

THE CHARACTERISTICS OF FORM IN RELATION TO PRODUCT EMOTION

Mohd Syafiq JAMALUDIN, Muhammad Fadli ZULKAPLI and Shahrman ZAINAL ABIDIN

Department of Industrial Design, UniversitiTeknologi MARA (UiTM), Malaysia

ABSTRACT

This study is to investigate the use of visual analogy in design characteristics. The main purpose is to provide an understanding of how product design can affect or influence user emotion. Emotion influences how users interact with the product; in the interaction, the feeling accompanies thinking. The success of a product in the marketplace will be determined by its aesthetic appeal, the pleasure it creates, and the satisfaction it brings to the user. In conjunction to a products emotion, the designer designs a product that can satisfy the user needs by using visual analogy and form metamorphosis, to create a product character that relates to user emotion. The study aims to communicate design form, emotion, user influence and application in the design process. This will focus on the element of semantic and syntactic analysis and interpretation of product emotion in design. Product emotion study is based upon the forms origin, which is also the influence of user emotion and product characteristics. It is important to understand the relationship between basic form and the products character so that the designer can achieve the goals of design and target their user by the product emotion. The theory is then investigated with a study of emotional responses to product appearance of a previously designed product. At the end of the research, it is expected to improve the understanding of theory of form analogy towards product emotion and it has important implications on design education as a cognitive strategy in the design process.

Keywords: Design, emotion, form, product characteristics

1 INTRODUCTION

In the era of designing technology today, a lot of design experts have begun to focus on a new emphasis in design; Emotional Factor towards Design. Many companies have been using the emotional strategies in designing their products, especially the vehicle, toy, household appliance and sport equipment manufacturers. They begin to realize that the emotional factor in product design is very important in attracting customers to buy and use the product. Many studies have been conducted and some have been adopted and applied in design disciplines. According to Holbrook [1], "We all know from our personal experiences that products can elicit strong emotional responses. These product emotions influence both the decision to purchase a product and the pleasure of owning and using it after the purchase". It may be quite tough for a designer to meet the users' emotional needs due to few difference factors among consumers such as age, body size, gender, interest, culture and geography. These factors play an important role in determining consumer emotions in each design. What makes it more difficult is matching the emotional needs of a consumer with a product design. It often happens that what is desired by the designer is not well delivered to the consumers, but interpreted with various assumptions as in some cases, consumers emotion is actually not influenced by tangible product attributes but by intangible- highly personal-construal of the product. The fact is, designers not only can hope or depending on their own construal and self-understanding as there is no collateral to fit the emotional needs of consumers [2]. However, towards fitting the consumer's emotion, designers can try to discuss or do some research towards consumers emotional needs, according to different factors mentioned. By understanding the emotional needs of different users of the product, designers are able to give a better emotional impact in their design but sometimes gaps occur between designers and users, where they cannot express the actual meaning and mutual understanding.

For example, a designer wants to design a superbike that looks great, strong, heavy and fast. They create and interpret all these elements in a superbike called ‘Suzuki Hayabusa GSX 1400’. However, the consumers might have a different perception towards their emotional interest to use it because they think it looks obese, fat and ugly [3, 4, 5, 6].

2 PRODUCT SEMANTICS AT THE EMOTION AND COGNITIVE LEVEL

In discussing the relationship between a product and consumer emotions, the researcher also discusses ‘product semantics’, which is one of the subdivisions of study in design. ‘Product Semantics’ was introduced and developed by Krippendorff and Butter [7], which mean “a study of symbolic qualities of-made shapes, in the cognitive and social context of their use”. Therefore, Product Semantics can be interpreting as connecting between consumers and products in terms of cognitive and emotions. Maybe unconsciously, some of the product manufacturers make an interpretation through shape, form, colour, texture and others, in considering that the visualizations are important in capturing consumer emotions and assessing the feasibility of a product in terms of appearance, functionality, production, feasibility, product semantics, ergonomic and social factors [8].

Semantics is also is a form of message delivery to consumers through the use of shape, form, colour, texture and others in design that can be interpreted as visual language as it relates the meaning and appearance of the product [9]. When looking at the design of a product, it carries multiple meanings and expressions. It might tell about the product itself or people whom using it. Through the design and its functions, the product is expressing its values that are interpreted by a variety of purposes by different people. Therefore, through the product expression, acceptance or rejection happen in a certain social context. However, “the product, maybe through its semantic context and expression, either strengthen or weaken this role, in this way creating positive or negative perceptions, emotions, values and associations within the individual person” [10].

3 ANALOGY STUDY

When we talk about the semantic in the form of the product, and the characteristics within, the question is, where does it come? It is a long discussion and research upon this theme is endless, where researchers’ cannot understand where it comes and how it happens. When the people say, “I feel so excited, and very energized when I see the design of ZX-10-R superbike on the road.” we can ask him, why do you feel it? And how do you feel it? Does anyone tell you that the design can/will make you feel so? It can be ensured, most of them cannot explain such the question above.

If we want to discuss the large field of design character, it is compulsory to relate the design of the product with it function (in terms of engineering, technology, system, purpose, etc) and the emotion. The relationship among three elements above can be simplified as in the figure 1 below.

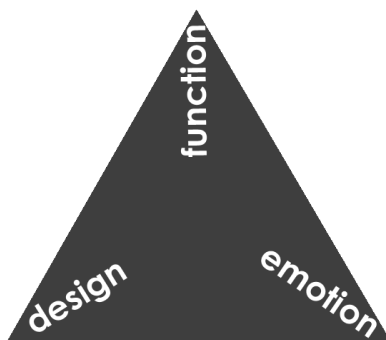


Figure 1. Elements and it relationships in designing a product

Each of the elements as stated above are very important to consider in order to produce a good design to elicit user attraction. Subsequently, the thing that we have to understand is, what are the relationships among the design form, function and the emotion. For the simple explanation, this paper will provide an example as case study; it is three (3) models of superbike, Kawasaki Ninja ZX-10-R, Kawasaki Versys 650, and Honda CBR1000RR (Honda Rabbit).



Figure 2. Sample of models of superbike for a case study

There are three models of superbike selected as a simple analysis for the study. As we can see the figure 2 given above, the design of the superbike is not only for the aesthetic, but also following and considering its main purpose, for riding. Before starting the process of the design, the function is the main focus for the design team, involving mechanism, system, engineering, technology and any related compulsory element. In this study case, the function of this bike is to speed on the road, faster than an ordinary motorcycle. So, they related the function element of this bike with the overall design or outlook. As example, ZX-10R has been designed for very high performance with speeding over 300km/h, with 175 hp, to compliment the engine’s prodigious power production, suitable for racing. From this function, the outcome of the design is compact, narrow and lightweight, aerodynamic, lowered and extreme. So, the character that is most suitable with all these criteria are adapted from closest image, such as cheetah, one of the fastest animals on the planet. It has a good similarity character with this motorbike image, the muscle, running style, body cutting, chasing head, and the tail. As the result, the users will imagine this entire character image in this motorbike design and influence them to own and try this for their satisfaction. The chart below shows the pair comparison of selected model image (see Figure 3).



Figure 3. The pair comparison of selected model image

The pairing of images above is known as image analogy, which means what is the closest or nearest image with the subjects? It is not only animals that are used, any object can be considered. By this image similarity, the subject (motorbike) can express its character so it can be felt or imagined by the user. They (user), when capturing a subject in their mind, will find what is the most similar image that can be paired with it, sometimes it does not need to cover all of the subject, but only a certain area or a most prominent/dominant character that can be matched.

The most dominant image in the subject, then analogized in their mind being something related in a different context. Some people analogize in context of the shape, or maybe the form, and some equalize the subject in the context of colour, style, traits, identity and many more, which influences their emotion. This is what we call form character, elicited from the form origin, where the character plays an important role in user emotion, by their imagination. It can be simplified as below (see Figure 4):



Figure 4. Analogies in mind being something related to a different context

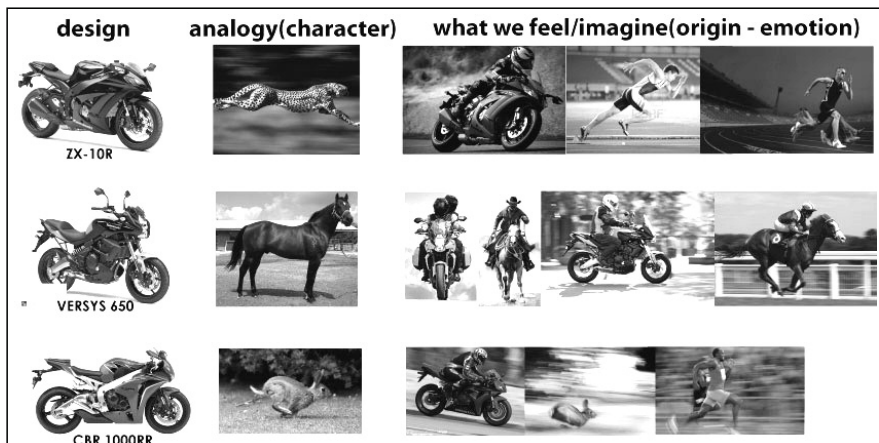


Figure 5. Relationships between form character and user emotion in design

Figure 5 shows the relation between form character and user emotion, by visualizing or imagining from the form analogy. When people look at the model of ZX-10R, they will feel fast, extreme, very energized, and feel like moving or chasing forward, because they imagine and visualize the character of the design with cheetah character.

Versys 650 gives another expression to the user, tough, strong, high luxury and energized, analogized from the horse character. The result, users who like all these characteristics will choose this bike to ride. This also happens with CBR1000RR model, so called Honda Rabbit due it similar characters with a rabbit, in terms of the shape, form, rabbit traits. It brings the emotion and feeling of speed, mercurial, courage, strike, but also sometimes looks quite cute and gentle. For those who are choosing to ride this bike, they usually want to feel all these emotions.

For another example, the writer gives several visual comparisons of form character with their form origin, so that we can feel the emotion that it brings.



Figure 6. Sculpture

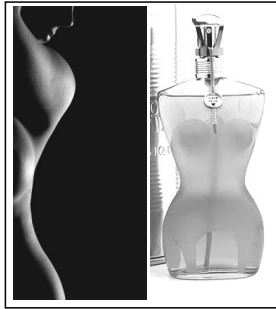


Figure 7. Perfume bottle

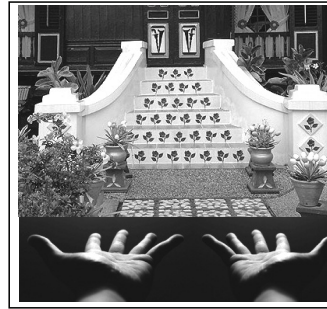


Figure 8. Outdoor steps

In figure 6, a sculpture made of steel is built for public visual art. Although it is not an industrial product, it still necessary to understand the emotion due to its form character. Visually, the form looks like a women legs as in the picture beside it, whomever looks at this, may also visualize by analogy what form that it is similar to (see Figure 7). So, people can feel the feelings of sexy, stylish, etc. For someone else, it might happen they visualize and compare with another object, it depends on their visual experience. It is so with figure 8, which shows a picture of Malacca traditional outdoor steps. The impression when we look at it, we can feel that it seems to say, "please, come in", invite us to come into the house. The question is, why we feel like that? From the study, it may be we imagine or visualize it equal to the 'open hand' sign, meaning inviting and pleasing.

4 CONCLUSION

An emotional factor in design certainly plays a very important role in attracting users from different backgrounds. In general, there is no specific way to examine and express these human-product relationships. However, the proposed method can be applied to express consumer emotional meanings. As explained above, the relationship between the basic trio; user, function, and emotion. They are mutually needed to produce an emotional impact of product design to the consumer, to determine whether a product is purchased or not. Origin forms must be addressed prior to study so that it is suitable to be applied in a product design. If the origin form does not coincide with the purpose or expression to be served, then a design would not be able to attract consumers to buy and use it and it will fail in the market. When asked if there is a specific method on how to connect the origin form and emotion, then the answer is it depends on the designer's creativity and self-understanding based on their research and experience. Finally, this paper hopefully can open the designer's mind in their design development process and can also contribute in design education as a cognitive strategy in the learning design process.

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