
Emotion: A Vital Component in Design Decision Making

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ABSTRACT

According to several authors, emotions are vital in decision-making, existing three fundamental components in the emotional set, that is, the affective, the cognitive and the motor, which gives emotions a central role in design projects, along with intuition, directly relating the design product with its user, which may lead to the adoption of new attitudes. Since emotions are processed at memory level, they can enable the generation of new meanings established by each user, motivating feelings of belonging, in addition to promoting greater durability in the relationship established between user/object, which may lead to positive attitudes at the level of product life cycle. Over the last few decades, there has been a paradigm shift in terms of design processes and methods, which has brought with it greater flexibility in the incorporation of concepts, promoting interaction and empathy with human beings, valuing a more cognitive and humanistic design approach. In this paper we present an investigation that fits into the disciplinary territory of Design, in which we intend to give emotion a central role in design decision-making. It uses a mixed methodology centred on literature review and practical experience in teaching design project. It is intended to stimulate reflection and bring new perspectives on the addressed object of study that may lead to a position taking the emotional component as a fundamental advantage key strategy in design decision making, contributing to a more sustained vision of the professionals but also the students, in the development of projects in design.

Keywords: Emotion, Design, Decision making, Intuition

INTRODUCTION

This paper aims to reflect on the importance of emotion and its fundamental components as elements that integrate and determine the decision-making action at the level of the Design project, since thinking and feeling are inseparable actions. We think, feel and generate emotions from concepts, which means that, given the way of thinking and which emotions were elaborated, a defined system establishes the final content in advance. Thus, emotional intelligence is developed, which is a set of abilities related to the processing of emotions and knowing how to manage them. According to Goleman (1995), these capacities are: emotional self-knowledge; emotional control; the self-motivation; recognition of emotions in other people; and interpersonal relationships. Emotional awareness refers to the ability to perceive, identify, and name feelings and emotions. Since about 15 years ago, it began

to be understood that emotions have a central role in design projects, along with intuition, directly relating the design product with its user, which may lead to the adoption of new attitudes. For this, the book by Don Norman (2004), *Emotional Design*, was fundamental. New research linking emotion and cognition at the design level demonstrates that attractive things actually work better, as Donald Norman amply demonstrates in this embryonic book on the subject, especially for designers. It appears that *Emotional Design* articulates the profound influence of the feelings that objects evoke. Since emotions are processed at memory level, they can enable the generation of new meanings established by each user, motivating feelings of belonging, in addition to promoting greater durability in the relationship established between user/object or user/service, which may lead to positive attitudes at the level of product life cycle, such as promoting sustainability. We also want to underline the paradigm shift in terms of design processes and methods, during the last decades. These changes brought greater flexibility in the incorporation of new concepts, promoting interaction and empathy with human beings, valuing a more cognitive and humanistic design approach. Focusing the disciplinary territory of Design, with this research outputs we intend to give emotion a central role in design decision-making. The decision-making activities during the design process are very complex, knowing that the decisions made have a crucial impact on the design solution, the business and the design process. Of course, there are guidelines for decision-making in design methodology literature, but most of the time these decisions are made without emotional valence being incorporated. In addition to the supporting literature, the authors' experience as design project teachers for many years has been a determining factor for the incorporation of Emotions in decision-making during the Design Process. The aim of this research work is to stimulate reflection and bring new perspectives on the addressed object of study, ie, to incorporate emotion as a fundamental advantage key strategy in design decision making, contributing to a more sustained vision of the professionals but also the design students, when addressing and developing design projects.

EMOTION AND DESIGN – EMOTION FUNDAMENTAL COMPONENTS

Emotions are vital for the interpretation and the way we respond to what is around us, contributing expressively to our quality of life, underlining the importance of our reaction to certain stimuli which affect us both physically and mentally and, consequently, our behavioral reactions. According to the American Psychological Association (APA), emotion is a complex reaction pattern, involving experiential, behavioral and physiological elements, ie, how individuals deal with different kind of situations they find personally significant. Emotions are influenced by our memories and beliefs. Vygotsky (1996), recognizing the organic bases on which human emotions develop, was one of the first to deepen the relationship between affect and cognition, postulating that emotions are integrated into general mental functioning, having an active participation in its configuration. In the emotional set there

are three fundamental components, which are: the affective, the cognitive and the motor. They give emotions a central role in design projects and at each stage of development they are integrated, although at each stage they can alternate depending on the capabilities to be developed in those stages. According to Wallon (2007), these components of emotion constitute the Human Being and permeate all our daily activities. The affective component of emotions treats them as ephemeral and contagious, being identified more for their organic, empirical and short-lived side (Almeida, 2012). This component of emotions provides the constitution of values, will, interests, needs, motivations that are central to choices and decisions, in this case, at the level of the Design project. Affectivity affects general development, behavior and cognitive development. The cognitive component is responsible for intellectual functions, being a privileged resource for the construction of knowledge. Perception, memory, attention, language, thinking, reasoning, imagination and problem solving are functions inherent to this component. The motor component is essential to the affective and cognitive fields, since this is essential for the constitution of knowledge and for the expression of emotions and feelings. According to Mahoney (2004) the motor component is responsible for the various movements of our body, constituting one of the most important resources for us to act at the level of the social environment, being, therefore, our resource of social visibility.

The study of emotion in the field of design is new and has been conducted from different methodological approaches and from the dialogue of authors with an equally diverse background. In 1999, the Design & Emotion Society, a benchmark in the field of Design and Emotion, was established during a meeting organized by the Industrial Design department of the Delft University of Technology, bringing together academics and professionals in the field of design. The Design & Emotion Society is an international network of researchers, designers and companies that share and exchange ideas, research, tools and methods that validate the participation of emotional experience in design projects, thus promoting dialogue between researchers, professionals and industry, in order to integrate emotion in Design projects. The other functions of our objects and the reasons why we choose them seem to be related to what the designer Max Bruinsma (2003) called “the invisible side of design”, when he states that design does not need new forms, but rather, of a new mentality. Besides formal and functional components, the designer must also pay attention to the meanings that a given object can assume. Such an attitude endows the object with some characteristics of a living organism, which requires an emotional response from the user, rather than a functional response.

Objects play other roles in the lives of their users, in addition to the mechanical functions for which they were objectively designed, consequently they are capable of evoking emotions. As stated by António Damásio (2003), objects are “emotionally competent”. This emotional competence of objects has been gaining more and more space in the field of design, as well as the idea that products and services intend to create experiences of pleasure, establishing emotional relationships with their users (Norman, 2004; Damazio, 2005). Marcos Buccini and Stephania Padovani (2005) refer to Experiential Design

as the design practice that seeks not only to meet the immediate and objective needs of the user, but also to understand and fulfill human motivations in relation to the product, related to life experiences.

Designing with a focus on the experience promoted by the product is an increasingly correct approach, since it transforms ideas from the theoretical field into practical guides for the design activity, promoting the experience that results from the simultaneous interaction with all these elements: the moment, the place, the individual and the product (McDonagh & Hekkert, 2003; Dal Bianco, 2007). When developing a particular design product, it is fundamental to identify the relevant emotional aspects, as well as assess their emotional impact, given that emotions influence not only our well-being, but also purchase and usage decisions. Therefore, it is essential to develop tools and methods that can support the designer in creating emotional values in the product-user relationship. Two of the tools that have been supporting designers in this area are the technique called *Attribute of Product Personality* – APP, developed by Patrick Jordan (1997), and the *Product Emotion Measurement*–PrEmo, developed by researcher Pieter Desmet (2002). The base of the *Attribute of Product Personality* is the concept of product personality that comes from the symbolic meaning of the product, which refers to physical product itself and can be described by human personality characteristics, called product personality. *Product Emotion Measurement* is an online measurement tool featuring a hand-drawn character (either male or female) who expresses fourteen different emotions (seven positive, seven negative) through actions and sounds. Iida et al (2006) recognize that APP and PrEmo are valuable tools for designers to improve the emotional aspects of their projects.

Objects have an active participation in everyday life. They organize social practices, influence behavior, embody goals and become inseparable from who we are. Much more than form or function, design products are the stage for our experiences and are imbued with emotions.

EMOTION AND DESIGN DECISION-MAKING

Hansen & Andreasen (2000) propose a framework of design decision-making in order to enrich the designer's mindset. It consists of two models: *the decision node* – a generic model of the interrelated decision-making activities; and *the decision map* – a model of the object of decision-making during design process. The *decision node* is a model of a generic decision in a product development project, consisting in six sub-activities: to specify, to evaluate solution alternatives, to validate a design solution, to navigate through the solution/activity space, to unify the current decision into consistent wholes, and to decide. The *decision map* is a model of what is synthesized during the design process, being, therefore, the object of decision-making. In a product development project three artefact objects are designed, namely the product, the life phase systems (production system and distribution system) and the meetings between the product, the designer and the life phase system, as well as the business for the company and the design process itself. However, from the designers' point of view they have a complex task, having to synthesize the product, which must meet the needs and values of the end-user, create

profit for the company, and fit to all product life phases. Finally, when a decision is made, it carries a complex pattern of consequences.

Despite having tried to systematize the two decision-making models, the truth is that at no time is there any reference to intuition or emotional design in the product design or design decision-making process. However, it is perceived that a design decision is not made at an instant in time, but based upon gradually clarification of the design and its consequences in several dimensions until satisfaction is reached (Hansen & Andreasen, 2004).

As responsible for the project, it is up to the designer to make a positive differentiation by making the product of his/her work more suited to the characteristics of the end users, through more humane and sustainable solutions, since the future of design is the future of a way of thinking, a complex process of creativity that ends up being based on those for whom a particular product or service is intended. As reported by Mascanzoni et al. (1994), design solutions cannot only focus on resolving issues of aesthetics and operability, but also on various other contents, implying a shift from an attitude based on form to something more substantial.

Increasingly, the Design project is concerned with providing each individual with solutions suited to their needs and desires, and sometimes characteristics, a more humanistic design, but at the same time contemplating emotion and intuition. Users must be included in the processes of designing and developing solutions for products and services, making the final product more adapted to the needs and characteristics, but also to the wishes of the user, considering the way in which he/she will relate himself/herself to the new product, making it more affective and therefore more sustainable and prolonging its lifespan: we should not only want to design for customers, but design with people, having a shared participation with them. Baudrillard (2004) defends the ability to provide the object with signs that allow it to diversify its availability and, consequently, multiply the possibilities of choice for the user, and should be thought as a fundamental concept of a society that aims to integrate people better, in which the added value of the products allows the individual to better identify himself/herself with them.

In the approach to Emotional Design, Iida and Mühlenberg (2006) already stated that the study of emotions has been of increasing interest to designers, due to its great importance in decision making.

CONCLUSION

In order to achieve a world more aligned with human needs, their characteristics and capabilities, but also less anthropocentric, the design activity has its share of responsibility in having to contribute to improving the living conditions of populations, making it more humanized. The valorization of the human dimension of Design is a disposition that has been observed over the last decades, insofar as the Designer has become aware and assumes his/her emotional and rationalization capacities as valid to sustain the development of knowledge and his/her own design activity.

Starting from a functionalist and formalist rational guideline, Design today has a new project concept in which intuition, pleasure and emotion are valued as the focus of a new design methodology, expanding its social and strategic commitment, where emotional, aesthetic and psychological factors are determinants and competitive differentials.

Always with a focus on sustainability and on products' life-cycle, Design has to be thought in a social and systemic perspective, being its territory of action governed by social relations, where Design and Designers can assume the role of cultural mediators, in the valorization of cultures and identities. Design, aiming at a quality profile of the experience and taking into account ethical and critical choices, must value emotions, as well as pleasure in the use of a particular product or service, adding value and assuming mediation in the material and immaterial dimensions.

As already mentioned, the main objective of this study is precisely to alert and help design professionals and academia to reflect on the need to change many of the projectual practices in Design that are still in force, incorporating emotions into decision-making in Design. Therefore, we cannot fail to emphasize the importance of studying emotion for design, given that even and often, design methodologies and processes tend to privilege formal and functional factors, to the detriment of emotional ones, which is not possible to understand, since the current world economy and society situation advises exactly to invert this order.

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