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Designing Product Character: Strategy to Evaluate Product Preference and Map Design Direction

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Theme- Design Character

“The role of design in forming our ideas about [gender] power relations often remains invisible, while at the same time it makes them concrete in the everyday world of material goods.”

John A. Walker (1983)

Very often the roles and effects of a tangible object are intangible. Walker (1983) gives us a hint that though design may not seem to be ostensibly changing our society, its presence can be felt ubiquitously. Everyday the products that we use, the environment that surrounds us had shaped our thoughts and placed certain stereotypes in our mind. These products carry messages and these messages are often communicated to the user.

Every product is built from many variable facets which ultimately give the product its personal and individual character. By stripping the product to its very core, this paper aims to identify the specific attributes that constitute to the product character and thereby generating a schematic of basic design elements.

Contribution

The aim of this paper can be achieved through two ways. The first is to construct a platform which determines the factors that shape our mental stereotypes and product characteristics. The second is to materialize these factors into qualitative tools to generate creative design briefs. The result of this study will be the generation of an empirical model of Product Character Attributes (PCA) and Character Design Strategy (CDS) that attempts to evaluate user’s preference and relating the preference to product design process at an early stage.



Conceptual Framework and Research Model

“Products are often instinctively perceived, and product choice is rarely just an exercise in logic.”

Alastair S. Macdonald (1998)

From Macdonald’ (1998) quote, we can suggest that the purchasing option of the user could ultimately depend on how a product is being perceived and reasoned at the point of purchase. During this interaction process, the human mind perceives and processes information in two ways which can be explained by *“the etymology of Kansei and Chisei”* (Lee, Harada and Stappers, 2003) shown in Figure 1.

Kansei interprets through senses whilst Chisei interprets through logics. Both ways of interpretations are crucial in the encoding and decoding of meaning during a user and product interaction process. Figure 1 defines the construction of a visual domain between the product, designer and buyer. The product acts as a transmitting channel between the designer and user. We can observe the thought-process in which the product is designed and interpreted. By understanding the interactive visual domain, the empirical model PCA can be constructed.

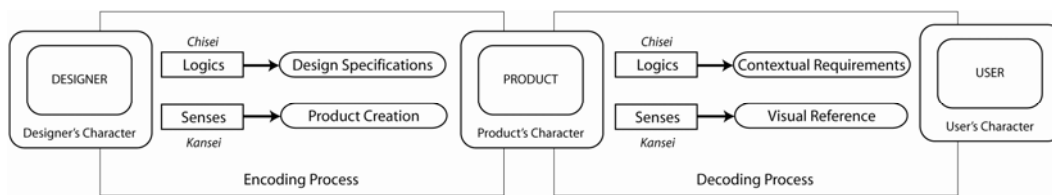


Figure 1 The interactive visual domain [adapted from Lee, Harada and Stappers, 2003]

According to Krippendorff and Butter (1984) *“design is the conscious creation of forms to serve human needs”*. Crozier (1994) states that *“objects are regarded as having status and value to the extent they are identified as having been designed.”* Chapman (2005) also proposed that *“we are consumer of meaning, not matter and product provide a chassis that signify the meanings to be consumed”*. From the amalgamation of these statements with Figure 1, we can gather that consumption preference is influenced by how well a product is designed to have met the needs (Bonapace, 2002) - safety and well-being, functionality, usability and pleasure, of the consumer. The visual domain aids in setting a boundary in which the research model as shown in Figure 2 can be carried out.

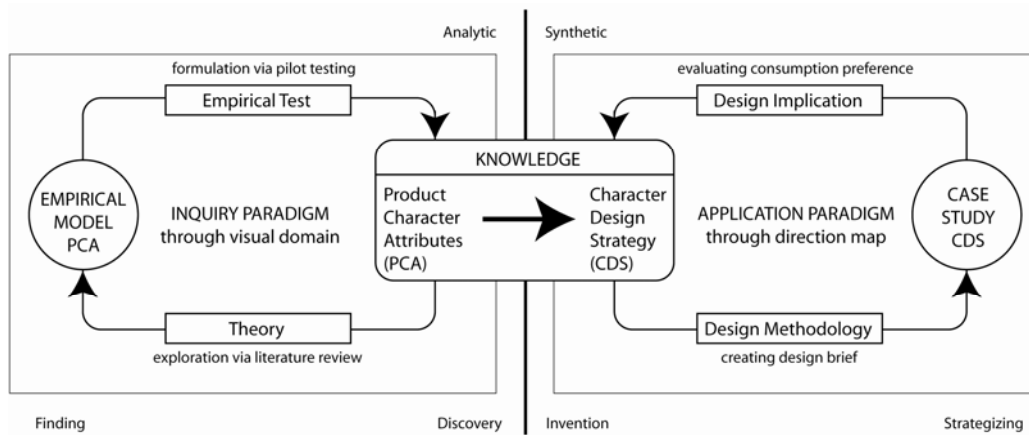


Figure 2 Research Model (adapted from Owen, 1998)

Fulton (1993) states that “products and environments can enhance the quality of our physiological experience and to achieve it, we need to explore new ways of learning about people in dynamic interaction with products and new ways of implementing what we find out.” The research model in Figure 2 attempts to discover a way in which new findings in the interaction process can be constantly implemented into design practices through two phases: the inquiry phase and the application phase.

The inquiry phase comprises of the following stages:

Inquiry Stage 1:

Construction of a visual domain in which the interaction process between designer, product and user can be defined.

Inquiry Stage 2:

Using the visual domain, construct an empirical model of PCA via written resources to identify the factors that influence the encoding process of product design during product creation, as well as the factors that influence the decoding process of product during product consumption.

Inquiry Stage 3:

Formulate the actual PCA model through conducting pilot testing, workshops and feedback.

The application phase focuses on implementing the PCA model into actual design practices in the form of CDS. CDS is a set of tools which attempts to map design directions of a company that is relevant to the user’s consumption preference. This phase comprises of a practical design project that includes the following stages:

Application Stage 1:

With the PCA model, formulate CDS by constructing design briefs and chart design direction right from the start of the product creation process.



Application Stage 2:

Using the brief, design for the specific PCA which is prevalent to the design project.

Application Stage 3:

Evaluate user's preference with CDS formulated in the initial stage and revise the PCA model accordingly.

The Basis of Product Character

According to Janlert and Stolterman (1997), *"people, as well as things, have character- high level attributes that help us understand and relate to them."* This definition proposed that by designating a character to any subject, inter-subject interpretation and interaction can be enhanced.

Margolin (1997) claimed that *"designers frequently consider their aesthetic judgments to be independent of consumer taste"* whereas *"consumers don't just buy a product, they buy value in the form of entertainment, experience and identity."* (Esslinger, 1999). By denoting a set of character attributes to a product, there will an apparent advantage of user's needs and preference being recorded and designed to their consideration instead of product design solely based on a designer's own assumption.

Product character attributes are factors- tangible or intangible, which contribute to the final make up of a product, giving the product its own character. They can be designed specifically to serve a particular user need. Generally these attributes are derived by stripping actual products into their primary distinct features- both physical and conceptual, interpreted through logic functions (Chisei) as well as physical imageries (Kansei). Though interpretations may differ with different product groups, a list of relevant product attributes specific to consumer products is generated to build the initial empirical model.

Working Hypotheses

One of Jordan's (2003) outcomes in his investigation of product personalities states that product personality was meaningful and was perceived in a consistent way. In order to build an accurate empirical model, the following working hypotheses are identified to heighten comparison consistency:

- i. Every product consists of a number of character attributes which gives the product its own character.
- ii. Different group of products has their own specific and distinct product attributes.
- iii. The character attributes of a product are built into the product by the design team with reference to the needs specified by the consumers or identified via consumption behaviour. This is known as the encoding process.
- iv. The purpose for consumption arises from the level in which the needs of the user are fulfilled by the specific and distinct character attributes of each product. The process in which these character attributes are identified and interpreted by the user is known as the decoding process.



Empirical Model of PCA

Building upon Dant's concept of product personality in material culture as well as synthesis of resources from human factor, cognitive psychology, gender studies, design and emotion and etc. were undertaken to derive an empirical model of product character attributes shown in Figure 3.

By understanding the product character attributes, dominant attributes of the user can be identified prior to the product creation and be adopted as part of the design process. User and market research can therefore be made more relevant to create a successful product.

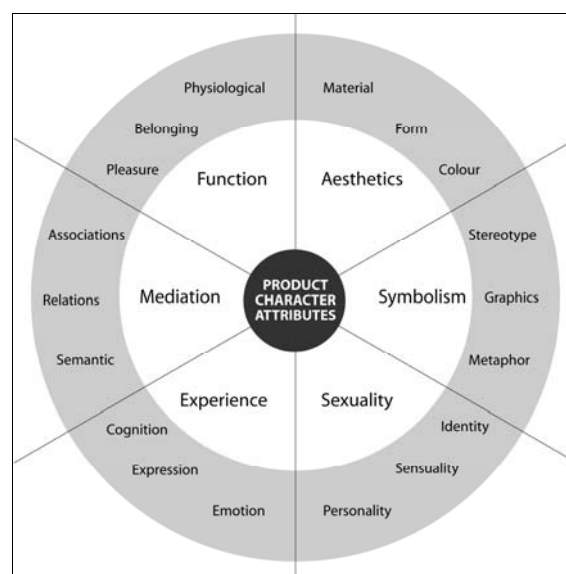


Figure 3 Empirical Model of Product Character Attributes (PCA)

These attributes constitute to the overall product character and the understanding of it will prove to be an advantage in mapping design direction for a product. To enhance comparison in developing CDS, these attributes are divided into six key segments as follows:

- i. *Aesthetics*- Norman (2004) discussed that “*attractive things should be preferred over ugly ones and attractive things work better*”. The aesthetical trait of the product character refers to the physical appearance of the product which, consist of its form, material and colour.
- ii. *Symbolism*- The symbolism trait of the product enhances its primary aesthetic value. It involves stereotype associations- “*mental images of generic exemplars of a product class,*” (Crilly et al., 2004) graphical symbolism- representation of a product's character specifically through packaging, and product metaphors- “*a way of creating cognitive and affecting meaning,*” (Charteris-Black, 2004)
- iii. *Sexuality*- Sexuality is defined as the way in which the product “*appeals, arouses or signifies certain sexual identity or activity*” (Press, M and Copper, 2003). This contributes to the product's innate



identity through the concept of creating identity, personality and sensuality. An identity allows the product to relay its primary function whereas personality creates a humane constituent of the product. This is often expressed throughout marketing and advertisements (Norman, 2004).

- iv. *Experience*- Van Rompay et al. (2005) discussed that experience arises from “*bodily interactions with the world* and has the ability to *motivate our understanding of expressions of all kind.*” The focus of experience is to “*strengthen the ‘humanness’ within design*” (Alben 1997). The cognitive and emotional concepts in design are the key motivators behind creating product experience. While cognition deals with the “*perception, action, vision, language, memory and reasoning of human intelligence*” (Oxman 1996), emotion is the outward expression these forms from interaction. Norman (2004) argues that we have “*a tendency to read emotional responses into anything, animate or not.*” As such, a product build with an emotional trait will be able to communicate in a more effective way than one which is not.
- v. *Mediation*- Mediation refers to the “*ability of a product to enable or enhance communication between people*” (Press, M and Copper, 2003). Semantics refers to the function of a product that is “*conveyed to some extent by the form of the product*” (Crilly et al., 2004). Association of product to its substitute and complements also creates a visual and mental reference for product comparison; a strong association can create a distinct product character.
- vi. *Function*- A product’s function is often the primary purpose why the product is created and it exists to fulfil certain needs of the user. Hsiao and Chen (1997) commented that “*a well-designed product should not only satisfy consumer’s physical requirements but should also satisfy their psychological needs.*”

Further Studies

The paper is currently at the final stage of the inquiry phase. A series of workshops and focus groups are being conducted to formulate the actual PCA model before entering into the development of CDS in the application phase.



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