Consumers’ Internet and Internet Consumers: Exploring Internet-Based Electronic Decision Aids

Michael Merz, Ph.D. Student, Department of Marketing, University of Hawaii
Qimei Chen, Assistant Professor of Marketing, University of Hawaii

The development and fast dissemination of the Internet has not only resulted in an explosion of information and therewith the potential danger of information overload but also in technological developments that help consumers make their choices. In this study, we propose that using Internet’s own technological development to alleviate consumers’ information overload might be the ultimate solution to help consumers’ make better decisions. Specifically, we demonstrate that Internet’s technological advancement can be used to (1) reduce consumers’ perceived information overload; (2) replace or supplement consumers’ choice heuristics; (3) redefine consumers’ optimal choice; and (4) reduce consumers’ post choice cognitive dissonance.

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Michael Merz, University of Hawaii-Manoa
Qimei Chen, University of Hawaii-Manoa

Extended Abstract
As early as 1955, Simon introduced the notion of bounded rationality. Since then, it has become clear that the traditional approach in explaining consumers’ decision-making, which is based on rational choice theory, is incomplete and flawed (Bettman, Luce, and Payne 1998). According to Simon (1955), bounded rationality takes into account that consumers have cognitive limitations in respect to processing information, and that it is the interaction between task environment and human information-processing system that ultimately determines the behavior of consumers (Bettman et al. 1998; Simon 1990; Todd 1999).

Technological advances, shorter product lifecycles, and the globalization of market transactions have led to a new environment that is not characterized any more by its lack of products and information but by its abundance. In particular the development and fast dissemination of the Internet constitutes such a new task or information-search environment that makes available an enormous amount of information on alternatives (Alba et al. 1997; Urban and Hauser 2004).

It becomes clear that in such information- or choice-overloaded situations, in which the decision task becomes more complex, it is often not possible for consumers to make rational decisions. Customers simply do not have the time (Weening and Maarleveld 2002) and/or the cognitive capacity to process all of the information available to them in a given time (Iyengar and Lepper 2000; Malhotra 1982, 1984). Because of limitations of consumers’ cognitive system—such limitations include limited online memory and computational capabilities (Bettman et al. 1998)—research has demonstrated that customers simplify their decision-making processes in information rich environments or under time constraints by relying on simple heuristics (Payne 1982; Timmermans 1993).

While the amount of information available on the Internet keeps expanding, the human processing capacity remains limited. This has created the need for sophisticated decision support tools that are available to consumers in the Internet environment to reduce their cognitive stress by helping them make their choices and providing them with information that is appropriate and relevant for their specific needs (Ariely 2000). Internet’s own technological development accommodates this need. Dickson (2000, 117) therefore calls the Internet a super-diffusion innovation, i.e. one that stands above other technological innovations in that it increases effectiveness, efficiency, and speed of “the transmission of new ideas and technologies between individuals and cultures” (see also Diamond 1998).

The focus of consumer research to date on Internet’s technological advancement has been to investigate how Internet tools influence consumers’ online search behavior. Little attention has been given to examine how the Internet helps improve consumers’ decision-making (Kohli, Devaraj, and Mahmood 2004; Zeng and Reinartz 2003) despite the increasing needs of more research that benefits consumers in general and that helps “individuals make wise consumption decisions” in particular (Bazerman 2001, 500). In a different vein, Bechwati and Xia (2003) note that traditional models of decision-making need to be revisited in the new Internet context. Others go even so far as to suggest that the Internet has changed at least some part of traditional theories of marketing, economics, and other fields of business management (see Biswas 2004; Gatarski and Lundkvist 1998; Hawkins Mansell, and Steinmuller 1999). Diamond (1998) therefore calls on scholars to examine how the available Internet services change consumers’ decision processes. In response to these calls, the present study developed a conceptual framework to demonstrate that Internet’s technological advancement could be used to (1) reduce consumers’ perceived information overload; (2) replace or supplement consumers’ choice heuristics; (3) redefine consumers’ optimal choice; and (4) reduce consumers’ post choice cognitive dissonance.

Specifically, we argue that the Internet not only provides customers with electronic decision aids (e.g. recommendation agents, side-by-side comparisons, ordering and ranking) but also with multi-sensory stimuli (e.g. pictures, short films, or sound) that ultimately help customers in their decision-making process through mental imagery or mood-creation. While research has widely acknowledged the former form of decision aids, it has not sufficiently considered the latter one. We propose that both electronic decision aids and multi-sensory stimuli are being used by online consumers as choice strategies in addition to or instead of commonly discussed heuristics to reduce their perceived information overload and/or to deal with the huge information load provided by the Internet.

In addition, we bring forward that the electronic decision aids and multi-sensory stimuli on the Internet help consumers make more rational decisions. We borrow Bazerman’s (2001) definition of rationality, according to which a decision is considered rational when it maximizes the consumer’s expected welfare. As such, we propose that the most rational decision in the Internet environment does not necessarily have to be the most optimal choice according to the expected utility theory (Tversky and Kahneman 1981) or weighted adding strategy (Bettman et al. 1998). Rather, we propose that consumers judge their choice outcome or the “quality of the decision” according to a reference (e.g. recommendation, average customer rating) that does not necessarily constitute the theoretically optimal choice. This argumentation is in accordance with the information theory that implies to maximize consumers’ benefits (welfare) and minimize their costs (cognitive [over]load through information [over]load). Hence, the Internet environment requires a redefinition of “optimal choice” or “optimal decision performance.”

Finally, we argue that the Internet also changes post choice behavior. The foregoing discussion implies that a redefinition of “optimal choice” will also lead to more satisfied customers and ultimately alleviated consumers’ post-choice cognitive dissonance.
Delivering Differentiated Experiential Branding in Web Environments

Jordan LeBel, Concordia University
Yanan Yang, McGill University
Demetrios Vakratsas, McGill University
Ashesh Mukherjee, McGill University
Laurette Dube, McGill University

Recent empirical evidence revealed that, beyond the hedonic/utilitarian distinction, a more differentiated representation of pleasure or positive affects or attitudes provides additional marketing insights (Dubé, Cervellon and Jingyuan 2003; Dubé and LeBel 2003). For instances, Dubé and LeBel showed that laypeople’s conception of pleasure is best captured by four differentiated pleasures: sensory/physical, emotional/aesthetic, social, and intellectual/accomplishment. Brand positioning strategies anchored in the delivery of differentiated pleasurable experiences have become ubiquitous and web communications are privileged vehicles to convey such positioning.

The present study focuses on consumers’ on-line experiences with products and/or services websites positioned along Dubé and LeBel’s four pleasure types. The objectives are: 1) to examine to what extent the intensity of the four types of pleasures is predictive of consumer responses at the individual level, as measured by website satisfaction and revisit intent, and 2) to examine to what extent the success of a website in inducing each of the four types of pleasures is predictive of market response at the brand level, as measured by patronage patterns reported by Media Metrix. We expect that the experiential positioning of the brand moderates the pleasure-intensity and consumer (vs. market) response relationship.

At the individual level, 100 web-sites with differentiated experiential branding strategy (sensorial, emotional, social and intellectual) were each observed on 24 visits by a panel of 200 participants. Websites were pretested so that each experiential branding strategy (sensory, social, emotional/aesthetic, intellectual) was represented. Each participant browsed a different website for 12 days and after browsing each website visit reported on the intensity of their experience of differentiated pleasures (twelve items, 7-point scale), website functionality (5 items, ?=.87), satisfaction (4 items, ?=.81) and revisit intent (a single likelihood item). Confirmatory factor analysis (CFA) performed on the 12 differentiated pleasure items revealed that a three-factor structure best represented the differentiated pleasures experience during the browsing episodes: sensory/emotional, social, intellectual. These results imply that sensory and emotional pleasures might have even fuzzier boundaries than expected, which may be due in part to the fact that Internet browsing is dominated by the more abstract senses of sight and sound (Howes, 1991). The correlations over the three types of online experiential pleasures are: -0.68 (for sensory/emotional-social), 0.49 (for sensory/emotional-intellectual) and -0.57 (for social-intellectual).

Structural analyses conducted at the visit level revealed a distinct contribution of the different pleasures to satisfaction and revisit intent, with a moderating effect for the website’s experiential branding strategies. Specifically, the results revealed that sensory/emotional pleasure accounts for the largest main effect on satisfaction (standard coefficient equals to 0.589, with p-value <0.01) over the four types of website. Further, the results demonstrated that website functionality contributes to browsing satisfaction (standard coefficient equals to 0.421, with p-value <0.01) and website browsing satisfaction in turn has a positive and strong impact on revisit intentions (standard coefficient equals to 0.862, with p-value <0.01).

Results revealed that social pleasure has overall a negative impact on website satisfaction, and the effect is further moderated by the type of experiential positioning espoused by a website. Specifically, social pleasure experience while browsing has a significant negative effect on website browsing satisfaction, except for website with a sensory pleasure positioning strategy (standard coefficients of -0.321 for social websites, -0.228 for emotional websites and -0.308 for intellectual websites). Further, intellectual pleasure has a mild positive impact on website satisfaction and the effect is further moderated by branding positioning as well. Specifically, intellectual pleasure had