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WELL BEING AS A CRITERIA FOR PRODUCT DESIGN

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ABSTRACT
Historically, Product Designers have concerned themselves with manufactured objects through negotiated briefs for clients either as external consultants or in-house designers. Within this remit traditional attributes of a product are well understood but the defining criteria for success is the bottom line of profitability. However there has recently been a shift in application of the design process to a diverse range of market sectors and problems. With this comes a reappraisal of the criteria which designers should use to gauge success. Product Designers should acknowledge that they have a responsibility, beyond the bottom line of usability and commercial profit, to deliver equitable value to many stakeholders. Among these values are social indicators such as well-being in contrast to short term desire (point of purchase), happiness or pleasure rather than functionality and value for money. The values by which design outputs are judged have become increasing more complex. This paper sets out to explore these issues and a call for Product Design application to expand from purely commercial to that of responding to human requirements whether individual, communal or cultural. It attempts to address what we mean by the terms well-being and happiness and how these can form part of both a design brief and a mechanism for judging success. It uses a series of student projects as case studies to introduce these concerns to design students and finally muses on the value of design itself as a mechanism for creating positive sustainable futures.

Keywords: Well-being, happiness, pleasure, word-circles, design research, design methodology,

1 INTRODUCTION

Research has indicated that Happiness in the Western World Peaked in the late 1950's. This correlates with the accelerated growth in both Product Design and Consumption [1].

Product Design (PD) including education is at a pivotal point in its evolution. That is the first phase of understanding industrial design, the attributes of the manufactured product are well understood, and the educational programmes structured to equip students with the necessary skills and understanding to work within the discipline are well established. However the attributes of design have, by necessity, been focused towards functionality, appeal and profitability as it has predominantly been funded by manufacturing industry. Both of these are short-term attributes which have inevitably been linked to increased consumption. Tim Jackson observes:

'Why is it that material commodities continue to be so important to us, long past the point at which material needs are met, Are we really natural born shoppers?' [2]

He continues:

'What is it about consumer goods that continues to entrance us beyond the point of usefulness?'[3]

If we now include the current concerns of ecological and social sustainability into this equation we have a conundrum: on one hand PD has achieved its initial aim, better products, but new issues relating to the bigger picture of attaining a sustainable future have been wilfully neglected. It is time for PD to re-consider what its' true purpose and value is. Part of this re-evaluation must include the stakeholders affected by design and the actors who can directly influence design decisions.

'Here an actor is defined by a person or organization that will remain centre stage and is essential to the main storyline of the design project. A stakeholder is any person or organisation that will have an effect on and/or be affected by the design project' [4]

Here we meet a new question in that if we are going to expand the application of design to meet a more complex range of requirements then we need to consider new criteria by which we initiate design

responses as well as validate and assess our designs. This shift of emphasis has already started both in theory [5], [6] and in practice by design groups such as Massive Change, Project H and Shift Design.
Much has been written about the need for sustainability and change. The initial driver for this was a growing awareness of the damage that human activity is doing to the planet. Within these debates the concept of three systems, ecological, economic and cultural (or social) has become accepted as platforms on which we need to create a balance to maintain a sustainable future. Whereas ecological damage(s): Resource Depletion, Climate Change and Human Health [7] are well understood even measureable, what we mean by Cultural or Social needs becomes more open to different interpretations. One key observation is that the changes necessary to create a balance between human activity and ecological sustainability may be instigated through behaviour change or new paradigms within the Cultural System of Sustainability [8], [9]. To fully understand the consequences of change and how to 'design' a sustainable future we need to further unpick what we mean by Cultural or Social Sustainability and ultimately map this onto the design process. In this way we can consider how we train designers to operate within a new framework. What will be the Cultural or Social Drivers for Design? By what metrics will we measure success?

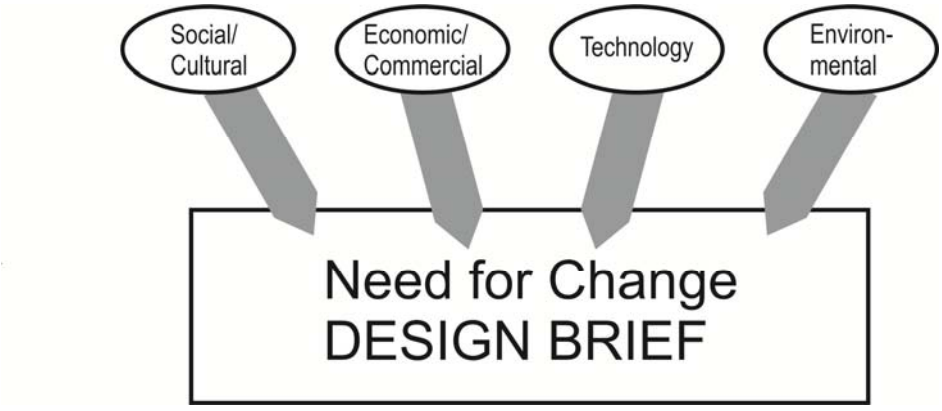

Figure 1. Drivers for Design

This paper explores, through student projects, how PD education can adapt to make the next generation of designer aware of new roles for design and reappraise associated value systems. It aims to unpick some of the complex issues. It is a work in progress raising more questions than it answers.
Within the above understanding is the notion that a need within a social or cultural construct is both a logical and aspirational driver for design. But some of the characteristics of social design are about the human condition and we use terms such as happiness, joy, harmony [10], [11]. These are difficult attributes to quantify. As Robert F Kennedy stated.
The Gross National Product does not include the beauty of our poetry or the intelligence of our public debate. It measures neither our wit nor our courage, neither wisdom nor our learning, neither our compassion nor our devotion. It measures everything, in short, except that which makes life worthwhile. [12]
If these attributes are to become criteria for design we need to explore how we can validate designs against these values from initial problem/issue identification to criteria for success. However we first need to understand what we mean by these terms.

2 RE-STRUCTURING DESIGN EDUCATION

PD is in a strong position to expand its remit as it is now constructed on a strong understanding of the design process or methodology for instance, Design Council Double Diamond [13], Service Design Thinking [14]. This acknowledgement of the value of the design process (or design thinking) is taught in several Universities [15]. The projects below report on initial work to raise awareness of social issues within student designers while exploring terminology associated with social or cultural constructs. An important aspect is how the research is narrated/presented and connected through each stage of the design process. These case studies are examples of approaches not completed projects. The aim is a shift in perception amongst students to questions PD beyond traditional limitations. The project (or sub-projects) outlined below were all conducted with second year students. During the first year they learn all the traditional skills of a product designer and the second year initially concentrates

on the purpose of design and how research informs this building an understanding of the design process. In the final year students take greater responsibility for their own directions which can include social aspects of consumer needs.
The case studies indicate methods of approach rather than complete projects. The example at the end demonstrates how an understanding of social issues have influenced a design proposal. All the tasks were supported by lectures on the context of social/cultural sustainability.

3 INITIAL EXERCISES

3.1 Mapping Relationships: Possessions and People

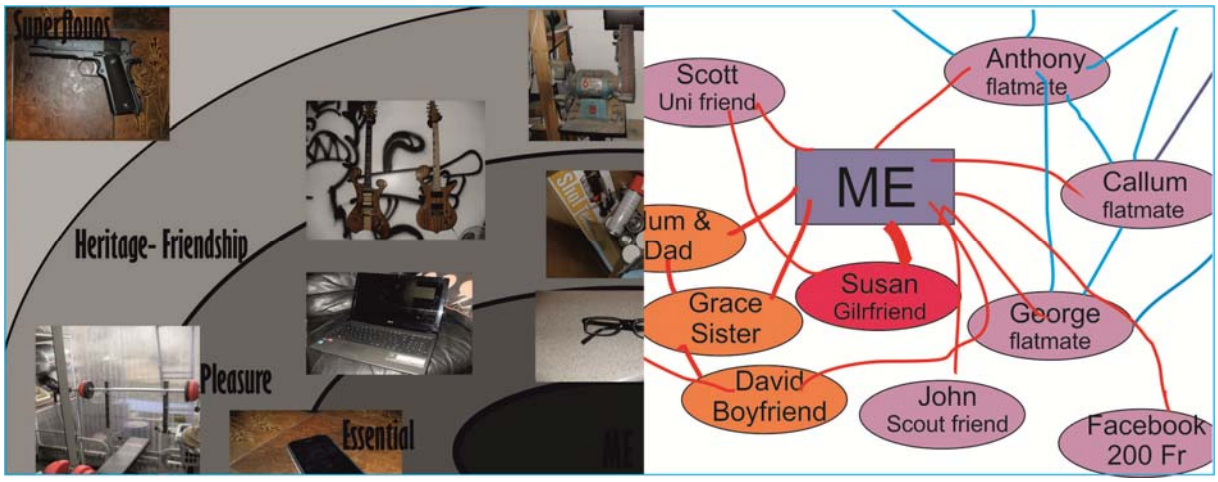

Figure 2. Mapping Possessions and Social Relationships

Within these exercises students have to visually map their own possessions and relationships. With possessions there is a hierarchy of need from essential through self -esteem to superfluous. The context is to make students aware of the values by which we engage with products. The second exercise is to map relationships within a social environment, a family house or shared flat. Starting with themselves they map out relationships to others and reflect on why these relationships exist. With both exercises it is important that the work is presented visually at a large scale to foster engagement and discussion.

3.2 Exploring Terminology: Word Circles

Initially design was placed in context of social sustainability (individual and community) through a lecture and open discussion on how design can have a positive impact. The final part of the session was to explore in ‘words’ what we mean by Well Being and Happiness. Students were asked to consider words which define these two terms. These ‘words’ were then written on a white board to form two ‘word circles’. Each student was then asked to draw a line between the two words (In the circle) which they felt were most important to the term. By this method key words became apparent due to the number of lines originating from them. In the example in Fig. 3 the word Freedom becomes important in facilitating Happiness.
By this democratic method the group became aware of what constitutes Well Being and Happiness (sometimes substituted for Pleasure within the exercise). From this simple exercise the notion of using these words to validate design choices was introduced. The next step was to introduce Project Briefs which incorporated this shift in thinking to exploring emotional or human responses and reactions.

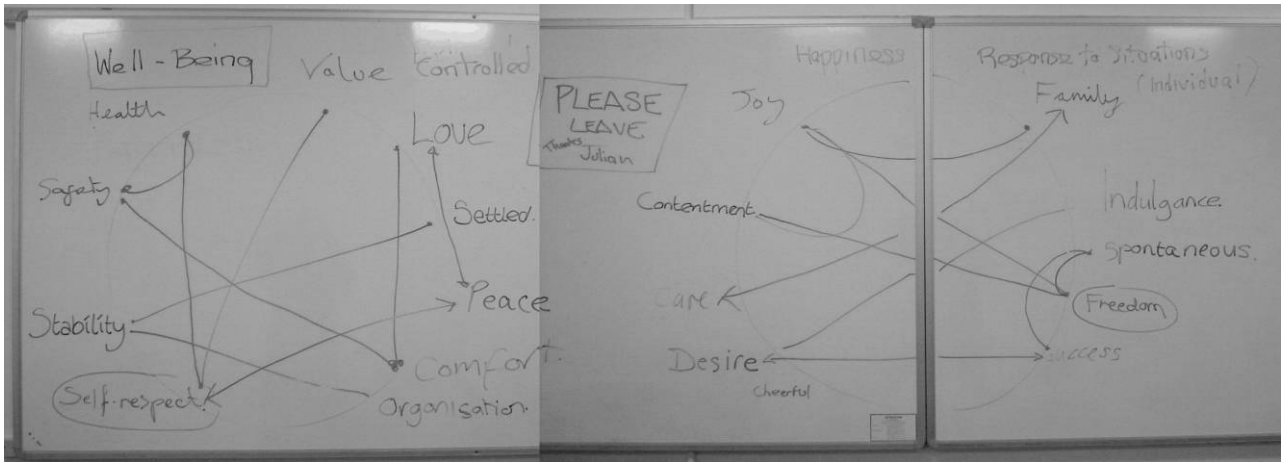

Figure 3. Well Being & Pleasure Word Circles 2010

3.3 Task Analysis 1: Emotional Response

Figure 4. Scenario & Pleasure Time Line

Initially the brief appeared a simple redesign of a functional product. However the approach was analysing actions. As an example, making a hot drink from the point when the drink is required to the consumption of it, rather than just analysing a kettle. By these means the students were encouraged to get back to first hand research rather than rely on assumptions. It also opened the possibilities of innovation (a new way of seeing) rather than incremental change of an existing product. This task was achieved through a series of photographs plotting the scenario. Students had to analyse and annotate these storyboards. In conjunction with this exercise and presented alongside the scenarios, students had to plot a timeline recording pleasant and unpleasant experiences within the storyline photographs (Fig. 4). To further emphasise the analysis of need rather than assumption, students, as part of the exercise, had two further diagrams to consider.

3.4 Task Analysis 2: Scenario – Activity – Incident

The Scenario-Activity-Incident (Fig. 5) created a hierarchy of events in a situation either using a product or undergoing a process. This prompted students to consider where design interventions could have an effect, also whether these would be at incident level, for instance improving ergonomics, or within the scenario finding a different way to accomplish the need. This approach is a derivative of Empathic Design Tool 10, Empathic Design Tutor.

'These individual needs are normally directly related to specific product interactions or parts of activities. Here it is important to visually represent the relationship between individual needs, & between needs, incidents & activities.' [16]

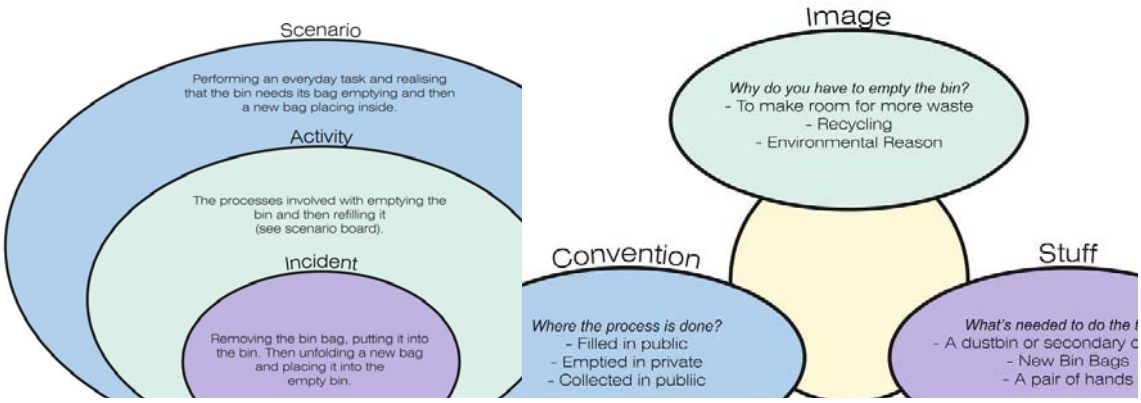

Figure 5. Incident-Action-Scenario Diagram & Stuff-Heritage-Ritual Diagram

3.5 Rituals: Stuff – Image - Convention

The second diagram to populate, (Fig. 5) after research at TU Delft University, gets students to think about ritual and cultural/personal perceptions. It asked them to consider stuff needed within the activity as well as conventions associated with the activity and the image or perception of undertaking the activity.

The final design brief was simple: take an unpleasant experience from the research and through design intervention create a pleasurable activity. The objective of the project was to get students to respond to issues in new ways while generating a different set of criteria to guide and validate their decisions, in this instance pleasure and happiness. That is identification of need from an emotional rather than functional analysis.

3.6 Rituals: Functional and Psychological Needs

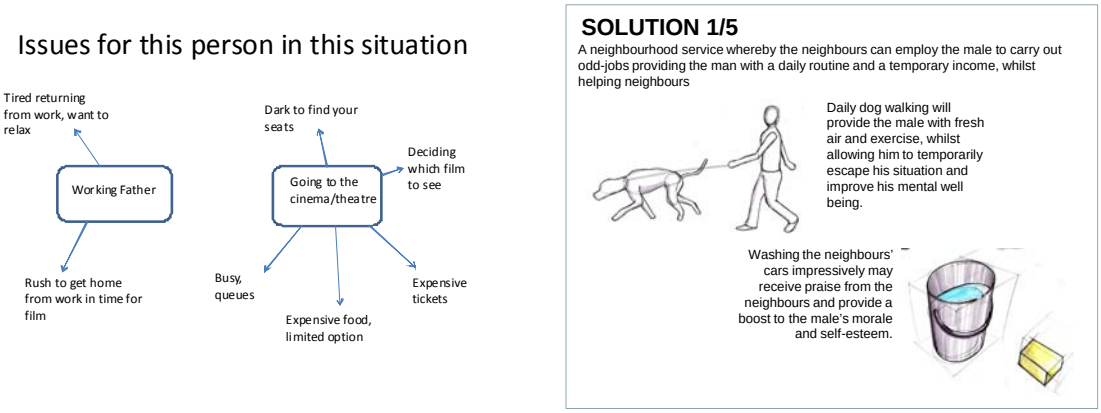

Figure 6a. Mapping emotional needs & b. Social Response

This exercise moved from need to scenarios where an individual was put into a social context or scenario. Profiles, such as 'Working Father (single parent), and contexts including 'Going to Theatre/Cinema' were selected randomly Fig. 6a. Students then had to analyse these contexts from the users perspective, as a spider diagram exercises. This broader approach allowed students to research all issues connected with individual or social needs.

4 RESPONSES

The projects continued to a design proposition stage and were critiqued against the initial word circles. Fig. 6b is an example of a social service whereby an unemployed man can regain self-esteem by becoming of value to a community. This improves personal and social well-being.

5 REFLECTION AND FURTHER WORK

The above exercises are set to broaden students understanding of product design from purely the physical object to a wider understanding of need. The term 'improving well-being' can loosely be used as an underlying objective of these projects. An important learning curve is a re-evaluation of the terminology we use [17]. For instance shifting from 'product to need' and 'ownership to experience' facilitates new and appropriate responses from designers. In essence the authors are aiming to instil a sense of new values within the student experience supported by the necessary processes to explore, express and respond to new social or cultural demands. As the terminology used is subjective, it is important that we equip students to articulate both verbally and visually meanings and contexts for their work which are effective within existing Design Methodologies. This is very much a 'work in progress' The next step is to forge better links between the terminology used in defining problems and the criteria used to evaluate success of a project outcome. Importantly, the exercises outlined above get students thinking, debating and reflecting on social issues. They form a good platform of understanding prior to the final year of study. The key Learning Outcomes of these Projects are:

1. That social criteria can drive and validate design decisions.
2. The value of exploring categorising and communicating social issues.
3. Exploring processes which facilitate and communicate the above.
4. Linking social need to design solution.

Alastair Fuad-Luke sums up this opportunity

'If sustainability is the most challenging wicked problem of the current era, then participation in design, as a means to effect deep, transformative, socio-political change, seems essential. This suggests a significant new direction for design to seize'. [18]

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