
Understanding the Relationship between Aesthetics and Product Design

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Abstract:

Product design is progressively being accepted by marketing experts and also from consumer researchers, it plays a vital role for any company for his success and maintain a good position of the company in a competitive market. But, with a change of time, the term aesthetics is also introduced in the market and start playing an important role in any product. In this work, we are doing full literature survey on product design and aesthetics. And try to find how both the term related to each other or (what is the relation between aesthetics and design of the product). And how they impact the product, company and customer perceptions. In this study, we try to conclude that how aesthetics is important for any product during its design phase. How they affect purchase decision of customer, and how they maintain market position any company during globalization. In this study, we try to evaluate how aesthetics, in general, is used in the product, work, and system design in particular.

Keywords: *Product design; Aesthetics; Customer; Market; Culture;*

1. INTRODUCTION

From the viewpoint of the designer, and industrial research, there is a growing acknowledgment that product design is emerging as an essential marketing element (Kotler & Alexander Rath, 1984; Wallendorf, 1980). This is true for product design in which aesthetics and human interactions are involved. Thus product design and aesthetics are the key marketing elements for competitive and emerging global market (Greer & Eisenstein, 1975; Wallendorf, 1980). Recently it seems that the influence of product design on product preferences has increased (Greer & Eisenstein, 1975). There is no effective theory or study on a design that, how they affect customer perception during purchase. So, the psychological science is the only area who helps the designer, product designer and industrial designer for describing the lack of theories of design (Schummer, MacLennan, & Taylor, 2009).

2. Product design

After the globalization of the world, the design is perceived as the most effective and strategic tool for all companies to gain substantial growth in the competitive market. Until recently, many industries use to discard design as a strategic tool. However, researchers claim that with the help of good design, one can enhance communications, environment, corporate identity of products (Kotler & Alexander Rath, 1984). The term 'Design' mostly refers to a particular composition or a process. For the consumer and industrial products development this process usually includes teams of product designers, marketing expert, engineers, technicians, scientists and also experts from the other fields (Bohrer, 2005). Basically, design refers to the product or process composition. requiring collaboration among the engineers, product designer, technicians, scientists, experts from marketing area and also experts from other areas (Sylcott, Cagan, & Tabibnia, 2011). Product design is the term which plays a critical role in any industries or product to sustain in the competitive market. The prime target of the processes of designs is to produce a good 'design'. Often for the manufacturer and for most consumers, this good design denotes that which performs its function within its economic limits. Mumcu & Kimzan (Mumcu & Kimzan, 2015) states that product design plays a vital role in cooperating a product's use and functional technique to the customer. Good design has a better ability to

speaking or communicating the functions of products. Industrial or product design is probably most linked with the aesthetic considerations of a product. This (such as, texture, shape, and symmetry) mainly describes the outer surfaces which cover the inner think (for example electrical or mechanical components) of a product (Bohrer, 2005). Basically, aesthetics of any product is influenced by the structure of any product (such as its function or working area). The main purpose of aesthetics is to show off (or speak out) the function of any product rather than to hide it (Veryzer Jr, 1993). Design or product aesthetics is one of the main influencing factors of the consumer behavior. Thus, it is well understood that product aesthetics play a vital role in product design (Anurrit, 2006).

2.1. Aesthetics

Since last two and half decades global industries is changing day by day. And, at the same time demands of young generation from global market is also changing. Sometimes product act as a sign of prestige for a customer and nowadays the demands of the customer is different from older times (Nayak, 2015). Similarly, aesthetic appeal is one of the most important things for any product to sustain in a market. According to Fast (Faste, 1995), aesthetics is a branch of psychology. Liu (Liu, 2003) states that the term aesthetics is our perception or opinion of an object based on what we see, feel, hear, smell and even taste. Additionally, our opinion could be based on one or all of these senses. Aesthetics is a manner of experience. It's one of the ways we judge, feel, and "know" the world (Faste, 1995). Both the theoretical debates and the experiential research accepted that aesthetic responses and appraisals are not limited to beauty judgments (Hekkert, 2006). Relatively, there is a complete variety of aesthetic philosophies such as the comic, the sublime, the humorous, the beautiful, the 'cool', the ugly, the pretty, the tragic, the funky, and the fashionable (Honderich, 1995). Basically, the word "aesthetics" originates from Greek term *aisthanomai*, which means an opinion by the senses (Ford, 2009).

3. Indian aesthetics

The term "Satyam Shivam Sundaram" in Indian philosophy is the supreme concept of excellency. *Satya* is originated from Sanskrit word and 'Sat' means truthfulness. "Shivam" originates from the Sanskrit which literally means of "Shiva". And, another meaning of that word is graceful or prosperous. "Sundaram" word originates from Sanskrit language and literally, the meaning of that word is right, well, and the handsome or beautiful. (Frazier, 2010). Aesthetics is a branch of philosophy and arts. Primarily Indian aesthetics is divided into three types of arts – music, architecture, and poetry. At the same time sign and symbols is the strength of Indian arts. Music and architecture show the freedom of expression or feeling to someone and poetry is the highest form of arts. (Frazier, 2010; Gupta, 2017). There are two broad categories in which schools of Indian Philosophy is divided, the schools of orthodox (*astika*) and heterodox (*nastika*). They also are known as non-atheist and atheist (Gupta, 2017). In the context of aesthetics, the first theory of inference is given in the 19th century. In that theory, they told about the emotive aesthetics experience and infer the emotion of a person on stage from his actions, perceptible physical changes, and utterances, such as movement of hand and expression of eyes (Pandey, 1965).

4. The importance aesthetics in product design

In the modern age, it is very difficult for any product to sustain in global market only with the functional appeal. So, aesthetics play a very important role for any product to sustain in the market (Juster et al., 2001). In day-to-day life, the term 'aesthetics' is used broadly in an environment like beauty salons to makeup gallery for the appreciation of pleasurable objects and fine arts. Why aesthetics is very important for every sector, according to (Bjerke, Ind, & De Paoli, 2007) from 18th-century aesthetic play a vital role in furniture industries. From last one and half decades, aesthetics play a very important role in kitchen cabinet industry to attract a large number of people from all financial groups (Xiaolei, Jun, & Bing, 2014). As some of an economic researcher try to find out the key issues which present at the intersection of fashion, aesthetics and also try to find the theoretical insights into bodily appearance and the aesthetics of fashion (Venkatesh, Joy, Sherry Jr., &

Deschenes, 2010). Some interface designer tries to find out how “charm factor” in-app icon designing plays an important role and at which level the design of app icons increase the curiosity of user(Hou & Ho, 2013).

5. Relationship between product design and aesthetics

Product design is an interdisciplinary area. There is various kind of design approaches such as industrial design, engineering design, ergonomic design, aesthetic design, and design as per usability. It's rare to include all the design concerns in the single product during designing of any product. That's why in a maximum of the products they are not giving much importance to an ergonomics and aesthetics. The drawback of this process is a complete failure of the product in the market. The product is not accepted by the society both psychologically and physically. The aim of this research work is to find out the relationship between aesthetics and product design. Many philosophers of technical field believe that there is very less role of aesthetics in technology. Indeed, several technological descriptions start with discussing the equivocality of the term art in order to differentiate the valuable arts from the fine arts (Schummer et al., 2009). The term fine arts, useful arts, technology, and science have continuously been debated and certainly redefined many times in the course of history. Also, reflecting the social status of the corresponding profession (Schummer et al., 2009; Venkatesh & Meamber, 2006). From last two decades, aesthetics also play a vital role in the automobile industry. According to (Hung & Chen, 2009) aesthetics have a greater impact on a commercial success and subsequent vehicle's desirability. Also, aesthetic features of any product have a greater effect on the success of any product in this competitive market.

The automobile industry is one of the emerging markets in worldwide and the role of visual aesthetics is very important for the success of vehicle in the market (Warell, 2015). One of the giant automobile company stated that more than 50% of a consumer decision is taken place on the basis of its styling rather than the vehicle technical performance (Kreuzbauer & Malter, 2005). The Key issue related to aesthetics is; either experience of aesthetics is emanated from the object or produced by the perceiver of the object. This matter is evident in a number of ongoing discussions like is a response to aesthetic is subjective or not and is there any rule for bounding the beauty. There is also one issue that there is any aesthetics nature in objects (Bullough, 1912). Moreover, the experience of aesthetics takes place when we are not concerned with the practical or useful consideration (Bullough, 1912; Kotler & Alexander Rath, 1984). In Ulrich (Ulrich, 2006) view there are three different ways of cognitive response from any aesthetics experience. The response to aesthetics is quick, usually in seconds of contact to the artifact.

In a natural sense the experience of aesthetics is unbiased (positive (attraction or beauty), or negative (repulsion or ugliness). In order to create a product design that is trendy and aesthetically pleasurable, designers should take into account product designs that people are exposed to in their daily life (Nayak, 2015). In the context of the product, aesthetics relates to what the product presents to the senses, especially vision. Product aesthetics is considered as the essential design element that works in concert with useful benefits to build important primary impressions and long-term customer satisfaction (Bloch, 2011). Experimental studies have investigated cognitive feedback to product aesthetics, such as product quality judgments (Landwehr, Wentzel, & Herrmann, 2010) and brand categorization (Kreuzbauer & Malter, 2005). The outcome shows that customers make their preliminary decision about the product through their esthetic understanding, and this conclusion may have an influence on the overall assessment of product performance (Norman, 2003). Therefore, designers use their training, skill, and experience to create products that induce a positive esthetic impression. However, customers and designers often understand products differently and express different esthetic preferences (Yi-Yen, 2000). Customer reactions to esthetic product attribute can be found in the study of the effects of package design on customers' behavior, emotional, and neural reactions (Reimann, Zaichkowsky, Neuhaus, Bender, & Weber, 2010).

6. Aim and methodology

This research aims to explore the importance of aesthetics in product design from different perspectives. First, we explore literature to understand the application and importance of aesthetics in product design. We take

published literature from different search engines (such as google scholar, Elsevier, Wiley, T&f, SAGE, ASME, Emerald, Books and some international conference paper.) of the last 20-30 years. Then, we categorize the findings on the basis priority. Later, we make a summary of all the published work in the different area.

In Section 4, we discuss the importance of aesthetics in product design. How aesthetics is important in day-to-day form past time to recent day and also in future. How they impact not only the human life but also the global market. In Section 5, we discuss how any product and its design depend on aesthetics or how aesthetics is important for any product in customer viewpoint. To what extent aesthetics affect any product. In the last Section, that we discuss the overall findings of the research and discuss the importance of aesthetics in product design from every viewpoint.

Findings and discussion:

Author	Finding
Anurit, J. (2006)	In his work, they find that, in the developed country how luxury brand cars act as social status.
Bjerke, R., Ind, N., & De Paoli, D. (2007)	In this study Bjerke explore the influence of aesthetics on employee motivation and satisfaction.
Bohrer, J. (2005)	They basically define the use of design in engineering products.
Bullough, E. (1912)	In this chapter, they discuss the development of different theories of aesthetics.
Faste, R. A. (1995)	Faste discuss how the involvement of aesthetics with engineering to create a successful product.
Ford, P. (2009)	In this chapter, Paul Ford discusses the different definition of aesthetics.
Gupta, N. A. (2017) Frazier, J. (2010)	In N. A Gupta, book writer describes different definition and evolution regarding Indian aesthetics. In J. Frazier, the book they describe the evolution of Indian art.
Hekkert, P. (2006)	In this study, Hekkert tries to find out the how to experience certain things as gratifying to our senses.
Hung, W.-K., & Chen, L.-L. (2009)	They examined the joint influence of product aesthetics and typicality on preference responses by using the chair as an example.
Liu, Y. (2003)	In this study, Liu tries to find out the two distinct things that differentiate aesthetic review of products and system design from the aesthetic gratitude of art and lays out an imaginary foundation as well as a two-process research procedure for aesthetics.
Landwehr, J. R., Wentzel, D., & Herrmann, A. (2010)	How luxury values the brands of a luxury car company and they effect marketing strategy of any company.

In a general way, aesthetics refers to the study of sensory values. This means senses is used for judgment or evolution of any product. In a fashionable sense, aesthetics is used to indicate particular design or style. For example, some designs indicate some specific area or culture of the specific community. In the history of China, the study of human nature and art is known as aesthetics. In his history, aesthetics is independent of religion or culture. In Islam, the term aesthetics is related to God or pureness (i.e. things which is created by God is perfect). In Islamic culture, most of time aesthetics are used only in mosques mosaics and the product which is related to God. In Western culture, artists used inspiration from Devil, God and Things which is related to God to define the beauty of product or artistic work (Ford, 2009; Honderich, 1995). At the same time, there are some major factors that affecting aesthetics. In term of building, architectural styles, sizes, and

shapes. In building the factors are colors, texture, shadow, and sunlight. For automobile section, texture, colors, brand name, and splines or source of inspiration is main the factor that affects the aesthetics values (Landwehr et al., 2010).

Conclusion

From previous time a technical person is limited only to the functionality of the product, not on the beauty of the product. But, from last few years, the term aesthetics relate to profit, money and growth. Because aesthetics play important role in the current market. If any product is aesthetically good. They make a positive image of the company in the market. Marketing researcher those who have interests in design area try to attract the students those who have a design background to their doctoral programs. Multinational and international are start hiring person with marketing academic and also with excellent design skills. In this study, we find out the importance of aesthetics, ergonomics and product design for any product for his sustainable growth in the highly competitive market. During literature review, we find out the relationship between aesthetics and product design. During the study we find out aesthetics play an equal role in the functionality of the product. If there is two product with equal functionality but in term of aesthetic point of view one is good and not. In many practical experiments the product with good aesthetics accepted by a large number of people. In this study, we only try to find out the relationship of aesthetics or product design. In future, we will try to explore the methods of measurement of aesthetics in the product.

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