MEDIATING EMOTION THROUGH OBJECTS: THE UNDERSTANDING OF DESIGNED OBJECTS AS AN ASSISTIVE TOOL FOR DESIGNERS IN THE EARLY STAGES OF DESIGN ACTIVITY

Hana HAPIZ
Plymouth University, UK

ABSTRACT

This paper will explicate the relationship between everyday objects and the user, categorise the objects based on an established system within the design discipline and develop a taxonomy to assist novice designers. To consider the relationship between these objects, a map based on the frame of product experience (Desmet & Hekkert, 2007) will provide a fundamental theory to support the taxonomy. This study will explore the potential of emotion elicited by the user towards everyday objects, and locate these emotions within the taxonomical structure to create a better understanding of the object-user relationship. To better understand the specific qualities of the user experience in this object-user relationship, it is necessary to understand how designed objects trigger and mediate emotion and how these emotions act as a critical component in how we understand designed objects. By unravelling the object conundrum deductively, novice designers can understand the implication of existing designed objects and improve the design of objects in the future. The taxonomy developed as part of this research will be beneficial for the novice designers who face the uncertainties in the early stages of the design activity.

Keywords: Emotion, everyday objects, design activity, uncertainty.

1 INTRODUCTION

Designers often face 'uncertainty' at the beginning of a design activity but towards the end, they usually gain the clarity and focus they require to complete the design task (Newman, 2009). Brown (2009) explains that designers face problems at the preliminary stage of designing, which actually motivates them to find the necessary answers. However in order to move to the ideation phase, good ideas are commonly generated from a well-informed client brief or what we call a design brief. Therefore, to establish a good design brief, a clear set of design criteria helps to communicate relevant solutions to other design colleagues or stakeholders. By taking into account that concise design criteria are essential to alleviate the uncertainty in the earlier stage of design activity, this paper will investigate the potential of the objects taxonomy as an assistive tool for novice designers to develop a framework for the design criteria.

2 EVERYDAY OBJECTS

Objects invite inquiries and affect our emotion; if they serve their function satisfactorily, they have the potential to greatly influence our lifestyle. Everyday objects are attached to the user as they posit emotional values that respond to the user. These objects elicit an unobtrusive element that is a representation of an extension of ourselves or a recollection of our past that we wish to remember (Margolin, 1989). Domestic objects like kettles, coffee mugs or a duvet elicit certain emotional responses in the user; they could be either illicit comfort or simplify their daily chores. Cognitive approaches to designed objects are usually overlooked and the element of emotion from an understanding of the user experience is often not considered (Norman, 2004). Emotion is connected to meaning as it plays a significant role in the cognition of the designed object; consequently it ought to

be considered as part of the design process. Emotion influences how we define the use of objects, the way in which we keep or display them and suggests the consequences of the object in our lives.

2.1 Theoretical framework

The field of user experience has evolved since the term 'user experience' was brought to wider audience by Donald Norman in the mid 1990s. Emotional responses are relational to the affective experience. The affective state is generally used to refer to all types of subjective experiences that involve a perceived goodness or badness, pleasantness or unpleasantness (Desmet & Hekkert, 2007). Objects affect the user inexplicably in many ways. A 'performative' object, or as referred to by Sudjic (2008), the object that we use, elicits certain levels of product experience. Hekkert (2006) has distinguished three levels of experiencing object: aesthetic pleasure, attribution of meaning, and emotional response.

> We thus define product experience as the entire set of affects that is elicited by the interaction between a user and a product, including the degree to which all our senses are gratified (aesthetic experience), the meanings we attach to the product (experience of meaning) and the feelings and emotions that are elicited (emotional experience) (p. 160).

Desmet and Hekkert (2007) have outlined the framework of product experience that distinguishes the affective product experience and the processes that underlie these experiences. Their analysis is based on the users' behaviour and cognition to the users' affective experience of the human-product interaction. These affective experiences are linked to the emotional responses elicited by the users.

3   DATA COLLECTION

Emotional responses, which are the pivotal variables in this study, are explored through an ethnomethodological approach. According to David and Sutton (2004), ethnomethodology focuses on the actions of participants in the interaction that requires an empirical focus upon the micro-processes of everyday life. Ethnomethodology is a method that scrutinises the miniscule details of one's preference; for instance, the attachment that one has to everyday objects. To unravel the personal bond between the user and the object, the study adopts the auto-ethnography method, a method stemmed from the ethnomethodological approach. Here, a set of instruments is used to analyse the findings using keyword coding and interpretative analysis. This reflexive method has been expanded to the exploration of data visualisation to elucidate the data findings in a visual format. The data visualisation is contextualised based on the established theoretical framework of Desmet & Hekkert's product experience. A set of themes is developed based on the synthesis of emotional responses elicited from the participant; these responses form the parameters of the generic design criteria.

3.1 Participant

The study adopts the auto-ethnography method that utilises the autobiographic materials of the researcher as the primary data. Differing from other self-narrative writings, such as autobiographies, this auto-ethnography study emphasises the interpretation of the researcher's behaviours, thoughts and experiences (Chang, 2007). For this study, researcher acts as the sole participant as having a background as a designer, and also a user, the findings will have their own unique values and authenticity.

3.2 Experimental procedure

The study investigates responses (interaction) towards selected everyday objects by examining emotional responses elicited by the participant in these two tasks. The tasks are as follows: 1) the researcher selects 30 domestic objects that she wishes to possess; 2) the researcher identifies 30 domestic objects that she has at home which are important to her. Her responses are recorded using a photo journal approach; this allows the participant to justify her selection and offer a reflection on her choices. The selected objects are divided into two categories as in accordance with the task: (1) admirable objects and (2) possessions.

3.2.1 Task 1: Admirable objects
Objects that we want to own or we love are usually a representation of who we are and who we want to be (Baudrillard, 1968). The emotional connection towards an object is described by the Japanese

term, *aichaku*, which means "symbiotic love for an object that deserves affection not for what it does but for what it is" (Schwartz-Clauss et al., 2010; p.39). By having *aichaku* towards the objects of her admiration, the participant has gathered knowledge about the objects based on their visual aesthetics despite the fact the she has never touched or seen these objects in real life. For this task, the participant is required to choose 30 domestic objects that she admires from any possible sources such as magazines, catalogues, television or the Internet.

3.2.2 Task 2: Possessions

Rob Walker (2009), a design columnist, shares an interesting insight about possessions in a documentary named *Objectified;* he argues that real objects are the ones that hold meanings implied in our life and reflect a true story about who we are. For this task, the participant is required to select 30 objects from her home that she could not live without. Task 2 is more complex than the first, as it involves objects that are present at home; these objects possess the elemental values that enable them to dwell in the participant's home.

3.3 Task trajectory

For both tasks, the participant is required to give reasons for her selection (justification) and synthesise the justification (reflection) by stating why these objects matter in a written format. There are two types of justifications that the exercise hopes to establish: explicit justification and implicit justification. Explicit justification is a direct justification that the participant can establish without having to think about the ideas behind the objects; rather, she can justify each selection based on the impression of the object. While implicit justification suggests the objects' inherent values, thus the participant needs to reflect on the indirect implication of her own selection and synthesise it according to previous knowledge about the object and articulate it in the form of implicit justification. Drawing on Desmet and Hekkert's research, the emotion elicited by the participant is thoroughly analysed using a product experience framework. Emotion is subjective; therefore while the 'justification' and 'reflection' provide reasons for why each object has been selected for both tasks, the keywords are layered with the understanding gleaned from the literature. The literature acts as the metric system to measure the elicited emotional responses.

4   ANALYSIS INSTRUMENTS

4.1 Photo journal study

Photo journal study is the approach used to document the objects selected by the participant. The participant is required to take pictures of the selected objects and then describe the emotions elicited by the objects in a notebook (Walker & Attfield, 1989).

4.2 Typological approach

Walker and Attfield (1989) argue that typology is defined as a form of bare analysis and generalisations according to groups and series of products. For both tasks, objects are coded according to their generic consumer categories such as chairs, cutlery and clothes. After coding, the inferences, interpretations and generalisation are made according to the 'justification' and 'reflection'.

4.3 Coding: KJ method

Objects are first coded according to type; the KJ method is subsequently utilised for both tasks. The KJ method is useful as a way to bracket oneself as researcher and the studied subject as well. Random samples of people have contributed keywords for the findings; the keywords are based on the implicit and the explicit justifications. The technique synthesizes different individual perspectives and experiences into a keyword definition and gives different meaning to the findings. There are two types of activities in the KJ method: understanding and completing the tasks. Figure 1 visualises the contributors' keywords that are connected to the typed keywords that are given by the researcher. The findings are now nourished with others insights without losing the essence of the participant's emotional responses.

Figure 1. Keywords collected from KJ method

4.4 Visual mapping

Visual mapping is a critical step in information visualisation, where the data finally comes to life through a deliberate visual form. However, mapping requires the following underlying components to ensure its reliability: theory, taxonomy and evaluation (Lima, 2011). Figure 2 shows the visual map of the relationship between the tasks' keywords and the theoretical framework that underlies the findings. The visual map is built based on Desmet and Hekkert's product experience.
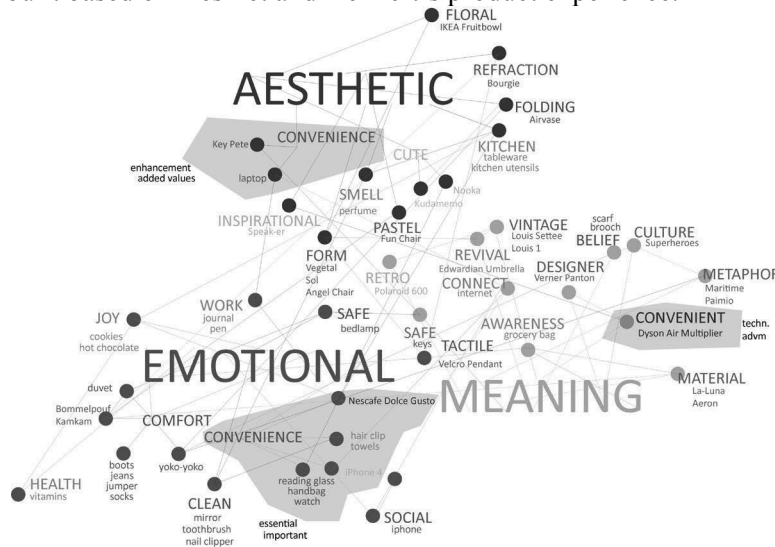

Figure 2. Visualisation of objects keywords based on Desmet and Hekkert's product experience theory

5   ANALYSIS OF RESONANCE

The map has assisted the researcher to visualise the emotional responses elicited by the participant while admiring or owning the objects. While the objects are inanimate, they possess traits that provoke us to elicit emotion when we look or use them. The map has visualised resonances between the keywords of the objects (refer Figure 1); the shaded coloured shapes are representative of the resonances held by each keyword. The objects somehow interlaced with the keywords and formed similar emotional responses. Figure 2 shows the keyword 'convenience' that was frequently coded. The participant elicited this emotion when interacting, using, owning or admiring the chosen objects. 'Convenience' appeared to be coded in the overall three experiences. Despite the fact that the objects were varied, they triggered the same emotion: 'convenience'. The visual analyses from Figure 1 and Figure 2 have offered a more comprehensive understanding about emotions and objects in relation to 'convenience'. 'Convenience', in this context refers to functional ease experience that covers emotional, meaning and aesthetic experience that she finds in her possession or admirable objects. The experience is deduced to the three main values which are: (1) fundamental, (2) supplemental and (3) admirable attributes. These values are present in the overall experience and they are the impetuses to the emotions elicited. Therefore, the researcher has hypothesised a new taxonomy of everyday objects; it ought to consist of fundamental, supplemental and admirable values.

6   DISCUSSION: FSA MODEL

The Fundamental, Supplemental and Admirable (FSA) model is a form of taxonomy of objects derived from the emotions elicited from the participant's interaction with the everyday objects. The 'convenience' emotion has transcended these emotional, meaning and aesthetic experiences suggested by Desmet and Hekkert while participant was using or admiring the objects. 'Convenience' is a representation of the emotion that any designer wants their user to feel as it combines the fundamental, supplemental and admirable values of designed objects.

1) Fundamental: Value that suggests the importance of the object. This value or attribute acts as self-image, portrays the main intention of the design and most of all it is the solution for the design problem. This value is generally related to the pleasantness, security and comfort experience.

2) Supplemental: This value makes life easier; it simplifies our chores and ensures our life is more enjoyable. This value includes the elements of pleasantness, aesthetics and technological advancement; it offers added value to our life. This value enhances the object whilst resonating with the fundamental value embedded in the object.

3) Admirable: This value comprises the element of amazement, wonder and exquisiteness. This value allows the designed object to set itself apart from other mediocre objects; it becomes somewhat unique. While the object will not be liked by everyone, it will be adored by some. This object can be a novel invention, which inspires interest in onlookers.

These values form part of the new taxonomy of objects that extrapolates the design criterion in establishing a well-informed design brief. Prioritisation is the task that any designer has to adhere to as part of the design process. Therefore, designers will be assisted to prioritise their design intentions through the FSA model. Hopefully this new taxonomy will alleviate the uncertainty faced by designers during the early design stage.

6.1 Application of the FSA model

The FSA values are subjective and content dependent. Dictating each value with specific types of objects is impossible as emotions are subjective and relative. The emotional reactions are essentially unstructured and comprise of various emotions. In the context of alleviating uncertainty in design activity, novice designers should be able to identify the main component of their design brief, and then develop the design criteria using the FSA model. Designers should know the fundamental values that need to be embedded into the design and articulate the supplemental and admirable values can enhance the design. Armed with knowledge about design and understanding of the user/client's profile, designers should know what to prioritise in their design solution. The FSA model can only be assistive if the designers have understood the design problems and FSA model acts as initial framework that visualise design criteria in lucid to the various backgrounds of the stakeholders. Figure 3 illustrates a sample of project brief that was developed using the FSA model. In this brief, designer has identified main design criterion to be embedded in her design, which is comfort. The supporting elements such as storage and adjustable mechanism are among the enhancements for the design. The admirable value such as using recycled materials for the chair is clearly articulated for the third component of this design brief.
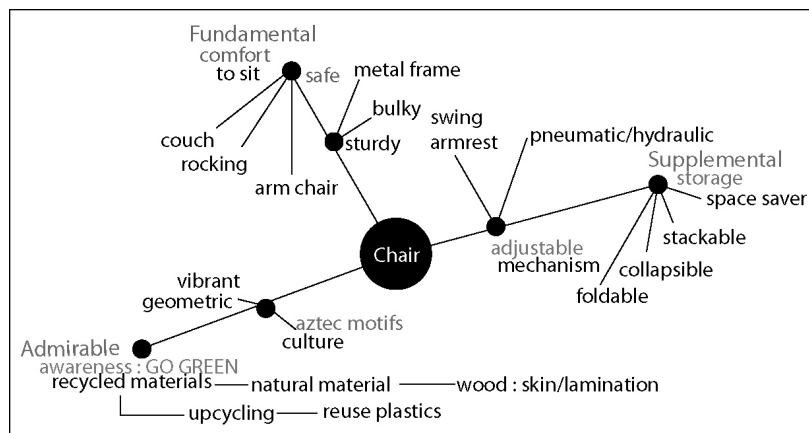

Figure 3. Application of the FSA model

6.2 Implications of the model

The model suggests the values that can be prioritised in probing design direction in design activity. Designers have total control over the design direction as the design criteria are developed based on designers' (individual) prioritisation. The model will hopefully aid designers during the early stage of the design process while framing and scoping the problem. The understanding of fundamental, supplemental and admirable values will assist designers to identify the requirement of the brief in a shorter period of time.

7   CONCLUSION AND FUTURE WORKS

Designers and deadlines are inseparable. Therefore, design activity is all about making the right choices, especially where time is of essence (Aspelund, 2015). The FSA model proposed in this paper postulates a workable approach to defining ill design problems while also fostering creativity. Designers' preferences to solve problems are varied; the FSA model hopefully can alleviate the time consuming process of brainstorming ideas and defining problems. Although designing should be a way to discover marvel designs, in certain situations a workable solution is the sole dream. The FSA model stemmed from the researcher adopting the auto-ethnography approach to understand own arboretum objects that stimulated her emotional responses. As emotions are speculative, the analysis adopted Desmet and Hekkert's research to construct a trajectory of object-emotion taxonomy. Emotions were used to measure the importance of each object and the admiration that the participant/researcher held towards each object. The FSA model attempts to assist designers to develop design criteria in constructing a design brief. The model offers new perspectives to the design thinking process; it shows that uncertainty is possible to be alleviated by adopting a formulaic approach to design. It provides a new dimension of understanding of the object-human transaction, as well as the possibility of discovering new ethnographic methods to unravel the object's latent relationship with us. Future research will further explore how FSA model assist the novice designers. In this study, researcher demonstrates the FSA application but only at pre-test level. In the nearest future, a large participation of novice designer participating in the testing will undeniably enrich the findings and explicate the potential of FSA model in dealing real design situation.

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