



Chapter IX

Virtual Reality, Involvement and the Consumer Interface

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ABSTRACT

Consumer purchasing online is considered, with interactivity highlighted as a critical end-user issue. Levels of user interactivity up to and including virtual reality environments are now realistic in e-tailing. Conceptualizing interactivity to recognize the relevance of perceptions to consumer engagement motivates a focus on the user interface. Aspects relating to trust, usability and involvement are identified, and examined in a series of linked studies focusing on hedonic and high-involvement products, particularly surfboards. Preliminary studies across a range of businesses and products indicated consumer willingness to purchase hedonic products online, but many businesses imposed a high workload on online purchasers. Despite successful web marketing of hedonic products such as CDs, we found that no contemporary providers of customized surfboards offered finished product e-tailing, nor used virtual reality technology to demonstrate performance. A real case study of online swimwear purchase demonstrated an improved purchase process. "Beachtown", a virtual reality e-tailing environment related to a coastal tourism economy allowed further examination of apparel, surfboard and holiday purchase. Results indicate that an enhanced interactive virtual environment increases end user involvement and willingness to purchase.

INTRODUCTION

Emerging technologies promise new types of relationships between businesses and consumers. In particular, interactive multimedia and virtual technologies promise greater degrees of consumer engagement with online products and services, potentially leading to increased product exploration, and more hedonic purchases (Jeandrain, 2001). Even though the technologies involved are now largely affordable, widespread and stable, to date e-tailing has had a mixed acceptance, with significant shopping cart abandonment statistics reported of up to 75% (Gordon, 2000). Other figures cited in Hurst and Gellady (2000) indicate that 42% of shopping carts are abandoned, losing a potential US \$3 bn in lost sales. While figures vary, and may include customers who later return to complete a purchase, the phenomenon remains significant. A study by Vividence (2001) showed that major reasons commonly given for shopping cart abandonment included the requirement for users to personally register and various aspects of the checkout process. Ghose (2002) reports McKinsey research on the dot.com crash noting that many sites successfully lured visitors, but failed to convert those into buyers. Clearly end user factors associated with the online purchase process contribute to the discrepancy between browsers and buyers.

The diffusion of innovation literature (Rogers, 1995) suggests that e-commerce will only be adopted if it offers a relative advantage, trialability, and minimal complexity. For B2C e-commerce to achieve its potential, there is a need to better understand how individual consumers actively perceive and engage with the technologies mediating online purchasing and product choice behavior. In recent years, some studies have started to appear, identifying factors relevant to a deeper understanding of online purchasing, such as trust (Gefen, 2002; Jarvenpaa and Tractinsky, 1999), usability (Nielsen et al., 2001), and the quality of interactivity, including allure (Rafaeli and Sudweeks, 1997). These are themselves multidimensional constructs, and are the subject detailed studies in their own right.

Gefen (2002) for example suggests trust is relevant to e-tailing uptake (2002), and can be related to technology acceptance models more generally (e.g., Davis, 1989). This well-established model naturally brings in usability issues, such as the perceived ease of use, and usefulness constructs familiar in mainstream IS literature. Usability and trustworthiness in web design is considered by Nielsen, (1999) who quotes relevant key findings from a user study. In particular, trust builds slowly as customers get good results from sites they use, and don't feel let down, in other words, they have a good experience with the site. Nielsen (1999) describes other ways in which site design can convey trustworthiness, including professional appearance, comprehensive and correct product content, details of fulfillment procedures and up-front disclosure of relevant charges and information. Other theoretical models for understanding trust in e-commerce are provided by Tan and Thone (1999) and by Egger (2000) which incorporate several of the factors identified within the psychological and marketing literatures, such as reputation and information communication

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