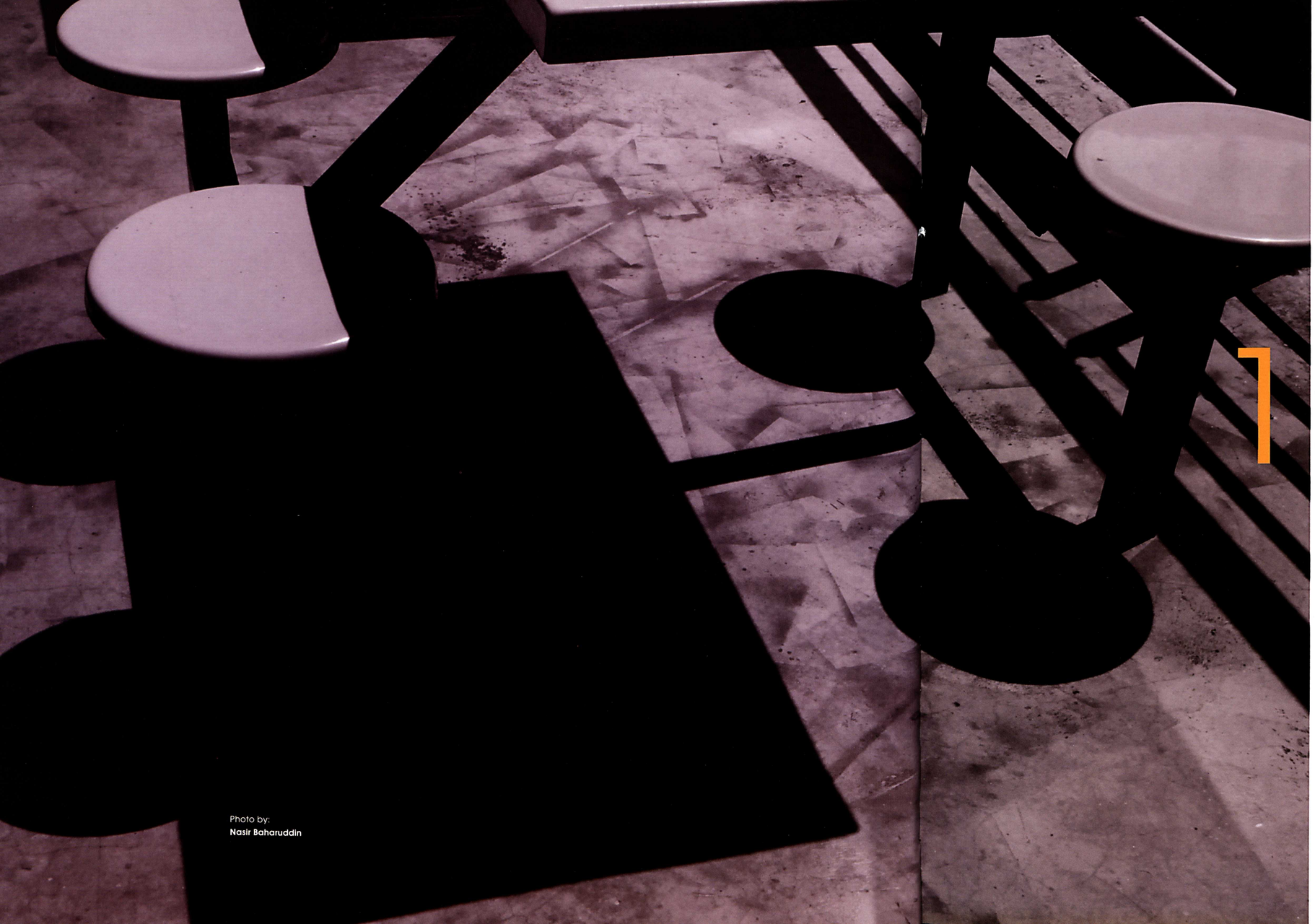

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1 Experimenting 'Design' to reveal Cultural Factors

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Abstract:

New designs should support the everyday environment and should refer to existing designs that are familiar to users. These would help to motivate designers to develop culturally localised designs that allow products to be manufactured and relevant to users' current lifestyles. Despite the growing number of studies on cultural factors in marketing research, designers have not been given much opportunities to present their designing skills and thinking in conducting such research related to culturel thus leading to product improvement. This article describes a framework and results of adapting a "practice-led" research-based approach to understand cultural factors of a specific ethnic group in Malaysia whose members migrated from traditional rural life to urban industrial setting. Findings from adapting this method have been generated into a design-research guideline for designers and product planners to understand users' culturally determined needs when developing a cultural product.

Keywords : culture, product design, design research.

The original motivation for this work was to seek ways for designers and producers in Malaysia, as an emerging industrial nation, to provide appropriate products for local consumers and their culture rather than simply responding to global norms. However, it was soon recognised that the central factor was not so much the particular conditions in Malaysia but rather that the population was experiencing rapid changes. It was seen that similar economic and demographic shifts were happening in many parts of the world and design works moved on to consider the role of designers in this context.

User-Designer-Product Interaction

Product developers are coming to understand how the interaction between users, products and environment can play an essential role in product development process (Green & Klien 1999:92; Taylor et al. 1999:217; Von Hippel & Kat2 2002:821). These authors indicate that a successful product or system requires a high level of interaction between designers and users. In many cases, however, designers are still predicting the users interactions with products based on their previous knowledge and experience. Popovic (1999:26) argues that in most product development processes, designers still find it difficult to predict theories concerning users' needs with respect to the products they use. Thus, according to *Jones (1992:216)*, designers should take part and engage more in the social life of the users by experiencing their lifestyles.

Norman (1988:85) points that there are a number of cases of products that were produced without proper research into users needs and limitations which led to problems involving users' interactions with those products. In general, research reveals that non-physical merits of product-user experience–such as aesthetics, emotion, pleasurability, product 'soul' and cultural factors–tend to be neglected, overlooked, misjudged or entirety ignored in the pursuit of factors such as physical styling, functionality, usability and ergonomics. In most cases, the manufacturers tend to make the least amount of change possible to make an existing product acceptable to the targetted culture (Lawson et. al 2003:9). Röse et al. (2001) and Rodriguez et al (2006) also claim that many non-physical aspects of designing a product have been overlooked in product development processes.

Designing for Culture

Outstanding design can come about via many sources of inspiration, ideas and experiences involving a wide range of specialists from different fields of expertise (Wasson 2002:72). Nevertheless, many factors that have influenced the designs developed by manufacturers have been overlooked. For example, how products become accepted by users is an issue which tends to receive much less emphasis than technological changes and material-oriented product development.

Therefore, the benefits made by cultural factors in the marketing of a successful product has largely been neglected. It seems to be a forgotten element of the product development process. However, a number of scholars and design thinkers have emphasised the importance of integrating the culture of users into product development. Thus, over the course of recent years, there is an increase of interest in understanding users' cultural needs as an important aspect of the design process (for example, Fernandes 1995; Diaz 2009).

Bloch (1995:22), in his consumer response studies, argues that preferences for product form are much driven by cultural factors and claims that nearly all Japanese auto manufacturers are setting up their studios in the United States with the aim of ensuring the commercial success of their products by paying more attention to understanding Americans' culturally determined needs and demands. Fernandez (1995), studying design competitiveness in global markets, states that a region's culture and quality of life are significant elements in the product development process despite moves towards global communications, economy and awareness. He stresses that designers should demonstrate more responsibility for the impact of their designs, not just by meeting the customer's need but also by preserving cultural variety and values.

According to Portigal (1997), a successful product should be seen not just as a technical solution but also as a package of cultural solutions. Its success is also due to a successful understanding of the values, institutional arrangements and economic notions of the culture the product is targeted at. Portigal (1997) also claims that a product's function, ergonomics, and cognitive aspect should be understood by designers and argues that the key ingredient in developing a successful product is a degree of which, he coined as 'cultural fit'. Users culturally determined needs may be particularly unpredictable in a changing society. Additionally, as pointed out by Squires (2002:105), it is always a challenge for designers to know who their users (or stakeholders) are. According to Leinbach (2002:3), design should no longer be seen as a styling shape or just an art object but products should be designed and produced with appropriate features including cultural aspects which could provide a more competitive edge in the market. Rodriguez et al. (2006) have suggested that in creating products for current emerging markets, designers should become involved in a deep understanding of the needs and context of the people within it.

It is becoming increasingly difficult to ignore the changes in users' lifestyles, tastes, demands and cultural values with the products people employ in their daily lives. Moving from traditional rural to advanced industrial urban (example from this article's case study), users have been introduced to the interplay of conflicts between cultural values and the processes of adaptation. As culture is understood to be a 'way of life' and is integrated with products that people use (Hofstede 2005), the study of products' transformation and understanding users' experience can be useful for designers in attempting to understand and respond to this situation. In this situation, designers are required to offer more than just an improved version or a new product, but rather an appropriate design and social engagement system in which design and designer can both play a role in the social investigation that informs designing.

Research Framework

In recent years, 'practice-led' design researchers have developed techniques that have enabled them to gain insights and develop holistic thinking about products, services, environments and systems. These include exploring both new possibilities Bowen 2009) and the constraints of a given situation (Rodriguez et al. 2006).

Design researchers such as Squires (2002:105) and Rodriguez et al (2006) have demonstrated 'user innovation toolkits' (Von Hippel 2002) that operated by incorporating the development of sketches. Prototypes have provided users with freedom of experience in sharing their thoughts and aspirations, a strategy which

could be useful in informing the design development stage. Further, Rust (2004) explained that designers have the ability to imagine new circumstances and could creatively 'design' a practical environment for people to experience a 'new world'.

Designing and doing research formed the main components of the methodology for this investigation. In general, methods and techniques of integrating design into the research process or designing research are generating a great debate amongst the academic community and design thinkers (Glanville 1999, Burdick 2003). However, in current design research situation, they have proven to become useful and effective research tools among design researchers (Bowen 2009, Marchand and Walker 2009, Evans 2009, Rahman and Rust 2009, Rahman 2010). Framework for this investigation is generally built up into two (2) main components which are continuously interrelated and contributed to each other. The first part focusses more to an account of how products interact with stakeholders in their cultural environment.

The second part focusses on the process of developing a specific design for culture which can be used to analyse and evaluate the understanding that was gained from the earlier stage. The social inquiry works involving stakeholders will directly inform the design development process which in return would assist in the continuous social inquiry works.

This element from "practice-led" design research approach is employed to provide an arena for investigating how stakeholders respond to the conceptual designs of cultural products and explore techniques that designers might use to work in this area.

Here, the design work is a continuous process alongside the social inquiry and responding to insights emerging from it. In turn, a set of conceptual designs were developed in the practical design work and are being used as provocative objects (conceptual designs) bridging users' cultural determined needs and inspiration to products while the programme of interviews and group works (design workshop and discussions) proceeds. This conceptual design work continues to be a continuous process alongside the social inquiry and responding to insights emerging from it. In turn, a speculative conceptual design has been used as instrument in this research as the programme of interviews proceeds.

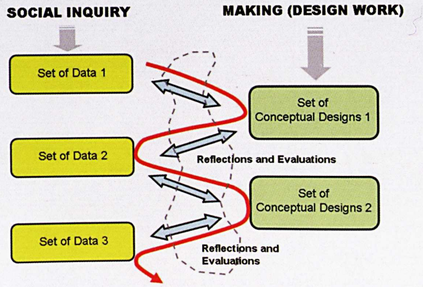

Fig. 2 - Research Work and Design Scheme

Both processes, designing and doing social inquiry is more likely to provide good results for this investigation. Thus, in the designing process the output could only reflect to the possibilities but with no absolute guarantee since this design work is validated by the social inquiry work and its output.

Analysis

The analysis process has been developed based on social science's qualitative data analysis techniques in generating themes and coding together with reflective process that fed tacitly into the designing activities as well as informing explicit analysis. In practicality, both designing and analytical actions are contributing to inform each other and assisted to progress the analysis process.

Methodological Findings

This section will only be focussing on methodological aspects. Part of the research work was to produce conceptual designs in the form of visualisations to assist researcher and research subjects in exploring possibilities in user-product-interaction. It is also to explore different ways of using these design visualisations with stakeholders. The presentation format, the concepts selected and the physical settings for the interactions with stakeholders affect the productivity of interviews and discussion sessions. Below are some of the productive approaches identified in the research work influence stakeholders' engagement:

Presentation formats influence participants' engagement. The early design presentations were in printed handout form and in 2 dimensional visualisation formats. Having these 2D illustrations for the interviews and workshops had its own disadvantages and limitations. For example, when showing 2D illustrations to the participants, the actual use and practical problems of the designed product could not be tested to evaluate the real practice and actual environment where the product should be operating. In this situation, participants had to imagine how the products might work based on the visualisations shown to them. The alternative approach of changing its presentation format from photo real into 2D illustrations has triggered participants engagement not only to discuss about the physical aspects of the products but also to other non physical aspects such as its practicality and function.

Selecting familiar cultural types (such as kitchen tools) triggers active participation. Having conceptual designs developed from existing familiar cultural products also encouraged active participation in the stakeholder sessions. Using these familiar forms did not just assist in developing future design ideas, it also mobilised the implicit elements of culture through participants' use of the product as a starting point for speculation about improvements and discussion of related practices and beliefs. This indicates that products that already have strong connections with users will be more productive than novel futuristic products which might cause the discussions to digress into other non related areas.

To connect with the cultural constraints in engaging with participants, some cultural constraints need to be considered. The researcher discovered that each of the interpersonal activities in the research required a different approach. For example, expert interviewees could be contacted formally and directly because they shared the researcher's professional understanding and recognise the value of the research, whether they were cultural authorities or

a policy expert. Thus, an expert interview does not require any special care in preparation or incentive for participation. However, the situation was different when it came to conducting home interviews. There was no formal source that could lead the researcher to suitable people. This required the researcher to have some knowledge of local settings. For example, some participants were found by asking diners at traditional food stalls for recommendations to other potential participants.

Friendly Introduction session is essential to deal with 'local' culture. The introductory phase was essential to building rapport and enabling the development of further dialogues. From the experience, researcher recognised that participants' responses were heavily influenced by their social background and the education system they had experienced. As design formed the central part of the design workshop sessions, participants' first reactions to communication revealed a rather passive response and less interest in extending their dialogues and developing their ideas about the research subject. To overcome this, the researcher created some activities based on selected shared topics of interest to engage and facilitate their communication with him.

Conclusion

Lowgren and Stolterman (1999:18) stressed that by exploring new methods and techniques, a designer could extend his language and his repertoire of tools for different design situations. A central feature of this work is the use of design practice and its outcomes to provide part of the environment for engaging stakeholders in their homes or other familiar environments. The designer also must develop good skills of interacting with and observing stakeholders. To develop appropriate skills in this approach, as well as understanding its principles, designers must experience them in action such as through pilot studies.

This is evident above where the designer is using research methods to understand the subjects and their culture as preparation for the main body of work. The designer/researcher will need to pay attention to certain features in developing their design work. These include developing appropriate design presentation formats, selecting familiar cultural objects and being able to identify flexible 'relevant' products. Methods of engagement with participants must also take into account participants' background, culture and environmental settings.

In summary, it was observed that the designer could not predict the course of cultural factors. However, through this practice-led approach, the work has identified that particular elements of culture might be useful for designers in new product development. This kind of contextualised understanding cannot be gained in studio work (Ireland 2003:22). However, it requires engagement with stakeholders and, as Bowen (2009:137) Rahman & Rust (2009) and Rahman (2010) have indicated, stakeholders cannot envisage future possibilities without a stimulus such as the introduction of a conceptual design or artefact.

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