Perceived Website Aesthetics by Users and Designers: Implications for Evaluation Practice

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ABSTRACT

The set up of practical methods for evaluation of website aesthetics from the user perspective and the provision of useful feedback to designers is an open issue in Human-Computer Interaction (HCI). The paper presents an evaluation study of aesthetic attributes of two websites from the user perspective and compares the results to the design team. The study initially involved the formulation of a set of aesthetic attributes and their appreciation by a user group of 111 users for two websites, following a traditional user testing approach. The user evaluation was then compared to the design team’s appreciation of these aesthetic attributes for their own designs. The main results of this test was that: (a) the two groups have a similar view about the presence of a considerable number of the selected aesthetic attributes; (b) users have rated most aesthetic attributes significantly lower than designers; (c) different aesthetic attributes become important for different objects of study for both groups. The design team found the evaluation informative and inspiring; however they identified the need for further explanation of user responses in terms of suggested design patterns and examples. Also, a number of recommendations towards an evaluation method of aesthetics in HCI are identified and discussed.

Keywords: Comparative Evaluation, Design Team, Human-Computer Interaction (HCI), User Testing, Web Aesthetics

INTRODUCTION

The aesthetic value of interactive systems is gradually appreciated for the development of the web and new media technologies and applications. Besides that it has been shown that aesthetics affects perceived usability (Sonderegger & Sauer, 2010), the practice of web design now requires the collaboration of many design professionals, while the development of technology gradually raises the constraints to creative design. For websites in particular, their aesthetic value has been reported as a critical factor for user acceptance in many studies (e.g. Van der Heijden, 2003; D’Angeli et al., 2005; Hartmann et al., 2008).

Despite that aesthetics is widely acknowledged as a desired property of web design, there...
are too few methods and knowledge about the evaluation of aesthetics in HCI. In this respect, Norman (2004) remarks that “we solely lack a standard body of terminology, theory and methods of investigation of aesthetics in HCI”. Therefore, we need methods, guidelines, tools, frameworks, for the design and evaluation of aesthetics in HCI in general (Mattila et al., 2008) and for the web in particular. Furthermore, related studies of aesthetic appreciation of websites have not considered the views of their designers in this respect, which is an important issue due to the largely subjective nature of this appreciation; website designers can explicate the aesthetic goals of the product and reflect upon user responses on the basis of their intended approach.

This paper presents a method and a case study for the evaluation of the aesthetic value of websites. The method extends important practices of traditional usability testing, in contrast to other studies that follow various experimental designs, and considers the aesthetic goals of websites as provided by the design team. The study compares the perceptions of 111 users about the aesthetic attributes of two websites to those of the 3-member design team, and discusses implications for respective evaluation practice. The paper is structured as follows: Section 2 presents the related work in terms of perspectives about aesthetics in HCI and about aesthetic attributes considered for the evaluation of websites aesthetics in other studies. Section 3 presents the evaluation study set up, conduction and results. Section 4 provides a discussion of recommendations and challenges on the basis of this study. Finally, section 5 presents conclusions and future work.

RELATED WORK

Over the last few years, the study of aesthetics in HCI attempts to identify the relationship of aesthetics to other dimensions of the interaction experience, especially usability. In addition, researchers in this area set out to investigate the essential nature of aesthetics in terms of evaluation studies that examine various aesthetic attributes that have been proposed to constitute the total aesthetic value of websites.

Aesthetics in HCI: Nature and Relationships with Other Dimensions of the Interaction Experience

The study of aesthetics has been the interest of a number of philosophic, artistic and scientific areas throughout human history. In their review of relevant studies of aesthetics in HCI, Lavie and Tractinsky (2004) identify the following areas: philosophical approaches for the study of aesthetics, empirical studies of aesthetics, the role of aesthetics in engineering design and the role of aesthetics in human-computer interaction. HCI is concerned with the “design, evaluation and implementation of interactive computing systems for human use and with the study of major phenomena surrounding them” (Hewett, et al., 1996) and therefore the study of aesthetics is relevant for both design and evaluation of interactive systems as well as for the understanding of the concept in its own right.

In order to approach the issue of aesthetic evaluation and appreciation, one must consider whether the aesthetic value is in the object (observed) or/and in the subject (observer). Pandir and Knight (2006) have described approaches to aesthetics as belonging to the streams of objective, subjective and holistic. Objective approaches attempt to provide general definitions on the basis of philosophical argumentation and theoretical analysis; in subjective approaches, aesthetic judgement is determined by the pleasure or displeasure that perception of the object arouses in any spectator (Ward, 1992); while holistic approaches posit that an understanding of aesthetics can have both subjective (e.g. personal preference) and objective (e.g. colour) dimensions.

The ‘holistic’ study of aesthetics is similar to the current understanding of the concept of usability in HCI: the prominent definition for usability is that it consists of “the effectiveness, efficiency and satisfaction with which specified
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