

AN INVESTIGATION OF THE IRRITATION OF WEBSITE ATMOSPHERICS

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ABSTRACT

This study investigated what consumers find irritating in website atmospherics. The results indicate differences exist in the amount of irritation caused by various atmospheric factors based on the respondent's gender, age and frequency of online shopping.

INTRODUCTION

Kotler (1973-1974) defined atmospherics as "the conscious designing of space to create certain buyer effects, specifically, the designing of buying environments to produce specific emotional effects in the buyer that enhance purchase probability." Baker (1986) and Bitner (1992) developed typologies to direct research on store atmospherics. Baker's (1986) typology of physical environmental components of a shopping experience included (1) ambient factors (e.g., background features that affect human senses), (2) store design factors (e.g., layout of merchandise, traffic patterns), and (3) social factors (i.e., people in the environment). Bitner (1992) developed a typology for retail service encounters that included ambient cues that affect the five senses, store layout, store arrangement, and signs, symbols and artifacts that communicate information to a shopper. D'Astous (2000) used Baker's (1986) typology to investigate various aspects of a shopping environment that could irritate and produce negative emotions that would affect the perception of a brick-and-mortar shopping experience.

Unlike the brick-and-mortar shopping environment where all five senses may be manipulated by the marketer, only visual (e.g., color, layout and animation), and to a lesser extent, auditory cues, can be manipulated in the online shopping environment. Fram and Grady (1997) reported no differences existed between males and females in their intention to purchase over the Internet while Van Name and Catchings (1998) determined the organization of the website, server performance, product data, a search option, and shopping carts all contribute to a positive online shopping experience.

Roslow, Nicholls and Tsalikis (1992) found a negative correlation between waiting time and the evaluation of service satisfaction in brick-and-mortar retail stores. Schleifer and Amick (1989) reported system response time was inversely related to computer user satisfaction. Dellaert and Kahn (1999) found visitor frustration with wait time could be mitigated by information about why the wait time is occurring. Bhatnager et al. (2000) reported marital status had no effect on perceptions of convenience of choosing online shopping over shopping at a retail store but older consumers were more receptive to purchasing via the Internet versus those that spent more time on the Internet.

Eroglu, Machleit and Davis (2001) hypothesized that consumer involvement (degree of personal relevance) and atmospheric responsiveness (tendency to base purchase decisions on the website's physical characteristics) moderated the consumer's willingness to avoid or engage in online shopping. Eroglu, Machleit and Davis (2003) tested their 2001 model and found that website atmospherics influence shopper attitudes, satisfaction and one's willingness to shop online. In addition, they found a moderating effect of involvement and atmospheric responsiveness on shopper attitudes, satisfaction and one's willingness to shop online.

Based on the previous discussion, the objective of the current study is to blend the two bodies of research regarding the impact of shopper emotions on purchasing behavior in a brick-and-mortar and an online shopping situation. Specifically, the current study utilized the methodology employed by d'Astous (2000) and investigated the impact shopping irritants that compose website atmospherics may have on online shopper emotions, and subsequently, influence the online shopping experience. As in the study by d'Astous (2000), gender and age were included as the independent variables. In addition, familiarity with online shopping may have an influence on consumer emotional perceptions (i.e., irritations) of a web shopping experience. The specific hypotheses to be tested in this study are as follows:

H₁: The degree of perceived irritation induced by displeasing aspects of the online shopping environment is influenced by the gender of the consumer.

H₂: The degree of perceived irritation induced by displeasing aspects of the online shopping environment is influenced by the age of the consumer.

H₃: The degree of perceived irritation induced by displeasing aspects of the online shopping environment is influenced by the frequency of online shopping.

METHODOLOGY

A sample of 183 undergraduate business students enrolled at a major western university was used in this study. The median age of students at the university is approximately 29 years old and over 80% of them work at least part-time (20 hours/week). Two expert judges adapted the shopping irritants used by d'Astous (2000) and added four more irritants that appeared to relate to a web shopping experience. The process of adaptation involved rephrasing potential irritants in a brick-and-mortar shopping experience to fit an online shopping experience. For example, store crowding was rephrased as heavy Internet traffic. These irritants are shown in Table 1. Respondents were asked to rate the perceived irritation induced by each of the 22 irritants with a five-point itemized scale (5 = this would be extremely irritating; 1 = this would never irritate me) using the measures applied by d'Astous (2000). Categorical measures of gender, age and frequency of web shopping also were taken.

RESULTS

D'Astous (2000) used expert judges to fit his list of shopping irritants into Baker's (1986) typology of physical environmental components of a shopping experience. In the current study, a factor analysis with varimax rotation was run on the 22 shopping irritants to see if they loaded on the same dimensions as Baker's (1986) typology. The dimensions identified by the factor analysis and mean irritation scores are shown in Table 1. The lack of a clear social dimension was expected given online shopping is most likely a solitary activity. However, the shopper is interacting with the Internet Service Provider when faced with heavy Internet traffic and waiting time to load a web page. Therefore, this dimension was labeled organizational interaction instead of the social interaction with other shoppers and sales associates as one would find in a brick-and-mortar retail shopping experience.

Following the method used by d'Astous (2000) three MANOVAs were run with the independent variables of gender, age, and frequency of online shopping and the dependent variables being the shopping irritants composing each dimension. All three hypotheses received partial support as a result of the MANOVA test. The MANOVA test of the design dimension indicated the three-way interaction and the two-way interactions were not significant. However, there was a significant main effect for gender (Wilk's $\lambda = .721$; $p \leq 0.001$), age (Wilk's $\lambda = .562$; $p \leq 0.025$) and frequency of online shopping (Wilk's $\lambda = .480$; $p \leq 0.024$). Univariate analysis showed only a few shopping irritants were significant for the main effects at the $p \leq 0.05$ level. Females were more irritated with inadequate instructions than males. However, males were more irritated by a complicated payment method. Older age groups were more irritated by a website that was not easy to read, losing their way on the web site and lacking confidence in product service. Perhaps older consumers are more familiar with brick-and-mortar retailers where product service may be assessed prior to purchase. Lastly, respondents that shopped more frequently online were more irritated by the waiting time to check out. This makes intuitive sense since frequent online shoppers are more experienced and may not tolerate delays.

There was a significant gender by frequency of online shopping interaction when testing the organizational interaction dimension (Wilk's $\lambda = .898$; $p \leq 0.0333$). Univariate tests indicated waiting for a web page to load was significant ($p \leq 0.023$) where females that shop more frequently online were more irritated by waiting for a web page to load.

The MANOVA test of the irritants comprising the ambient dimension indicated a significant age by frequency of online shopping interaction (Wilk's $\lambda = .725$; $p \leq 0.007$). Only one shopping irritant was significant. Older consumers were less irritated by the unpleasant visual surroundings in the location they were shopping on the web. Older online shoppers may be shopping at the office where the visual surrounds are relatively nice.

Table 1

Perceived Irritability of Components of the Online Shopping Environment

<u>Shopping Irritant</u>	<u>Mean</u>	<u>SD</u>
Organizational Interaction Factors		
Heavy web traffic	3.04	1.03
Waiting for web page to load	4.32	.85
Web Page Design Factors		
Website isn't easy to read	3.87	1.00
Website is too small	3.23	1.14
Website is confusing	3.65	1.06
Inadequate instructions on web site	3.75	1.08
Website not orderly	3.57	1.08
Losing your way on the web site	3.55	1.01
Inadequate product information	3.80	1.04
Merchandise of interest not available	3.69	1.11
Merchandise scattered on web page	3.50	1.10
Limited selection on web page	3.29	1.12
Advertised specials not available	3.74	1.20
Payment is complicated	3.74	1.13
Waiting time to check out	3.46	1.22
Prices not indicated on web page	4.20	1.07
Lack confidence in product service	3.58	1.15
Website contains deceptive sales information	3.96	1.28
Ambient Factors		
Unpleasant surroundings in the location where you shop on the web	2.84	1.35
Noisy surrounds in the location where you shop on the web	2.63	1.18
Location where you shop on the web is too hot or cold	2.69	1.14
Unpleasant visual surroundings where you shop on the web	1.73	1.00

DISCUSSION

The results of this study indicated some support for extending Baker's (1986) typology to describe the physical environment of online shopping. The shopping irritants included in this study corresponded to the ambient and design components of the typology. The social component may need to be redefined when applied in the virtual world. Females tended to be more irritated with more of the factors of online shopping than males. The youngest age group in the study tended to be the least irritated by the factors studied. Frequent online shoppers were the most irritated by most of

the factors included in this study. These results are consistent with what has been reported in previous research.

The results of this study need to be interpreted in light of the study's limitations. Specifically, a larger sample is needed to secure enough observations in order to break the data apart based on other variables such as product purchased and customer satisfaction with the purchase process. It could be that irritants related to other factors such as delivery influenced the responses to some of the shopping irritants need to be included on the questionnaire. In addition, situational variables such as the sensitivity of the shopper to atmospherics and the purpose of the visit to the website may hold

interesting insights into how to enhance the online shopping experience.

Van Name, Mark L. and Bill Catchings. 1998. Speed is the key to online selling success. *PC Week* 15 (December 14): 40.

REFERENCES

- Baker, Julie 1986. The role of the environment in marketing services: The consumer perspective. in *The Services Challenge: Integrating for Competitive Advantage* John A. Czepiel Carole, A. Congram, and James Shanahan, eds., American Marketing Association, Chicago, IL.: 79-84.
- Bhatnagar, Amit, Sanjoy Misra and H. Raghav Rao.: 2000. On risk, convenience, and Internet shopping behavior. *Communications of the ACM* 43 (November): 98-108.
- Bitner, Mary Jo. 1992. Servicescapes: The impact of physical surroundings on customers and employees. *Journal of Marketing*. 56 (April): 57-71.
- d'Astous, Alain. 2000. Irritating aspects of the shopping environment. *Journal of Business Research* 49 (August): 149-156.
- Eroglu, Sevgin A., Karen A. Machleit, and Lenita M. Davis. 2003. Empirical testing of a model of online store atmospherics and shopper responses. *Marketing and Psychology* 22 (February): 139-150.
- _____, _____ and _____. 2001. Atmospheric qualities of online retailing: A conceptual model and implications. *Journal of Business Research* 54 (November): 177-184.
- Fram, Eugene H. and Dale B. Grady. 1997. Internet shoppers: Is there a surfer gender gap? *Direct Marketing* 59 (January): 46-51.
- Kotler, Philip (1973-1974). Atmospherics as a marketing tool. *Journal of Retailing*. 49 no. 1: 48-64.
- Roslow, S., Nicholls, J.A. F., and Tsalikis, J. 1992. Time and quality: Twin keys to customer service satisfaction. *Journal of Applied Business Research* 8 (spring): 80-86.
- Schleifer, L. M., and Amick, B.C. 1989. System response time and method of pay: Stress effects in computer-based tasks. *International Journal of Human-Computer Interaction* 1: 23-39.