

A Framework to Measure the Role of Users' Aesthetic Attitude in Visual Appreciation of ICT Products

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Abstract—In order to compete and succeed in the marketplace, ICT product owners like software, applications, websites etc., need to look beyond system reliability and interaction quality and pay more attention to the aesthetics and perceived subjective quality of their products. Aesthetically gratification has been reported to lead to better efficiency in task fulfilment and usability [5]. Aesthetic experience of human being, mind perceive information in a certain state of consciousness [6]. Cupchik and Laszlo (1992) discussed that the state of mind as an 'aesthetic attitude' towards the object of appreciation. Noblet, 1993 reported the importance of aesthetic rely on the designers educated guess [2]. Educated guess discounts the need to understand the users' aesthetic attitude. Thus the presence of a suitable aesthetic attitude is a precondition of the aesthetic experience which will improve usability and thereby market acceptability of the ICT product. This paper argues the need to understand the users' aesthetic attitude and proposes a framework to measure the same. The proposed framework has been built on the basis of definition of aesthetic, aesthetic experience and aesthetic attitude in literature. This framework can be used to measure users' aesthetic attitude towards ICT products.

1. INTRODUCTION

Aesthetic is very old concept, rooted in the Greek word aesthesis that can be translated as understanding through sensory perception. There are several definitions are existing but the definition i.e., the pleasure attain from sensory perception [7], is most appropriate in that separates aesthetic phenomena from other types of experience, such as the construction of meaning and emotional responses. Aesthetic is another important aspects of product like functionality. And aesthetic experience can be measure objectively and also by subject's attitudes towards object, which is called as aesthetic attitude. Author is proposing how to measure subject's attitude in evaluating aesthetic judgment in ICT products.

2. NEED FOR FOCUS ON AESTHETICS IN ICT PRODUCT DESIGN

Any product have two aspects functionality and aesthetics. Both are playing significant role in the ICT market. Today, most of the product selling based on factor like affordance and

aesthetic. Consumers of ICT products are making choices based on aesthetic values and distinctively visual design. Simonson, 1997 stated that most product rarely break and tend to do what they promise. Therefore it is not surprisingly then that consumers increasingly make brand choice based on aesthetic values and distinctiveness of visual design [8]. Beauty is just an attribute in user's evaluation perception, alongside durability, ease of use, cost and safety [3].

Aesthetic value provide satisfaction to user and it is initial responses to the products and first impression matters. From evolutionary perspective, it is argued that we prefer aesthetic patterns and features that are beneficial for the development of the senses functioning and our survival in general.

Aesthetic play an important role in product and system design. Less aesthetic design may suffer a lack of acceptance that renders issue of usability [9]. Also aesthetic designs are more effective in fostering positive attitude. And therefore help in creative thinking and problem solving. According to Berlyne 1974, an aesthetic response refers to the reaction a person has to an object based on his or her perception of the object [10].

Information communication and technology (ICT) is a wide technology which encapsulate the products like communication device or web based system. For example printers, tablet, mobile phones, computers, embedded systems, satellite communication systems and projectors etc. These ICT products would be going to be a part of our workplaces. Such computing products will involve complex visual information. Visual complexity would be develop from the display information and form design of the product, both factors are collectively leading to increase user errors and reduce the user performance in a decision making tasks.

In ICT product design, information visualization has recently evolved by many researchers. The aim of the information visualization research was to amplify cognition by developing the visual metadata. Designing effective visual information for any interface design needs to develop visual perception in

the user mind. For better visual perception, aesthetic measure was identified as a computational tool [1].

In this paper, author proposed a framework to map aesthetic attitude in context of ICT products. Aesthetic attitude measure for ICT product will be one of the marker to create an efficient product in near future. The major role of aesthetic in ICT products would be user interface design which involving continuous human information processing. Therefore there is a need to understand the importance of aesthetics in context of ICT product.

3. AESTHETIC ATTITUDE APPROACH FOR PRODUCT DESIGN

Osborne, 1986 said that the capacity of advance aesthetic experience is not common to all... both the capacity for it and the interest in developing it are very unevenly distributed [8]. It is assumed that all individual have same capacity for processing art and beauty of the object. The evaluation of aesthetic attitude will serves for categorizing individuals who are able to judge aesthetic better than other. Aesthetic is a subjective matter and very hard to quantify. But for scientific analysis we need people's view points and interpreting those in a quantitative form to understand general mind set on aesthetical aspects of a particular type of products. The scientists need direction on how to design measuring instruments and studies on what data collection procedure to use and on how to interpret the results. Without a theoretical framework research is meaningless. Therefore this article is proposing the framework on which we can make a measuring instrument for judgment of beauty in the ICT PRODUCTS. As scientists said that to have an aesthetic experience one should have an 'aesthetic attitude. Aesthetic attitude defined by readiness to explore an object to see what it might suggest. Aesthetic attitude gives sensitivity to the individual towards objects. as aesthetic attitude defined by Fenner, (1996), that an aesthetic attitude is a state of mind that serves receptor to having an aesthetic experience in connection with aesthetic object or event and transform the object of the spectator's perception from an ordinary object – in – the world into an aesthetic object [11].

4. AESTHETIC MEASUREMENT

There are two approaches by which we can measure aesthetics of products. First is to consider products and its properties by which aesthetic experience is associated and try to establish what properties they might have in common. This type of enquiry is often seen as a promising way to investigate the question "what is art?" Another way is focus not on the object but on the subject who is experiencing them, to consider what is about aesthetic experiences which gives them to aesthetic quality. This paper is proposing the second approach for measuring aesthetics in products. Enquiry will be based on Kant philosophy. From above discussion which is based on Kant's philosophy author is proposing a framework from

which we can measure aesthetic attitude. This can be done by make and psychological measuring instrument which can be based on visual based diagrams or questionnaires.

Aesthetic judgment are based on feelings, it is neither based on objective properties (sensation of color.), nor it is cognitive judgment (e.g. the judgment that color is green). Also pleasure we get is disinterested, which means that it does not have any motives or personal desire while judging the object. Its disinterested character distinguish it from the judgment of agreeable, which are the kind of judgment expressed by saying simply that one like something or finds beautiful. (For example food and drink). Disinterested character also distinguish it from the moral judgment as well as non-moral judgment.

Therefore aesthetic judgment of any product is away from personal desire, it is judgment of objective property, and also it is not like judgment of good or bad. That's why there is need to measure the aesthetic attitude of designers and users because this is very important to know the users attitude towards the product and designer's attitude towards the firm or society.

For Kant pleasure involved in judgment of beauty is disinterested which means does not have motive to do anything in particular. And taste refers to contemplative rather than practical [6], therefore attitude we bear towards the objects is also NOT PRACTICAL.

5. COMPONENTS OF AESTHETIC ATTITUDE

The judgment of beauty of an object describe by the components- disinterestedness, subjectivity, normativity, and immediacy. Aesthetic attitude have been consistently involving with the judgment of good and bad. Kant stated that judgment of taste or beauty and correctness was not completely judge by any one entity. By this philosophy of beauty judgment given by Kant, authors suggested a framework under which the combined aesthetic attitude help to design ICT products. Components of the aesthetic attitude have been discuss in figure1.

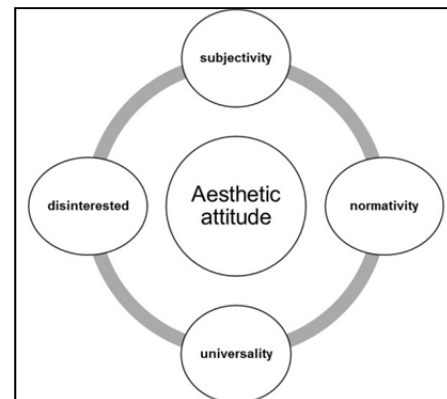


Fig. 1: Measuring components for aesthetic attitude

In this paper authors considering only features which are given by the Kant in his philosophy. Different philosophies have been different theories about aesthetic attitude and their measuring techniques. So as Kant describes in his work how judgment of beauty is possible and what is the role of aesthetic attitude in judgment of beauty authors proposing a framework for measuring a psychological scale for measurement of aesthetics in ICT products.

5.1 Subjectivity

Aesthetic judgment are based on feelings rather than objective properties like color etc. the nature of pleasure is the harmonious free play of the imagination and understanding. It is not like pleasure involved in sensuous gratification, as in the pleasure of sensation, or of eating and drinking. The pleasure is disinterested, that is desire free. It is in like the judgment of agreeable, unlike pleasure in what is good for me and unlike pleasure in what is morally good. All these pleasure according to Kant, interested pleasures they are bound up with desire and they don't have anything to do with judgment of aesthetics.

5.2 Disinterestedness

While judging moral something we get pleasure because such a judgment issues is a desire to bring the action of moral goodness. And while becoming aware to judge an action to be morally good, it appears to be exhausted in our judging them aesthetically to be beautiful.

5.3 Immediacy

Aesthetic judgments are not interference from the principles or applications of concepts they are immediacy of straightforwardness and sensory judgments, in conclusion we do not reason why thing is beautiful. Aesthetic perception is about the perception of object aesthetically, because of complex structure of products of beautiful objects, we have role of reason in their perception. But perceiving structure of an object is one thing and perceiving beauty is another.

5.4 Normativity

When a man put thing as a beautiful he demands this agreement from all others as if he judge differently it is because aesthetic judgment has an aspiration to universal validity. Normativity can be expressed as: some are correct, others incorrect, or some judgments are better than others. Kant express the normative idea that "we insist on other agreeing with our taste [6] and Kant says that the judgment of taste involves 'a claim to validity for all men [6].

6. PROPOSED FRAMEWORK FOR MEASURING AESTHETIC ATTITUDE FOR ICT PRODUCTS

We can measure the aesthetic attitude on the basis of four features listed by the Kant in his philosophy. Enquiry can be of questionnaires like "I like things' color" etc. or it can be based on two dimensional diagrams "Like judging square over

the circle will give as idea that person doesn't have aesthetic attitude. Similarly by judging beautifulness on the basis of color, forms, or any objective properties also can give an idea that person doesn't have an aesthetic attitude. For a person having and aesthetic attitude he should be able to judge the beauty by his or her feelings rather than its objective property, they should feel desire less pleasure which came from free play of imagination and understanding. They should not judge the products or objects based on morally good or non-morally bad. The judgment should be immediate and straightforward. And he should claim for universal validity.so author is listing feature based on Kant's philosophy how we can measure aesthetic attitude for ICT products.

- Aesthetic judgement should be subjective and based on feeling rather than objective properties
- Judgement should not be based on morally or non-morally.
- Judgement should be immediate and straightforwardness of sensuous.
- It should be desire less.
- It should to be the judgment of agreeableness
- It should have universal validity

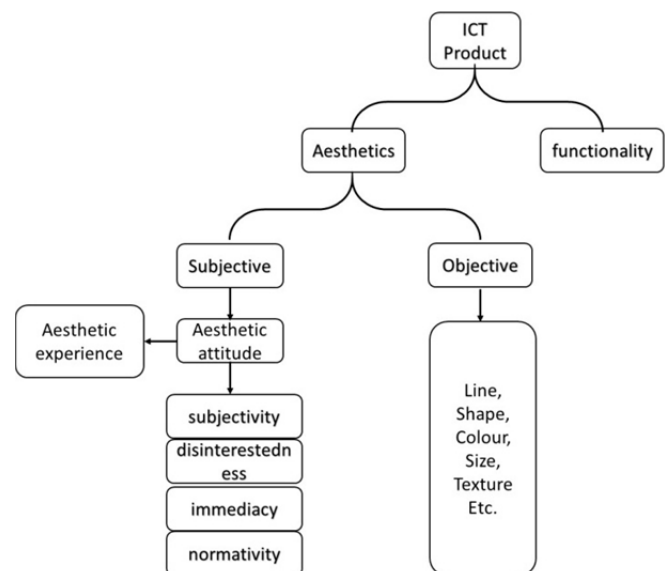


Fig. 2: Proposed framework for aesthetic attitude measurement

Therefore based on four major features, *Subjectivity*, *Disinterestedness*, *immediacy* and *normativity*, we can construct a psychological scale for measuring an aesthetic attitude.

7. CONCLUSION

It is very difficult to understand world without attitudes. Without having ability to think in terms of 'good' and 'bad' 'desirable' and 'undesirable', world would be of meaningless

for this reason, the attitude construct has proven indispensable in social psychology's understanding of why we think, feel, and do the things we do. Similarly without aesthetic attitude world will be not so much aesthetically appealing. There is a lack of individual those are having greater aesthetic sense towards the world. There is an also lack of measuring instruments which can measure aesthetic attitude. How do we evaluate aesthetic attitude? What the functions of evaluation? How are they affect the way they operate in behaviour? These questions are most important, and challenging enquiry for the social psychology.

Our purpose of giving framework for measurements of attitude is of motivating people. The assumption is here that by feeding back information people will be motivated to change their behavior.

Aesthetic attitude includes the idea of sensitivity of the individual toward object, and the assumption of his ability to react positively or negatively towards these objects.

Aesthetic experience, requires openness and involvement; it is not a merely passive act of seeing. The internal relation which comes from the imagination and understanding we have to discover. This is called as free play of faculties. The artist provide a sketches and guidelines to engage your interest and touch you emotionally. But there is no picture and no poem unless you yourself enter it and fill it out.

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