.30	<b>closing session</b>						
13.30 – 14.30	<b>lunch</b>						
14.45 – 17.30	<b>in artists' footsteps:</b> post-conference excursion in Tuusula						

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## 'THE NEWS FROM NOWHERE'

by Mark Roxburgh & Craig Bremner; School of Design, University of Western Sydney, Nepean, Australia

### ABSTRACT

The concept of research for design has been characterised by the mimicry of borrowed research models for the practice of solving problems. Propositions for appropriate design research methodologies in general have drawn upon either 'the scientific' way or the field of sociology, without taking account of the epistemological implications of importing models for knowing the world. Add to this design's nostalgic attachment to the 'mystique' of creativity and one begins to realise that the intellectual pattern of design is riddled with paradoxes. In this paper we will briefly critique this scenario and contest prevailing beliefs. We will then propose a model of research and of gaining knowledge from the world, through design, which reflects our experience that design practice is not only highly social and contingent, but also ideological. Case study examples of the potential value of the implementation of the proposed model for design research will be presented. Its benefits and limitations will be discussed.

### INTRODUCTION

Before we can embark upon a critique of some of the models of design, and their attendant methodologies, and outline our approach to design research, with all its flaws, we must first ask ourselves why does the issue of appropriate design research methodologies seem so pressing. If we view the changed educational and academic circumstances of design as being the primary cause for this perceived need we unduly flatter the academy for its intellectual impetus and miss the significance of the wider stage upon which design and design education is acted out upon, the stage of the social world. In considering the issue of design research we are less concerned with the academy's demand for rigorous and acceptable models of inquiry, though we will address these, and more interested in the radically changed nature of the stage upon which design is set.

As the industrial era saw the nature of making and consuming artefacts change, 'designers' developed new anecdotes about design. Similarly, the shift into a post-industrial era requires new accounts of design's story; changes to the settings of design are no less profound now than the changes of the industrial revolution. The models of design that have developed since that time are built largely around notions of mechanical and aesthetic reproduction. In the age of information, that characterises the post-industrial era, this reproduction has been replaced by reiteration and rhetoric. We have shifted from an economy of the artefact, where the artefact is the richest 'thing' we can possess, to an economy of the sign, where the sign is the richest 'thing' we can experience.

artefact = richest possession    v    sign = richest experience  
industrial staging of design        post-industrial staging of design

In order now, to continue to stage design we require a revised script. In revising this script we need to consider where design gets its information from and how it deals with it to provide the richest possible experience. However, to do this we must first analyse design's dialogue with itself to understand the nature of the scripts thus far.

### THE STORY SO FAR .....

#### THE SCRIPTS

Historically, design has been conceived of in essentially binary terms; it has generally been characterised as either an artistic (subjective) or technical / scientific (objective) activity (Dilnot 1989, 249; Rowe 1987, 1). Occasionally it is located somewhere in between these two poles, as is often the case in describing architecture and more recently industrial design. Its artistic conception encompasses the sub-disciplines of visual communication, interior, fashion, and to an extent industrial design. This view has arisen, in part, as a consequence of the historical location of educational programs for these sub-disciplines in art and design schools (Margolin 1989, 5); many of which have yet to fully cast off the legacy of the Arts & Crafts movement's dependence on the skill of reproduction. Technically conceived, design encompasses facets of engineering, computer, technological and systems design. Historically the educational programs of these sub-disciplines have been located in technical colleges, trade schools, science, engineering or business faculties all of which value notions of technical rationality (Margolin 1989, 4-5).

Further clouding the issue of any epistemological difference between these two key conceptions has been the pre-eminent influence, in the 20th century, of what might be called the modernist frame. This frame is stereotyped as being positivist, rationalist and universalist and draws upon liberal humanist tradition and the dominance of scientific and technical reasoning that has characterised the past few centuries. Though this frame might seem more likely to be aligned to design in its technical conception it has had similarly profound influences upon its artistic staging. The most visible sign of modernism's relationship to 20th century design has been the development of the problem solving metaphor for design activity. Drawing upon notions of bounded rationality and the application of logic, design activity thus conceived is concerned with the identification of a problem and the development of an appropriate solution, usually as a type form (See Rowe 1987, 39 & 49; & Whiteley 9-10). This approach is a symptom of the reduction of the project to manage change, as Simon (1981, 129-33) effectively defines design, into the application of a universal aesthetic and/or technique to all solutions. That design creates as many problems as it solves hints at the flaws in this approach (See Whiteley 1993).

### THE ARTISTIC MODEL

Artistically conceived, design activity is seen as the creative self-expression of a gifted individual who is largely responsible for the conception and production of the artefact (Forty 1986, 6-7). It is a view that values concepts such as individual creative freedom and places great faith in the intuitive moment of creation. The discourse of design as 'Art' is also a feature of much design literature and its presence upon the intellectual stage of design has played a significant role in its reproduction. What this 'ego-centric' view of creative production ignores, however, is the contingent nature of the conception and indeed execution of artistic practice. In deconstructing the dominance of the ideology of the creative genius Wolf (1981) and Bourdieu (1993) argue that how we define art comes about through discourse between a range of 'actors' or 'positions' within the artistic field; that is artists, galleries, dealers, critics, audiences, educational institutions, developments in technology and materials, economic systems and so on. Furthermore, they argue that artistic concepts, as manifest in the artwork, are not the product of the divine inspiration of the artist but rather a reflection of themes and ideas circulating upon the social and material stage. Seen this way artistic activity, indeed all creative or cultural production, can be seen as socially situated and contingent practices.

The arguments of Wolf and Bourdieu regarding art, echo in the work of Dilnot (1989), Fleming (1996), Forrester (1989), and Forty (1986) amongst others, regarding design. These scholars, in different ways and with different emphasis, all define design practice as a social, material, economic and ideological process in which the designer is but one of the many 'actors' involved in bringing the designed object into being. This social constructivist perspective might appear to underplay the significance of the role of the designer, shifting the emphasis away from notions of authorial intention and control by examining the role of these other 'actors' in the design process, (indeed Forty has that tendency) but such a reaction undervalues the complex relationship between individuals and social structures. Rather than arguing individuals have no agency or are indeed not free, this view proposes that individuals are free in the sense that they exercise that agency by undertaking socially situated choices and practices and reflexively and consciously monitoring and modifying their actions within those situations (Bourdieu 1993, 34; Wolf 1981, 24). The failings of the script for the artistic model of design lie in the investment of faith in a future delivered by the unbridled imagination of a gifted few. The consequence of such a move is to invest in those few an enormous amount of power and responsibility.

### THE TECHNICAL MODEL

Technically conceived, design activity is seen as providing technological solutions to design problems. Technological development in this context involves working out the practical implications of scientific discoveries, which are seen as new and more accurate insights into natural reality (Dilnot 1999, 75; McKenzie & Wacjman 1985, 4-5). The application of these technological solutions are seen as causing social or environmental changes in the pursuit of progress. It is a model of cultural production that has been heavily influenced by the methodology and epistemology of science. The discourse of design as 'science' is also a common feature a substantial body of design literature. Design's version of the technical or rational model of thought is manifest in the notion of creative problem solving. Inquiries into the processes of problem solving have been of interest to psychologists from the late nineteenth century and can be characterised as being either mentalist or behaviourist in outlook. Whilst having different emphases what both models have in common is the belief that human action is structurally determined, either by the structures of the mind or the structures of the environment, and can be discovered and measured. In this scenario human action can be predicted with certainty. The behaviourist model in particular dominated concepts of creative problem solving as well as studies of the social world well into the mid 1900's (Rowe 1987, 41-6).

The dominance of the technical or scientific model of design leads us to view the design process and designed artefacts as having natural or inevitable consequences (Dilnot 1999, 75). Design thus conceived is determinate in social relations and human agency unaccounted for; the inverse problem of design as 'art'. This view of the development of design and technology is what is known as technological determinism. Critics of the notion of scientific objectivity, especially as it is applied to technological design, argue that the notion of objectivity itself is a social construct and cannot exist separate to subjective, social experience. Furthermore, they argue that technological developments occur in a complex network of social, material and economic relations where a range of 'actors' are co-determinate in the process (McKenzie & Wacjman 1985; Law 1992). These 'actors' are both human (designers, scientists, technologists, marketing people, users, investors etc) and non-human (materials, available technologies, production processes, distribution mechanisms, economic systems etc) thus extending the social constructivist agenda to imbue non-humans with agency or effects. Like social constructivism this theory, known as Actor-Network Theory, has as its aim socially situating technological design in order to deconstruct its conception as naturally inevitable and returning a sense of human agency to its processes, albeit agency exercised in complex circumstances. When viewed like this it becomes apparent that the script for the technological or scientific model of design invests its faith in a future delivered by technological progress. The consequence of this move is to remove human choice and control from the decision to implement technological change thus imbuing technology with an enormous amount of power.



## THE STAGES

### THE SOCIOLOGY OF DESIGN

The problems associated then with investing faith in notions of either technological progress or the unbridled imagination is that both scripts separate the technical (the object) from the social (the subject). Such a separation fails to consider the dialectical nature of the relationships between subjects and objects. Each script proposes that one is determinate of the other rather than considering objects and subjects as being co-determinate or recognising that human relations are mediated through objects (Law 1992, 381). In a sense then both scripts have not adequately considered the wider context or stage upon which design activity is played out upon. This is a legacy of the positivist paradigm of thought and reflects not so much a failing of its conception and implementation as it does the limits of knowledge at any point in time. Discontent with the limits of knowing through the positivist frame has seen the emergence of a loose coalition of ways of knowing in the latter part of the twentieth century. Various terms have been used to characterise this move: post-structuralism, post-positivism, post-modernism etc. What these ways of knowing have in common is a general belief in the relative nature of concepts such as truth and knowledge, a suspicion of the notion of the universal and a regard for the context of the particular. In short all knowledge reflects the cultural and subjective frames of a particular point in history and is ideological not natural. The most obvious example of the influence of this new frame upon design thinking has been the pre-occupation of the past couple of decades with semiotics. Whilst this interest has been useful in understanding the way in which audiences might engage in the economy of the sign, the scholarly concentration upon the act of decoding or consuming 'texts', by audiences, has lead to a model (ironically like those outlined before) that is singularly deterministic. The script in this instance is configured by the imagined voice of the audience not the voice of authorial intention, the author is after all 'dead'. That much scholarly attention in design has been given over to semiotics seems something of a puzzle given design's central role in 'writing texts'. This is, however, symptomatic of design's constant adaptation of other scripts of knowing the world without considering the epistemological implications, for design, of such moves.

What is missing from these accounts of the sign is the relationship decoding has to the wider social and economic context in which it circulates, and the role its conception and production (encoding) plays in relation to this. In outlining his model of communication, Hall (1990 [1980]) clearly marked the processes of encoding and its relationship to decoding as being as important a facet of the circulation of the sign. As noted earlier, numerous design scholars share a similar interest in accounting for design activity but that is in part the rub, the concern with an account, a description. Such accounts and descriptions lead us then to design conceived as a sociological enterprise. Whilst not undervaluing the importance of this shift, for it provides us with a richer picture of the nature of design activity, it is an approach that communicates knowledge about design but not necessarily through design. Its usefulness seems to be limited to making the process clearer so that designers might have a better understanding of what it is they do and thus exercise greater control over it, no small matter but not central to the crux of the problem which is the production of knowledge through design.

Staged like this design is not a discipline in its own right rather it becomes an activity that can be subsumed as a sub-discipline of sociology<sup>5</sup>. That the work of Actor-Network theorists covers such similar territory should indicate to us that if we pursue this path our time may well be up unless we work out what makes design different from sociology. The fundamental question to ask is: how can this knowledge of design, and its relation to the social world, be used by design? In thinking this through we should consider that sociology, crudely put, is concerned with what is and what has been and translates this knowledge into narrative forms and theoretical propositions. As design is concerned with "what might be" (Dilnot 1999, 72) this knowledge could be transformed into artefactual propositions, a point we will return to shortly.

### THE CONTINGENCY OF DESIGN

Post-positivist theories of design recognise it as a discursive and ideological practice. Understandings of the nature of design are thus configured through discourse and the ability of any participant to engage in that discourse is determined by their discourse histories (Hollway 1984, 236-7). By extension the discourses surrounding design are shaped by its historical discourses, thus current understandings cannot be clinically removed from historical understandings. In light of this shift we recognise that our propositions are but another anecdote about the nature of design, and one that reflects the limits of knowledge now and the discourses of design that have preceded us. We also recognise that our anecdote will, at some point, be superseded as the limits of knowledge through and of design continue to shift. Having said that it is important to note the difference between the way in which we conceive of our anecdote of design and how others have been framed. Historically an anecdote of design has been regarded as a model for practice that is presented as definitive (this is the positivist logic). This approach, in extreme circumstances, is called a doctrinaire position (Rowe 1987, 119). For example:

Arts & Craft anecdote = the model of design

or

Bauhaus anecdote = the model of design

or

Semiotic anecdote = the model of design

and following that logic

Craig & Mark's anecdote = the model of design

These models, however, are incapable of accommodating change; they cannot recognise their social or historical contingency. Because they are fixed equations, as the limits of knowledge shift they become inadequate. Nor do they represent the potential to incorporate any pre-existing knowledge of and through design within them. If we consider design as a process of managing and implementing change it is evident we need a new equation which can accommodate it as well as pre-existing notions of design. Such an equation looks something like this:

Arts & Craft + Bauhaus + Semiotics + etc + etc = a model of design

or more simply

anecdote + anecdote + anecdote .... + (ad infinitum) = a model of design

In these fixed models two key topics have been individual designers and the objects they design. The concern for the contingency of design that has emerged in the past decade and a half reflects the limitations of those topics. The popularity of semiotics in much design literature of this period is testament to the shift away from an interest in design heroes towards the circulation of the meaning of the objects they design. We would argue, though, that while this move has enabled the ideological dimensions of design to be more clearly articulated it compounds one of design's old problems. In many respects the continued preoccupation with the material object or text means design continues to look to itself for its information. This is further compounded by design's habit of looking at other ways of knowing for hints on how to look at itself, thus design is doubly impeded. Implicit in this shift, however, is a realisation in the design community that material culture cannot be separated from culture per se and that the social world is potentially one of the richest sources of information for design.

#### AN ANECDOTE OF CONTINGENT PRACTICE

For some time marketing led firms have recognised that the social world is a valuable source of information for the design of new products or services (See Whiteley 1993, 6-46). Marketing culture which has been historically influenced by the positivist frame has largely contented itself, though, with measuring and analysing unseen (or unseeable) quantitative information such as performance measures, spending patterns, socio-economic demographics, and the like. It is an analytical approach that delineates the boundaries between industry and culture, rather than seeing them as part of the same complex social situation. Furthermore, it configures people as consumers with particular attitudes hence the tracing of those attitudes in an attempt to create the right conditions for increased consumption. This view of the social world, like others described, again presents social subjects as passive, in this instance to the determinations of industry (Zeisel 1981, 35). This reduction of vast and complex amounts of information into knowledge, with a quantifiable element of predictability, is adequate where the cycle of production and consumption is pictured as occurring in a so called market. As a metaphor, though, the concept of a market is looking increasingly untenable in the post-industrial and virtual era we have entered. In brief this is the equation of market led design as it appears today:

PRODUCT	+	CONSUMER	=	MARKET
(service)		CHOICE		

In this model phenotypical development (how products are conceived) leads to process innovation based on the analysis of consumer trends, or attitudes. A consumer price is fixed according to inter-enterprise competition. This is driven by the ideology of consumption based on possession through acquisition. Fundamentally this is a 'historical' process; it involves looking back at the situation and developing retrospective justification for choices that are presented as inevitable. In contrast to this analytic model is a synthetic model based on the design of processes to manage change and complexity. In this scenario genotypical development (what products are conceived) leads to innovation based on the synthesis of knowledge about the user, scenarios of usage, and user experience, in the name of service. This is a culture of 'use' based on creative interpretation and participation. This participation of the 'user' in the creative configuration of the genotype enables the ethical implications of such developments to be negotiated. Staging design like this requires new methods of research to enable designers to enter into these negotiations.

In contrast to the marketing model, where the consumer is perceived as a passive receptor of pre-determined messages, the concept of the 'user project' provides human subjects with actual production potential, albeit mediated by the design process. The project of the user then, is not to consume but to be active in the process of using properly (Morello 1995, 69). In order to stage design as an agent of managing change and complexity in this scenario we must consider what its sources of information will be. That which is before us and can be seen is our own context and the context of users of the material and social world. Careful and rigorous means of observation and analysis must be employed in this endeavour and it is for this reason that post-positivist sociology has appeared so attractive to design of late. In looking to that discipline though we must make clear that the questions that we as designers might ask of this kind of 'sociological' enterprise are fundamentally different from those a sociologist might ask. This might be characterised as such:

sociology - how can this information be used to tell us about a complex and changing set of circumstances and what does this tell us about who we are?

design - how can this information be used to manage and implement change in a complex set of circumstances and what type of future do we want?



Furthermore, we must be conscious of the fundamentally synthetic nature of design in this context, its potential to turn the analysis of observation into knowledge in the form of artefactual propositions or communications. Research in this setting is used to interpret design 'traces' from the fashioned world. The staging of design we have proposed (ie anecdote + anecdote + etc ...) enables design to avail itself of any number of its historical anecdotes in order to see into and refashion this world. This does not mean the abandonment of all that has gone before in design. Rather, it enables design to draw upon the tools available to it from its vast skill base, and its intellectual and historical settings; all of which make up 'design'. Further these tools can be expanded upon by drawing from other disciplines but in doing so fashioning them in a way that accounts for the benefits and weaknesses of their (and design's) history.

## CASE STUDY

### THE SETTING

The anecdote we have put forward is the intellectual framework through which we believe design now needs to look at the world for its sources of information. When methods of looking at the world are framed from a specific intellectual perspective we have what is called a methodology (Kellehear 1993, 8-11). Methods on their own are like tools in a toolbox; unless there is some knowledge of how they might be used, and to what purpose, they are essentially useless and meaningless. Having outlined our anecdote we will now concentrate on the tools. The following case study analysis is drawn from the development and application of this methodology, since 1997, in an undergraduate subject called Research Methodologies. This subject is undertaken for one semester by third year industrial design and visual communication students at UWS Nepean, Australia, and third year visual communication students at the Nanyang Academy of Fine Art, Singapore. Typically these students work in groups of between four and six and the subject involves three hours of contact and up to seven hours of non-contact learning per week. The subject runs for about fourteen weeks in Australia and seventeen weeks in Singapore. Needless to say there are certain limitations associated with the application of this methodology in such a context and these will be dealt with shortly.

### RIGOUR AND VALIDITY

If design is to look at the world in which it is staged as a source of information then methods of observation are required. Therefore, our approach to design research is predicated on observation as a key tool. All human subjects make observations of, and comments upon, the nature of the world in which they live. What separates these idiosyncratic observations from research is the degree to which they are rigorously and methodically applied and to what purpose. For observations to be useful to design, indeed any program of research, they must be carefully planned and executed with an underlying intellectual frame (Zeisel 1984, 51; Ziller 1990, 14). Furthermore, to take on the status of research, the methods of observation and the information collected through them must be carefully explained and presented in a readable form so that others can make sense of it. This enables reflection upon information about the situation observed to occur in a systematic manner and assists in the process of synthesising that information; a critical point given the synthetic nature of design (Ireland 1998, 46; Zeisel 1984, 43).

Research enacted like this, through the post-positivist frame, can be characterised less as a process of recording and analysing information and more as a process of cultural collaboration between the observer and the situation, and by extension those in the situation, where a text is dialectically produced (Harper 1998, 31). This echoes recent conceptions of design, such as Schon's (1983, 76-9) view of it as a reflective conversation with the situation, and Forrester's (1989, 125-33) extension of this view by considering design as an act of making sense together. In practical terms we can see evidence of this concept applied in the development of real products and/or services as outlined by Golsby-Smith (1998, 5-25) and Ireland (1998, 42-6). In this way the context of the situation cannot be separated from the context of the researcher. Rather than seeing the researcher's context as inhibiting fruitful research, as the positivist paradigm argues, we argue that it is a valuable source of information. This raises the vexed question of the validity of the results of such a research enterprise.

Validity in positivist social research is determined through the use of multiple methods of inquiry. If similar results are produced from the same situation using different methods then it is argued that the observers' subjective influence has been lessened, if not erased. Thus the data presented from such research is arguably 'objective'; it has been validated by 'external' measures. As we have already outlined this is typical of marketing research upon which much design has been premised. The difficulty in accepting the 'objectivity' of such a validating mechanism is that it is essentially socially constructed and applied and does not exist outside of the social realm. Given this, validity cannot simply be 'externally' applied. Claims to validity in the post-positivist sense are internally generated and this is known as contextual validity. Such claims are negotiated through reflexive accounts and representations of the research process and findings. In this mode the researcher attempts to make the processes by which information and findings were produced explicit. This involves an account and representation of the contextual frame of the researcher; the sources of information; the codes of representation of the information collected and the modes of its communication (Prosser 1998, 104-5). The risk of course of this approach is that validity becomes an exercise in solipsistic relativism but this is overcome through the process of negotiating internally generated and 'externally' applied criteria. This process is similar to the concept of a "plurality of hierarchies" where design standards are contingent upon time, place, group and circumstances (Whiteley 1993, 165).



## AN OUTLINE

This brief outline of the methods of research we teach is by no means definitive nor is the order in which they are presented suggestive of the order in which they should be applied. As examples of other methods of observation come to hand we recommend trying them out as it were and indeed mixing the order of techniques used to suit the researcher and the situation. However, we do recommend that the students research is premised on examining a particular theme or issue that is relevant to a group of 'users' as opposed to going into the 'field' with no thoughts about what they are looking for. In order to accommodate the time limitations of running such a project at an undergraduate level students are advised to examine the theme in relation to a particular cultural artefact or process, thus reducing the scope of information that they are required to analyse. This inevitably results in a degree of reductivity but enables them to manage the process by limiting the amount of information they have to consider.

## THE USER

At the outset students are required to undertake a small scale literature review of current, and sometimes historical, understandings of both the theme and the topic. This strategy is typical of much social science research, both positivist and post-positivist, and provides researchers with an informed basis from which to look at the world, or a with set of questions through which to engage it (Kellehear 1993, 16-28). As a tool for framing design research the reliance on the 'social theories' of a particular issue or topic is less commonplace, though the work of Cheskin Research, for example, indicate the usefulness of this approach (See Ireland 1998, 43). Students then choose appropriate methods of observation and documentation to observe and interpret social and material situations. Methods used include still photography, auto-photography, video, sketches, unstructured interviews, visual questionnaires, and the like. These methods are employed primarily as qualitative devices to develop a depth of understanding of the situation. Occasionally they are used as quantitative devices to 'substantiate' these qualitative and situational observations. The 'things' observed range from individuals to social groups; their interests and hobbies; their spaces and possessions; their views or understandings of particular topics; physical traces and so on.

## THE SCENARIO OF USAGE

Through this process students begin to negotiate towards an emic (insider) understanding of the situation, which is inevitably framed by their etic (outsider) perspective. To more fully account for their etic position and to provide some 'external criteria' they are also required to examine a variety of media texts relevant to the theme and topic being researched. Such texts might include movies, television shows (fiction and non-fiction), computer games and interactives, music and other forms of mass communication. This enables the students to develop a sense of how the theme, topic and situation might be understood and represented in more 'global' terms. Similarity and difference in these representations become apparent at this point. Furthermore, the relationship between type and stereotype can begun to be identified. These moves reflect the relationship between emic and etic perspectives. The value of this is that understandings and synthesis of the information being analysed can be negotiated through the dialectic of those perspectives, thus both are valued frames.

## THE REPRESENTATION AND COMMUNICATION OF ANALYSIS

At several points during the research phase the students are required to present and analyse their research process and findings up to that point. This process is reflective by nature and it enables the students to develop new insights into the process and information by 'looking back' at it, and for their peers to provide an 'external' perspective. This takes the form of an audio visual and conversational presentation in front of the entire class. In a sense they are mini research reports of work in progress. A common approach in social science research, to presenting work in progress, is to note key issues and create lists of topics, questions or points that appear relevant; writing an initial analysis of the information collected; summarising the methods used and why; and outlining a rationale for moving forward. The dominant form this takes is the written word (Prosser 1998, 97). This might be a useful mechanism where the final research outcome will be a written report, journal article, conference paper or book chapter, but given the visual nature of much of design the production of purely text based analyses can limit the potential to explore complex relations between words, concepts and images which might then be synthesised into a design proposition.

Instead of compiling written reports at these interim stages our students are either required or encouraged to present them in the form of a map using graphic and typographic skills. The use of 'mapping' techniques is common enough in environmental based design research but this generally involves the use of maps of a physical reality which then have observed behaviour recorded on them (Zeisel 1981, 44-5 & 122-3). Alternatively the mapping metaphor is used in describing the cognitive maps or mental pictures that people have of particular spaces and their thoughts and reactions to that space (Zeisel 1981, 170). Ziller (1992) in particular is one researcher, albeit in social psychology, that has worked extensively in the area of getting participants to make their own photographs to represent these cognitive maps. The limitations of this approach though is the potential for images to be reductive in summarising complex information and it is with that in mind that Prosser (1998, 36) suggests qualitative visual researchers appropriate the montage techniques of visual artists to juxtapose complex and different types of information.

To address these concerns we have extended the mapping metaphor in an attempt to get students to move beyond the idea that maps have to be derived from a geographic 'reality' and can also be used to represent a conceptual construction. By doing this students can identify visually the relationships between observed situations, theoretical constructs, key pieces of text, mass media representations and so on. Informing how they do this is a consideration of the appropriateness of the visual forms or aesthetics to the situation being observed. That is, the maps must reflect the aesthetics of the situation, as mediated by their aesthetic ability, and not simply be based upon their own personal aesthetic. This has two important consequences. First, by utilising their visual skills in communicating these points it gives students confidence in dealing with complex concepts; they are doing so from a basis of their particular communication (design) expertise. Second, when done well, it enables complex issues and relationships to be represented in a manner that is relatively easy to read and where the viewer is not required to read volumes of text, thus it is readily communicable. This process then is reflective and dialectic as the outcomes have arisen from the interaction of emic and etic perspectives of the situation. This last point is significant for if the information being collected and analysed is to be synthesised into a design proposition of some sort it must be communicated in a manner that is readily accessible and understandable to designers (See Zeisel 1984, 38). Thus the means of communication of the information often provides both conceptual and visual clues as to the nature of any eventual design outcome.

#### THE USER EXPERIENCE

After going through this process the students are finally required to develop a design proposition (prediction) based upon the synthesis of their analysis. This proposal is presented in report form with some preliminary visuals, where appropriate, of what it might look like. As likely though there will be no image of the 'product' because it is only at concept stage. What is significant at this moment though is the manner in which that concept is contextualised in the report. The design report, much like the interim reports, outlines the research process and findings, the design concept and the rationale for making such a proposition, albeit in a more rigorous and substantial manner. The conceptual and formal aspects of both the report and the proposal must be consistent with the understandings and images developed, through the research, of the issue, topic, and user (the situation). This means that there are no preset technical specifications of what form the report or the proposal should take. Thus the coherence of the report and the design proposition reflect the dialectical nature of the emic (user) and etic (researcher) negotiation. In this way the experience of the situation can be clearly communicated to other researchers or designers to enable evaluation of the appropriateness of the report and proposal to occur.

#### LIMITATIONS OF IMPLEMENTATION

As outlined at the outset of this section this methodology has been implemented in a single semester undergraduate subject. The demands on such a subject to develop the research skills of the students are such that the subject itself is more instructive and less reflective. The downside of this is that scope for the students to develop a more critical approach to its application, and thus develop their own anecdotes, is limited. In this setting a clearer mechanism for identifying observer reactivity (ie their preconceptions of the situation) must also be developed and requires implementation at the outset (See Ireland 1998, 43; Zeisel 1984, 22; Ziller 1990,30). This can readily be executed through the process of mapping as outlined earlier. Another shortcoming of the implementation of this approach is that the students only reach concept proposal stage and there is no scope for prototype development and further reflective modification. Ideally the teaching of such an approach to research might run through a sequence of subjects over a number of years to accommodate the entire lifespan of any design outcome; that is the traces of design research, concept development, production, usage and disposal. This would enable students to look at the network of relations that design exists in more comprehensively than is currently possible. The consequence of such a move might be to refocus the central concern of design education away from the narrow realm of skill based specialisation to a space where a shared understanding of the ecology of design drives it.

#### BENEFITS OF APPLICATION

If we assume, as we have proposed, that design practice is operating in the world, then it is reasonable to predict that the approach to research we have outlined has practical implications and applications. Feedback from the students involved in these case studies all reported a greater sense of control over the design process. By moving beyond the reliance on the intuitive moment they gained new insights into the complex staging of the fashioned world and a greater capacity to manage change in these settings. As was demonstrated in much of their work this methodology enabled them to transcend the limits of their specific skill based disciplinary education (read training). For example students were designing new production and retail services for application on the world wide web or new cafe typologies using current communication technology. They were able to move in these directions because they could see and engage with the world from and through the unique perspective of design. Furthermore, this approach has the potential to add specific insights into the global flow of information therefor sustaining design difference without recourse to innovation excess (process innovation) by contrasting the specific with the general. This occurs through the dialogue between emic and etic perspectives. Staging design in this way is in contrast to the historical scenario we have outlined, where design has viewed the world through the lenses of other discourses. As a consequence design has not had control of its dialogue, even the dialogue it has with itself (ie. telling each other what we know).

Earlier we referred to Dilnot's characterisation of design as being concerned with 'what might be'. We also crudely characterised the sociological task as being concerned with 'why it might be'. It is our contention then that the anecdote of design we have presented here, with its practical implications and applications, expands upon these two facets of engaging with the social world by also being concerned with 'how it might be'.



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