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# EMOTIONS WHILE SHOPPING ON WEB SITES: A RESEARCH PROPOSAL

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## ABSTRACT

*This paper describes a research project that aims to increase our understanding of shoppers' emotions during online shopping episodes. The research project centers on the presentation of a new research model, considered as an expansion of the model presented in Éthier et al.'s (2008) empirical study on the impact of interface design on emotions experienced on B2C Web sites. The model focuses on the impact of several e-shoppers' emotions on a key purchasing behavior and on the antecedents of these emotions. A proposed methodology to validate the new research model is also presented.*

*Keywords: Emotions, online shopping, interface design, cognitive appraisals*

# 1- INTRODUCTION AND RESEARCH OBJECTIVE

An increasing number of consumers use the Web to buy products and services. Five years ago, the amount of retail products purchased online in the U.S.A. represented less than 1% of all purchases compared to 6% today; this percentage is expected to top 11% by 2012 (Forrester Research, 2008). According to e-commerce experts, this increase is due to the growing number of Web managers who have taken measures not only to facilitate browsing and broaden the spectrum of available information but also to reduce the negative perceptions of transaction security and privacy (E-commerce Times, 2007). Nevertheless, it is widely agreed that the rate of e-shopping is still low and that other incentives should be investigated.

Several recent studies have shown that making e-shopping a pleasant experience for consumers is a factor that can contribute considerably to the growth of e-commerce (Eroglu et al., 2003; Éthier et al., 2006 and 2008; Lam and Lim, 2004; Li and Zhang, 2009; Menon and Kahn, 2002). However, there is little research on the subject of consumers' emotions during online shopping. Other than the general concept of affect, only a few of the emotions felt by e-shoppers have been identified (Eroglu et al., 2001 and 2003; Éthier et al., 2006 and 2008; Jayawardhena, 2004; Kulviwat et al., 2004; Lam and Lim, 2004; Menon and Khan, 2002; Sanchez-Franco and Rodriguez-Bobada Rey, 2004; Semeijn et al., 2005). Moreover, our knowledge of the antecedents of these emotions is limited. To date, only a few cognitive determinants have been pinned down (Éthier et al., 2008; Li and Zhang, 2009; Peine et al., 2009). Finally, no empirical study has yet established relationships between emotions such as joy, pride and frustration and specific behaviors by online consumers.

The objective of this study is to address these gaps in the literature by (1) identifying a more comprehensive set of emotions (positive and negative) that are felt by consumers during online shopping episodes, and (2) proposing and validating a research model to better understand the factors that influence emotions as well as their direct impacts on a key behavior: the consumer's intention to return to a Web site in order to buy goods or services.

## 2- THEORY

The research project is based on the *Stimulus-Organism-Response (S-O-R)* paradigm and on the *Cognitive perspective on emotions*. The S-O-R paradigm (Mehrabian and Russell, 1974) claims that the environment sends out stimuli that produce organismic changes (cognitive and emotional) in individuals. In turn, these organismic changes affect individuals' behaviors. This framework was later adapted to the retailing context by Donovan and Rossiter (1982). Bitner (1992) further developed the framework by presenting a retail store's environmental dimensions as the Stimulus (ambient conditions; space; signs, symbols and artifacts), the shoppers' internal reactions (cognitive, emotional and physiological) as the Organism, and the shoppers' behaviors (approach and avoidance) as the Response. Recently, several studies of commercial Web site atmospherics have found empirical evidence supporting the relationships posited in this paradigm (Eroglu et al., 2001 and 2003; Éthier et al., 2006 and 2008; Mummalaneni, 2005; Sautter et al., 2004).

The cognitive perspective postulates that emotions are always solicited by an intervening process of evaluation of an event rather than the event per se. Several approaches related to cognitive appraisals have been proposed to identify what factors produce emotions (Fridja, 1986; Lazarus, 1991; Roseman, 1984; Scherer, 1984; Smith and Ellsworth, 1987). The research project focuses on two distinct approaches in order to further explore the antecedents of emotions felt in online shopping episodes. The first approach is the *Cognitive Motivational Relational Theory* developed by Lazarus (1991) and taking the work of Scherer (1984) into account. According to this theory, at the most basic level a person appraises a situation to ascertain the benefit or harm it holds for him or her. Basic emotional responses are driven by two sorts of primary appraisals: goal relevance and goal congruence. Goal relevance indicates the extent to which an event or outcome is personally relevant to an individual. The more goal-relevant a situation, the stronger the consequent emotion is likely to be (Nyer, 1997).

Goal congruence indicates the extent to which an event or an outcome is congruent or incongruent with an individual’s wants or desires. If an event is being perceived as desirable, then positive emotions (e.g., joy, pride) are likely to occur, while if the event is perceived as being undesirable, negative emotions (e.g., anger, sadness) may be experienced (Nyer, 1997). The second approach is the *Appraisal Theory of Emotions* developed by Roseman et al. (1996). This theory was formulated to explain a wide range of emotions, several of which might be experienced while shopping. It hypothesizes that a particular combination of cognitive appraisals (unexpectedness, situational state, motivational state, probability, agency, control potential and problem source) determines which of the 17 emotions (surprise, hope, joy, relief, liking, pride, fear, sadness, distress, frustration, disgust, dislike, anger, contempt, regret, guilt and shame) will be experienced in a given situation.

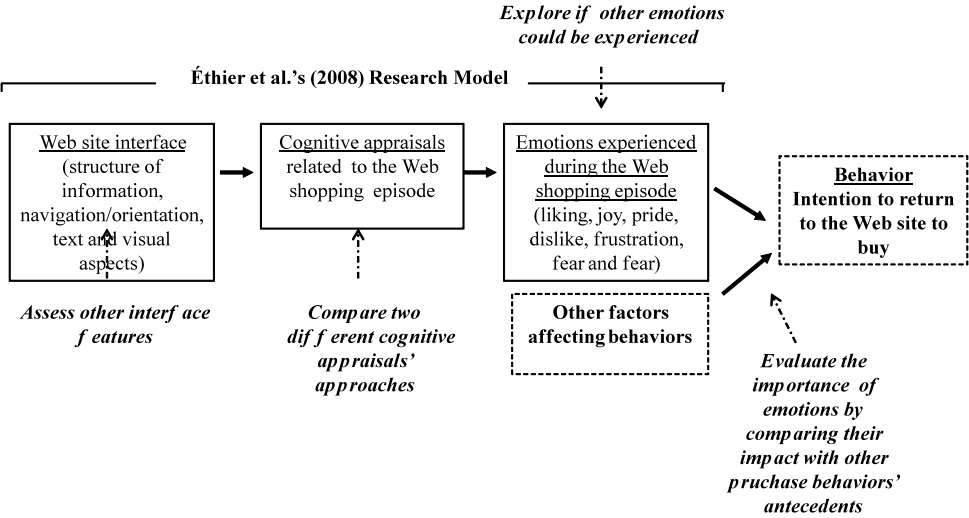


Figure 1. Expanded Research Model

### 3- THE RESEARCH MODEL

The research project seeks to expand on Éthier et al.’s research model (2008) based on the *S-O-R* paradigm and the *cognitive perspective on emotions*. The research model was developed to understand the antecedents of emotions in online shopping episodes. It posited specific relationships between four Web site interface features (structure of information, navigation/orientation, text and visual aspects), three cognitive appraisals from the *Appraisal Theory of Emotions* (situational state, probability and control potential) and six emotions (liking, joy, pride, dislike, frustration and fear) that were experienced during structured interviews to pre-test the model. It was tested with data collected from 215 students (from two Canadian universities) who accepted voluntarily to simulate a Web shopping episode. Specifically, the participants’ shopping episode was divided into two consecutive tasks in which they had to gather product information (price for example). First, they were instructed to shop for a specific retail item (a movie DVD or a music CD) in order to become familiar with their pre-assigned Web site. Next, they were invited to shop for a product they would give to a family member or a friend. Immediately after their shopping episode, participants were asked to answer a questionnaire designed by the authors to assess the research model’s constructs and to validate the relationships between them (questions are presented in Table 1 in the 2008 Éthier et al.’s study). The results showed that shoppers experienced all six emotions included in the research model; the

emotions of liking and joy were experienced intensely by a substantial number of shoppers. The results also demonstrated several significant relationships, as structure of information had a positive influence on all three cognitive appraisals, while the appraisal of the situational state (measured as the overall evaluation of the online shopping episode) impacted all six emotions, except fear.

As indicated by Figure 1, *Éthier et al.*'s research model (2008) will be modified in line with the research project's objectives, as presented above (bold text and italics highlight the proposed modifications). First, a new construct assessing e-shoppers' intention to return to the Web site and make a purchase will be introduced. Based on previous studies that found positive relationships between affects or emotions and purchasing behaviors in traditional or online buying situations (Eroglu et al., 2003; Kulviwat et al., 2004; Sanchez-Franco and Rodriguez-Bobada Rey, 2004; Semeijn et al., 2005), it is hypothesized that emotions will impact e-shoppers' intentions to return to the Web site to buy products or services.

Second, the research project will assess the importance of emotions by comparing their impact with three other key antecedents found to influence purchasing behaviors: attitude (Bagozzi, 1981; Jarvenpaa et al., 2000), satisfaction (Mittal and Kamakura, 2001; Seiders et al., 2005; Tsai and Huang, 2007) and perceived value (Chen and Dubinsky, 2003; Dodds et al., 1991; Zeithaml, 1988). Based on prior research in which affect was found to be one of the determinants of behavior in shopping situations (Eroglu et al., 2003), it is posited that the impact of emotions on behaviors will remain significant when other key determinants are also considered.

Third, the research project will reassess the validity of the three original constructs' dimensions. As mentioned earlier, other cognitive appraisals will be evaluated, taking into account the two cognitive appraisal approaches discussed above. It is hypothesized that they have a direct impact only on emotions, as predicted by the cognitive perspective on emotions (Nyer, 1997; Peine et al., 2009). In view of the evolution of Web sites in recent years (e.g., the development of social media features and the use of video clips), the Web site interface components will be reevaluated. Based on *Éthier et al.*'s (2008) study, it is predicted that each feature of the modified construct will have a direct impact on shoppers' cognitive appraisals. Finally, given that Web users' experience with the Web has increased significantly in recent years, the set of six emotions will also be reassessed.

## **4- METHODOLOGY**

This research project includes both a qualitative and a quantitative method. The qualitative aspect of the research project can be described as a "past real-life" methodology since participants will be asked to recall and describe previous shopping experiences on the Web. It will zoom in on all phases of the Web shopping experience. To accomplish this task, focus groups and structured interviews with e-shoppers will be used in an attempt to validate the emotions identified by *Éthier et al.* (2008) and possibly to discover other relevant emotions. These two instruments will also be useful for learning more about emotions' antecedents and better understanding e-shoppers' perceptions of the role of Web site interface features. The quantitative component of the research project can be described as an "immediate real-life" methodology and will be utilized to validate the expanded research model. E-shoppers will be invited to a specific location and asked to shop on a Web site they have never visited before and simulate a purchase (aborting the transaction before payment is authorized). Immediately after this task is completed, the participants will be asked to answer a questionnaire derived from the questionnaire used in *Éthier et al.*'s 2008 study.

## **5- CONTRIBUTION**

From a theoretical perspective, this research project should contribute to an increase in scholars' understanding of the role played by emotions during online shopping episodes by (1) proposing and validating a new research model focused on emotions, their antecedents and their impacts; (2) comparing two set of antecedents of emotions; and (3) comparing the impact of the emotions felt on

the intention to return to the Web site to make a purchase with the impact of other antecedents identified in earlier studies of the purchase of products and services in an online or bricks-and-mortar store.

From a practical perspective, the results of this research project should help Web site designers or managers to build improved Web sites by (1) increasing their understanding of the emotions felt by e-shoppers (which specific emotions they feel and the cognitive factors influencing them), and (2) identifying key interface features that are most likely to influence e-shoppers' internal processes in such a way as to encourage the desired behaviors such as increased visits, purchases, repurchases and loyalty.

## References

- Bagozzi (1981). Attitudes, intentions and behavior : A test of some key hypotheses. *Journal of Personality and Social Psychology*, 41, October, 607-627.
- Bitner, M. J. (1992). Servicescapes: The impact of physical surroundings on customers and employees. *Journal of Marketing*, 56(April), 57-71.
- Chen, Z. and Dubinsky, A.J. (2003) A conceptual Model of Perceived Value in E-commerce : A preliminary Investigation, *Psychology & Marketing*, 20(4), 323-347.
- Dodds, W.B., Monroe, K.B. and Grewal, D. (1991). Effects of price, brand and store information on buyers' product evaluations. *Advances in Consumer Research*, 28, 307-319.
- Donovan, R. J. and Rossiter, J. R. (1982). Store atmosphere: An environmental psychology approach. *Journal of Retailing*, 58, 34-57.
- E-commerce Times (2007). Report: E-Commerce fraudsters, haul may reach \$3.6B in 2007, November 19.
- Eroglu, S.A., Machleit, K.A. and Davis, L:M. (2001). Atmospheric qualities of online retailing: A conceptual model and implications. *Journal of Business Research*, 54 (2), 177-184.
- Eroglu, S.A., Machleit, K.A. and Davis, L:M. (2003). Empirical testing of a model of online store atmospherics and shopper responses. *Psychology and Marketing*, 20 (2), 139-150.
- Éthier, J., Hadaya, P., Talbot, J. and Cadieux, J. (2006). B2C Web site quality and emotions during online shopping episodes: An empirical study. *Information & Management*, 43(5), 627-639.
- Éthier, J., Hadaya, P., Talbot, J. and Cadieux, J. (2008). Interface design and emotions experienced on B2C Web sites: Empirical testing of a research model. *Computers in Human Behavior*, 24(6), 2771-2791.
- Forrester Research (2008). US e-Commerce Forecast 2008 to 2012.
- Frijda, N. H. (1986). Emotion: Cognitive structure and action tendency. *Cognition & Emotion*, 1, 115-143.
- Jarvenpaa, S.L., Tractinsky, N. and Vitale, M. (2000). Consumer trust in an Internet store. *InformationTechnology and Management*, 1, 45-71

- Jayawardhena, C. (2004). Measurement of service quality in internet banking: the development of an instrument. *Journal of Marketing Management*, 20 (1/2), 185- 207
- Kulviwat, S., Guo, C. and Engchanil, N. (2004). Online information search: A critical review and assessment. *Journal of Internet Research: Electronic Networking, Applications and Policy*. 14 (3), 245-253
- Lam, H.M. and Lim, K.H. (2004). Emotions in online shopping: Fulfilling customer's need through providing emotional features and customizing Website features. Twenty-Fifth International Conference on Information Systems, Washington, D.C.
- Lazarus, R.S. (1991). *Emotion and adaptation*. New York: Oxford University Press.
- Li, N.L. and Zhang, P. (2009). Toward E-commerce Website evaluation and Use: Qualitative and quantitative understanding. *SIGHCI Proceedings*.
- Mehrabian, A. and Russell, J. A. (1974). *An approach to environmental psychology*. Cambridge, MA: MIT Press.
- Menon, S. and Kahn, B. (2002). Cross-category effects of induced arousal and pleasure on the Internet shopping experience. *Journal of Retailing*, 78 (1), 31-40.
- Mittal, V. and Kamakura, A.W. (2001). Satisfaction, repurchase intent, and repurchase behavior: Investigating the moderating effect of consumer characteristics, *Journal of Marketing Research*, 38(February), 131-142.
- Mummalaneni, V. (2005). An empirical investigation of Web site characteristics, consumer emotional states and on-line shopping behaviors. *Journal of Business Research*, 58 (4), 526-532.
- Nyer, P. (1997). A study of the relationships between cognitive appraisals and consumption emotions. *Journal of the Academy of Marketing Science*, 25 (4) 1997, 296-304.
- Peine, K., Heitmann, M. and Herrmann, A. (2009). Getting a feel for price affect: A conceptual framework and empirical investigation of consumer's emotional responses to price information. *Psychology and Marketing*, 26 (1), 39-66.
- Roseman, I.J. (1984). Cognitive determinants of emotion. *Review of Personality and Social Psychology*, 5, 87-96.
- Roseman, I.J., Antoniou A. A. and Jose, P. E. (1996). Appraisal determinants of emotions: constructing a more accurate and comprehensive theory. *Cognition and Emotion*, 10(3), 241-277.
- Sanchez Franco, M.J. and Rodriguez-Bobada Rey, J. (2004). Personal factors affecting users' Web session lengths. *Internet Research: Networking Applications and Policy*, 14 (1), 62-80.
- Sautter, P., Hyman, M. R. and Lukosius, V. (2004). E-tail atmospherics: A critique of the literature and model extension. *Journal of Electronic Commerce Research*, 5, 14-24.
- Seiders, K., Voss, G.B., Grewal, D. and Godfrey, A.L. (2005). Do satisfied customers buy more: Examining moderating influences in a retailing context. *Journal of Marketing*, 69 (4), 26-43.
- Scherer, K.R. (1984). On the nature and function of emotion: A component process approach in *Approaches to Emotions*, K. R. Scherer and P. Ekman (eds) Lawrence Erlbaum Associates.

Semeijn, J, van Riel, A. C. R., van Birgelen, M. J. H. and Streukens, S. (2005). E-services and offline fulfilment: How loyalty is created. *Managing Service Quality*, 15, 182–194.

Smith, C. A. and Ellsworth, P. C. (1987). Patterns of appraisal and emotions related to taking an exam. *Journal of Personality and Social Psychology*, 52, 475–488.

Tsai, H.-T. and Huang, H.-C. (2007). Determinants of e-repurchase intentions: An integrative model of quadruple retention drivers, *Information and Management*, 44, 231-239.

Zeithaml, V.A. (1988). Consumer perceptions of prices, quality and value: A means-end model and synthesis of evidence. *Journal of Marketing*, 52, 2-22.