Social Cues, E-Social Ambience, and Emotions in Web-Based Fashion Retailing: A Case of U.S. Shoppers

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Abstract

In-store atmospherics involve quantified physical and social aspects; however, the social quality of a web-based retailing context has largely been under-examined. This study addressed some antecedents and consequences of social ambience in virtual shopping (or *e-social ambience*) within a web-based U.S. retailing fashion context. This study explored the role of social cues as a viable antecedent to e-social ambience and emotions as its consequence. A conceptual framework was built postulating the effect of social cue for web content, on e-social ambience, emotions, and e-shopping enjoyment. The experimental results (n=488) on a fictitious retail T-shirt website confirmed the positive correlation among the variables; in addition, the level of social cues included within the web content significantly increased the level of customer-perceived e-social ambience of the website and subsequent positive on-site emotions. On-site emotions positively influence purchase intentions. The results expand the current understanding of e-store management by providing novel insight relevant to fashion companies that wish to provide customers with a quality website shopping experience.

Key words: E-social ambience, Social cues, Emotions, Purchase intention

I. Introduction

Store atmospherics refer to the subjective quality of a store's environment as experienced by its customers (Baker et al., 1994). It is evoked by the store's sensory and cognitive retail characteristics ranging from visual (e.g., store layout, color) to non-visual elements (e.g., scent, sound, lightings) (Baker et al., 1994). As a subset and essential component of store atmospherics, *social ambience* refers to subjective perception of the interpersonal quality of a store's environment from on-site contact among social entity (e.g., retail salespeople, peer shoppers). The extant literature has demonstrated the essential role of social ambience in the quality in-store environments of conventional retail settings (e.g., Sherman et al., 1997). How-

ever, the topic has rarely been discussed in the context of online shopping (hereafter e-shopping) (Henning-Thurau et al., 2004) with only few exceptions (Mummalaneni 2005; Sautter et al., 2004; Wang et al., 2007). At its beginning stage, the prior research on the topic has not yet provided a comprehensive understanding of the dynamics of social ambience in e-shopping. As a type of hedonic goods, apparel is subject to such social influences during the purchasing stages (Bridges & Florsheim, 2008). Particularly in the U.S. market, apparel is one of the most frequently purchased and fast growing categories online (Shop. Org, 2011), with the increasing consumer demands for quality interpersonal experiences during the purchase events (Ha & Stoel, 2012).

Motivated by this, this study aims at making an initial effort in addressing the dynamics of social ambience in e-shopping, or *e-social ambience*, within

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the context of the U.S. fashion. Based on the extant definition of social ambience (e.g., Sautter et al., 2004; Sherman et al., 1997) e-social ambience is defined in this study as the subjective perception of the interpersonal quality of an online store's environment. The theoretical framework draws upon mediated communication (e.g., Rutter, 1987; Tanis & Postmes, 2006), environmental psychology (Jacoby, 2002; Mehrabian & Russell, 1974), and recent studies of virtual experiences (e.g., Hoffman & Novak, 2009; Yee, 2006). More specifically, the study addresses the antecedents and consequences of e-social ambience, in seeking some initial answers to the following questions: which characteristics of websites' content affect the perceived quality of e-social ambience, and whether/how it affects consumers' attitudes?

Firstly, in addressing viable antecedents to e-social ambience in fashion e-shopping, the study investigates the role of *social cues* as an antecedent of shopper-perceived e-social ambience. Unlike typical retail settings with rich in-store interactions amongst social entities, it has not been much discussed as to what determines the interpersonal dynamics of e-shopping settings. Social cues refer to the variety of organizational and situational variables in certain communication context indicating interpersonal aspects of the context (Gunawardena & Zittle, 1997; Sproull & Kiesler, 1986). Within web-based communication situations, common types of social cues include a variety of text-based cues (i.e., emoticons, exclamation marks, and tone of writing) (Wang et al., 2007). Although the topic of social cues has been largely under-explored in relevant academia, numerous fashion companies such as Saks Fifth Avenue and Urban Outfitters have already employed a variety of social cues in their text-formatted content (e.g., company/product descriptions). The effect of the total quantity of social cues has been largely supported in most of the relevant literature of mediated communication, whereas it has been somewhat arguable as to different effects by types of social cues. Accordingly, this study examines the effect of the total quantitative level of social cues on the consumer-perceived level of e-social ambience perceived by the shoppers. More specifically, the author posits that e-social ambience is a consumer's subjective

evaluation of the interpersonal quality of an e-shopping situation, while the quantity of social cues is its crucial antecedent.

Secondly, this study explores the emotional consequences of e-social ambience. Stemming from the principles of environmental psychology, research has suggested that the S-O-R framework captures consumers' emotional responses to the various in-store characteristics, including the social cues (Donovan & Rossiter, 1982). More recently, a few studies have suggested that the S-O-R framework should be effective in addressing consumers' responses towards characteristics of a retail website (e.g., Eroglu et al., 2003). Given the positive influences of social feedbacks in a traditional brick-and-mortar store setting, it is likely that the higher level of e-social ambience will contribute to the positive consumer attitudes. The previous studies of environmental psychology have implied the importance of the atmospherics' effect on positive emotions, and their subsequent impact on positive consumer attitudes (e.g., Cheshin et al., 2011; Fiore et al., 2005; Lee, 2010; Song & Zinkhan, 2008). Therefore, this study tests a positive impact of the perceived level of e-social ambience on the on-site emotions, and their subsequent impact on purchase intention. The findings of this study will contribute to the current research of the e-store environment by illuminating its social aspect. Furthermore, the findings will provide fashion marketing scientists with novel perspectives on how to manage e-store environments to improve their positive psychological mechanisms and subsequent positive attitudes.

II. Literature Review

1. Social Cue as Antecedent to Perceived E-Social Ambience

Store atmospherics in virtual shopping can be quite different from that of a typical shopping. What is most different is perhaps that it does not provide direct interpersonal contacts (Eroglu et al., 2003), and any interpersonal communications among social entity (e.g., between a customer and firm) mostly occur through text-based information, the weakest communi-

cation method providing low social intensity (Short et al., 1976; Garrison et al., 1999). Some psychologists, however, found crucial potential of such mediated communication on the web. That is, interpersonal quality of a medium may not be an inherent quality of the medium; rather, it can be manipulated through some basic characteristics of the medium or communication context (Gunawardena & Zittle, 1997; Walther, 1992). They suggest that the quantity of *social cues*, or *signals*, can be an effective antecedent to the overall quality of interpersonal dynamics of the store that shoppers perceive. The role of social cues in a mediated communication environment, including that of a virtual context, has largely been advocated by various mediated psychology theories, including the social presence theory (Short et al., 1976), the faded cue theory (Festinger et al., 1952), and the social identity report approach (Walther, 1992).

2. Social Cues

Social cues refer to sensory or cognitive stimuli that convey contextual information about a communication (Tanis & Postmes, 2006). The cue approach ascribes relatively little social power to computer-mediated communication (CMC) because cue that enable communicators to perceive one another as individuals are relatively few in a CMC, while Face-to-Face (FtF) communication naturally involves a vast amount of non-audial cue, leading to a socially-rich communication (Kahai, 2009; Kato et al., 2007). The narrow bandwidth of social cue within a CMC leads to negative psychological consequences like psychological isolation (Derks et al., 2007), de-individualization (Festinger et al., 1952), anonymity (Kahai, 2009), and low communication efficiency (Derks et al., 2007). On the other hand, CMC situations with sufficient cue have been reported as socially-rich, resulting in positive socio-emotional consequences (Walther, 1992) and good communication responses (Gunawardena & Zittle, 1997).

E-social ambience should derive from the dynamics of subtle social cues embedded within the communication content; more specifically, the quantity of social cues, rather than the specific types of social

cues, can be a crucial determinant of interpersonal dynamics of a virtual context (Derks et al., 2007; Garrison et al., 1999; Kahai, 2009; Walther, 1992; Walther & Tidwell, 1995). With most visual, non-verbal, vocal, and physical cues are filtered out, most dominant types of social cues remaining in a virtual context include text-based social cues such as affective cues (e.g., use of expressions or symbols of emotion like exclamation points, emoticons, and capitalization, Derks et al., 2007; Kato et al., 2007), and tone cues (e.g., tone used in the writing and first person narrative, Cheshin et al., 2011; Sohn, 2011). Being realized the effects by the companies or not, these types of social cues are commonly utilized in the text-based content of fashion retail websites, mostly through basic contents like company information and product attributes. For instance, product attributes are the most common and dominant type of text-based communication in e-tailing and include a variety of affective and/or tone cues, such as exclamation points, strong emotional expressions in the product/company information, etc; friendly and personalized messages are another example of web content filled with social cues reflecting on companies' effort to improve perceived interactivity of their on-site interaction with their shoppers (Song & Zinkhan, 2008). According to the extant literature, intentional manipulation of social cues for such text-based web content in a fashion retail website likely affects the perceived level of e-social ambience. Various subtle text-based cues for fashion e-shopping may have a significant positive influence on consumers' perceptions of an e-store's interpersonal dynamics. Given the positive correlation between the level of social cues and social ambience in the communication studies, increase in the social cues is apt to improve customer-perceived level of e-social ambience within the website. Thus:

Hypothesis 1: The greater the amount of social cues available in text-based web content, the higher will be the perceived level of e-social ambience within the website.

3. Online Shoppers' On-Site Emotions

Store atmospherics in typical retail contexts is often

found to have strong correlation with in-store emotions (e.g., Eroglu et al., 2005; Sherman et al., 1997). Babin et al. (1994) introduced the concept of hedonic shopping value which reflects the individual's evaluation of the entertainment and experiential worth of the shopping trip (e.g., the fun, experiential part of shopping). The stimulus-organism-response (S-O-R) framework of Mehrabian and Russell (1974) serves a useful theoretical basis for a discussion of the positive emotional states derived from store environments. The framework describes the influence of external stimuli on the psychographic states of approach or avoidance attitudes and behaviors arising from the evoked organism. In essence, the framework shows that individual emotional states mediate the influence of the environment on individual behaviors. Donovan and Rossiter (1982) adapt this framework to retail environments and propose that the store environment arouses the basic emotional states of pleasure-arousal-dominance, which in turn affect individuals' approach and avoidance behavior. This proposition gained broad support in subsequent studies, particularly those describing emotional responses to environmental factors (Baker et al., 1994; Eroglu et al., 2003; Mummalaeni, 2005; Yoo & MacInnis, 1998). Three positive on-site emotional states within in-store atmospherics are pleasure, arousal, and dominance (Mehrabian & Russell, 1974). With the results of the previous research somewhat inconsistent regarding the role of dominance (e.g., Mummalaeni, 2005; Sherman et al., 1997), most prior studies on the S-O-R theory have not separated the three emotions in discussing their roles in the in-store consumer attitudes, perceiving that each of the three emotions represent distinct aspect of positive emotion induced by environments (Floyd, 1997). Accordingly, this study also examines the three emotional states in addressing the dynamics of e-store ambience.

The stimuli in a virtual retail space include drivers embedded in the website and the properties of the operating environment (Ergolu et al., 2003; Sautter et al., 2004). In the context of consumers' decision making, stimulus is a package comprising many interactive and often competing factors that are external to the person (Jacoby, 2002) and are associated with en-

vironmental inputs and marketing activities (Bagozzi, 1986; Eroglu et al., 2005). Recently several studies have empirically shown that the S-O-R framework successfully reflects the dynamics of e-store atmospherics, suggesting that those atmospherics affect the emotional states of customers (e.g., Mollen & Wilson, 2010; Mummalaeni, 2005). E-store ambience involving high-level task-relevant cues should yield more positive consumer attitudes towards e-shopping, comparing to that of low-level task-relevant cues (Eroglu et al., 2003). Mummalaeni (2005) found that ambience factors of web sites significantly contribute to customers' sense of pleasure and arousal as well as their degree of satisfaction and loyalty. Sautter et al. (2004) refine the stimulus component of the framework, suggesting that the social elements of a store can be conceived as a type of operator environment and therefore contribute to psychological organism that individuals experience within the context. Sherman et al. (1997) empirically show that social ambience within a retail space has a significant influence on shoppers' perceptions of pleasure and arousal. However, the framework has yet been adapted to the context of e-tailing and previous work on e-store atmospherics has not considered social ambience within this framework.

While no direct interaction between e-social ambience and emotions has been revealed, CMC studies empirically indicate that a high-level of social context flowing from sufficient cue brings better emotional responses, such as communication effectiveness and positive moods (e.g., Derks et al., 2007; Moreno & Mayer, 2000). Hoffman and Novak (2009) have extended the early work demonstrating the influence of web sites' characteristics on consumers' cognitive and emotional states by suggesting that the social component of a virtual experience have a critical influence on consumers' internal states. Cheshin et al. (2011) found positive effect of perceived interactivity of text-based web content on emotions. The author posits that a positive e-social context will have a positive influence on emotional states, expecting that the three emotional states (i.e., pleasure, arousal, and dominance) should play a crucial role in the dynamics of the e-social ambience. Building on the literature, the fol-

lowing is hypothesized:

Hypothesis 2: The perceived level of e-social ambience within a website will positively influence (a) pleasure, (b) arousal, and (c) dominance perceived in the e-shopping experience.

4. Purchase Intention

The scope of the organism sector for the S-O-R framework has been expanded to encompass psychological systems well beyond emotional states; researchers found that this sector includes prior experiences, knowledge, beliefs, attitudes, predispositions, intentions, values, cognitive networks, schema, scripts, motives, personalities, feelings, impressions, images, and expectations (e.g., Jacoby, 2002). Specifically, the organism from environmental stimulus within the virtual retail space has expanded to include various patronage behaviors to stimuli (Mollen & Wilson, 2010). Studies on e-commerce have suggested that positive affective states elicited by a rich e-store environment play an important role in improving customers' purchase and revisit intentions. Mathwick et al. (2010) reported that Internet-based affective states are positively associated with retail patronage intentions. Fiore et al. (2005) and Lee et al. (2010) reported positive emotional states from virtual apparel e-shopping is positively related to the participants' intention to patronize the Website. Accordingly:

Hypothesis 3: (a) Pleasure, (b) arousal, and (c) dominance perceived in the e-shopping experience will positively influence the customers' purchase intention.

The hypothesis are summarized in <Fig. 1>.

III. Methods

1. Sample and Study Design

For the study, U.S. participants were recruited through an online survey agency sampling. Study introduction, guidelines, and URL to stimuli and online survey were posted at a designated spot of the company's website where the company's consumer panel can have access. An invitation email was sent to the 5,000 randomly-chosen emails from the pre-registered consumer panels of the firm, asking for a voluntary participation in the survey. In the email, participants were introduced to the study with instructions explaining that the purpose of the study was to understand reactions to a website that just had renovated its layout. After one week, a total of 521 samples are collected (response rate of 10.4%). After deleting 33 incomplete responses, finally a total of 488 samples were remained and analysed (48% males; aged from 21 to 69; average annual household income \$55,300; 31% has degrees higher than a bachelors).

To test hypotheses, an experiment was performed. To exclude any unwanted familiarity effect, the author

Fig. 1. Conceptual framework.

employed a fictitious T-shirt e-tail company in the main experiment of the study. The main stimulus, cue manipulation, and the website layouts were discussed and tested through a set of several pretests (e.g., group discussions, 1:1 interviews). T-shirt was chosen as the main stimulus because it was indicated in the pre-tests as the type of fashion products that the participants would consider most to purchase online in the near future, followed by jeans and accessories. Since the purpose of the study was to test the effect of quantitative level of social cues, the author developed two websites for either low- or high-cue condition, where the quantitative level of social cue was manipulated through the website's text-based information (i.e., product attributes and company information).

Cue level manipulation followed the extant communication literature (e.g., Cheshin et al., 2011; Derks et al., 2007; Wang et al., 2007) using both the affective and tone cues. In the high-level cue condition, product attributes were designed to include multiple emotional expressions (e.g., happily), exclamation marks, and emoticons. Furthermore, product attributes in the high-level cue condition used a first person narrative. In the low text-based cue orientation condition, no obvious affective cues were used, and the attributes were written as third person narrative. Other than the cue treatments, all layouts and product descriptions for each item are maintained consistent across the conditions. Each participant is randomly assigned to one of the two cue conditions ($N_{\text{Low-Cue}} = 239$, $N_{\text{High-Cue}} = 245$). After browsing the website, the participants were asked to select and place one T-shirt design into the virtual shopping cart. Having selected their choices, they filled out a web-based survey tapping the variables of interest (i.e., perceived level of e-social ambience, on-site emotions, and purchase intention) and basic demographics.

2. Measures

All variables of the framework were measured using established measures in the literature. To measure the quality of perceived e-social ambience was measured using the 4-item 7-Likert type scale used by pre-

vious studies (i.e., Sherman et al., 1997; Short et al., 1976). On-site emotions were measured using a set of 14 items originally developed by Mehrabian and Russell (1974) and employed in retail atmospherics studies (e.g., Donovan & Rossiter, 1982; Floyd, 1997; Mummalaneni, 2005; Sherman et al., 1997). Finally, purchase intention was measured using the three items from established measures (e.g., Fiore et al., 2005; Zeithaml et al., 1996).

3. Manipulation Check

A manipulation check for the experimental conditions was performed with thirty undergraduates who did not participate in the main experiment (Perdue & Summers, 1986). They viewed one of the two sets of treatment websites for four minutes and then rate whether the treatment website had more social cue than the untreated web site. The items used were: "The website's company information and/or product attributes are written as first-person narrative"; "The website's company information and/or product attributes involve emotional expressions, exclamation points, and/or emoticons." The items were measured using a 7-point Likert type scale (anchored as 1 = "not at all" and 7 = "very much") and averaged for each cue condition. A between-subject manipulation check (t-test) supports the distinctiveness manipulation ($M_{\text{High-Cue}} = 4.21$ and $M_{\text{Low-Cue}} = 2.77$, $t = 8.07$ [$df = 28$]; $p < .001$). No other effect was significant.

IV. Analysis and Results

1. Validity and Reliability

The discriminant and convergent validity of the measures was tested with confirmatory factor analysis (Table 1). The results of the analysis showed an acceptable validity for the seven constructs as well as their indicators, with model fits all exceeding the threshold levels suggested in the literature (CFI = .96, NFI = .94; IFI = .96; RFI = .92, RMSEA = .068; Bagozzi & Yi, 1998; Hair et al., 1998). The AVEs for the seven constructs ranged from .55 to .89, exceeding their squared correlations values (ranging from

Table 1. Validity and reliability of measures

Construct / Indicators	CFA standardized factor loadings (λ)	AVE	Cronbach's alpha
η_1 : E-Social Ambience			
γ_1 : Lively	.80	.67	.92
γ_2 : Cheerful	.70		
γ_3 : Friendly	.82		
γ_4 : Courteous	.85		
η_2 : Pleasure			
γ_1 : Satisfied	.78	.55	.95
γ_2 : Contented	.69		
γ_3 : Annoyed (r)	.88		
γ_4 : Pleased	.82		
γ_5 : Hopeful	.90		
γ_6 : Despairing (r)	.90		
η_3 : Arousal			
γ_1 : Relaxed (r)	.85	.89	.91
γ_2 : Calm (r)	.90		
γ_3 : Jittery	.90		
γ_4 : Excited	.90		
γ_5 : Aroused	.94		
η_4 : Dominance			
γ_1 : Skilful	.87	.73	.86
γ_2 : Successful	.83		
γ_3 : Dominant	.77		
η_5 : Purchase Intention			
γ_1 : I would be willing to buy products from this website for myself.	.96	.78	.94
γ_2 : I would be willing to recommend this website to other people.	.86		
γ_3 : I would be willing to defend this website when others speak poorly about it.	.93		

.19 to .42) and the threshold value of .50 (Fornell & Larcker 1981). In sum, the results provided strong evidence of convergent and discriminant validity. Cronbach's α coefficients of measures, calculated to test the reliability of the measures, found acceptable levels of reliability for the constructs, with coefficients ranging from .86 to .95 (Nunnally, 1978). Descriptive statistics and correlation coefficients of model constructs appear in <Table 2>.

2. Hypotheses Testing

1) Overall Model

Structural equation modelling was performed to test the hypotheses, using a maximum likelihood esti-

mation procedure with a covariance matrix as input. A latent model with 22 indicators and six latent variables (1 exogenous and 5 endogenous variables) was tested to examine the casual relationships among the variables indicated in hypotheses 1 through 3. The level of social cue was coded as a dummy variable (0 = "low-level cue condition" vs. 1 = "high-level cue condition").

Overall, the results of the structural equation modelling obtain for the proposed conceptual model revealed a chi-square of 699.47 ($df = 315$), a comparative fit index (CFI) of .95, a normed fit index (NFI) of .93, a relative fit index (RFI) of .91, an incremental fit index (IFI) of .95, all of which show a fair fit based on established fit indices (Bagozzi & Yi, 1988;

Table 2. Descriptive statistics and correlation coefficients of model constructs

Model constructs (N=488)	Mean ^a	S.D.	Correlations					
			1	2	3	4	5	6
1. Social Cue Level	0.51	0.82	-	-	-	-	-	-
2. E-Social Ambience	3.70	1.22	.34 ^b	-	-	-	-	-
3. Pleasure	3.65	1.53	.29	.32	-	-	-	-
4. Arousal	3.98	1.85	.29	.44	.56	-	-	-
5. Dominance	3.62	1.47	.21	.50	.54	.54	-	-
6. Purchase Intention	3.92	1.70	.10	.21	.34	.15	.25	-

^aMeasurement for construct 2 through 6 were based on a seven-point scale where 1 = "strongly disagree" and 7 = "strongly agree."

^bAll correlations indicated figures are significant at $p < .01$

Hair et al., 1998). Moreover, the root mean square error of approximation (RMSEA) value is .76, within the acceptable range of .05 to .08 (Hair et al., 1998).

2) Social Cue Level to E-Social Ambience

Hypothesis 1 posits that the number of cue available at a virtual store will be positively related to the e-social ambience. Results indicate substantial evidence of the influence of both types of cue on the intensity of perceived e-social ambience. The influence of cue level is statistically significant with the social ambience ($\beta = .36$, $t = 6.70$, $p < .001$). Therefore Hypothesis 1 is supported (Fig. 2).

3) E-social Ambience to On-Site Emotions

Hypothesis 2 states that the intensity of the e-social ambience within a virtual environment will increase

consumers' positive emotional states.

In support of hypotheses 2a, 2b, and 2c, the proposed positive relationships between the e-social ambience and emotional states are statistically significant (for pleasure [H_{2a}], $\beta = .29$, $t = 5.57$, $p < .001$; for arousal [H_{2b}], $\beta = .42$, $t = 9.18$, $p < .001$; for dominance [H_{2c}], $\beta = .53$, $t = 10.24$, $p < .001$). The level of e-social ambience is shown to influence the three distinct emotions. The amount of variance shown does not vary across the three emotional states. In total, the cue explains about 32%, 30%, and 30% of the variance in pleasure, arousal, and dominance, respectively.

4) On-Site Emotions to Purchase Intention

Hypothesis 3 assumes that the three emotional states will increase purchase intention. Providing support

Fig. 2. Standardized beta coefficients and t values.

for Hypothesis 3, the results reveal a positive relationship between pleasure and purchase intention (H_{3a} : $\beta = .35$, $t = 7.35$, $p < .001$), between arousal and purchase intention (H_{3b} : $\beta = .17$, $t = 3.92$, $p < .001$), and between dominance and purchase intention (H_{3c} : $\beta = .23$, $t = 6.29$, $p < .001$). Therefore, hypotheses 3a-3c are all supported. The R^2 of the purchase intention explained by e-social ambience and three emotions (pleasure, arousal, dominance) is 65%, indicating that the substantial amount of variance is explained by the variables.

V. Discussion and Implications

As an initial step exploring the relevant topics in the literature, the findings of this study have some theoretical implications. A central contribution of this study is its proposal of a multidisciplinary theoretical framework capturing the core antecedents and consequences of the e-social ambience in relation to social cue level in product attributes, emotions, e-shopping, and purchase intention. To best of the author's knowledge, this study is one of the initial steps addressing the interpersonal dynamics of fashion e-shopping. The concept of social ambience and the relevant theoretical backgrounds have first been suggested and tested to the context. Examinations of the virtual social context have tended to focus on the effects of relational and continuous interpersonal contexts in order to theorize the influence among members of a web-based group activity (e.g., Yee, 2006) and explore how the shared virtual experiences of computer-based communication, such as online game, forum activities, and conference meetings, affect the participants. Unlike social contexts defined by real-time interactions involving the relatively strong web presence of a group, the social context illuminated in this study is the non-relational social contexts of a web-based commercial environment, where most of the typical social signals are filtered out (Festinger et al., 1952; Walther, 1992). Furthermore, this study used wide-used text-based content in manipulating the level of social cues. Incorporating observations on social factors of fashion retail websites should yield a more comprehensive understanding of customers' evaluation of their Internet shopping experiences. This will lead to efficient man-

agerial ways to attract or retain consumers (Hoffman & Novak, 2009). Consumers want to have a totalized experience even on the web and they appreciate quality interpersonal dynamics in e-shopping (Ha & Stoel, 2012). Therefore, research on social ambience in fashion e-shopping of the U.S. market should benefit companies in enhancing quality of their offerings to the consumers and the resulting consumer psychology and attitude, and provide useful insight to other markets as well including that of Korea that also shows rapid growth of fashion e-shopping sector.

This framework builds upon the classic S-O-R framework, encompassing the emotional effects of the e-social ambience as its psychological organism. The e-social ambience is empirically found to contribute to each of the three emotional states of emotions equally; the strong roles of pleasure and arousal are consistent with the findings in the literature, while the equally-salient role of dominance is somewhat inconsistent with the previous where the effect of dominance has usually been found to be insignificant (e.g., Donovan & Rossiter, 1982; Mummalaneni, 2005; Sherman et al., 1997). In addition to the verified importance of the two emotions (i.e., pleasure, arousal), the important role of dominance is also revealed. This contributes to expanding the extant literature of on-site emotions in e-shopping contexts that has emphasized mostly the importance of pleasure and arousal only, but not that of dominance (e.g., Mummalaneni, 2005). More broadly, the crucial role of dominance in e-shopping contexts can be supported by the findings of the previous research on virtual contexts which have emphasized the crucial motivation of control to initiate and participate in various virtual communications and activities (e.g., Hoffman & Novak, 2009; Klein, 2003; Mathwick et al., 2010). This study's support for the finding of the important role of dominance in the e-social dynamics is suggested in the marketing literature of the online experience, where consumers' control motivation is indicated as being critical to their responses to web-based activities (Mathwick et al., 2010; Novak et al., 2000; Sheridan, 1992). For instance, Sheridan (1992) and Novak et al. (2000) indicate that a high-level sense of control is an essential determinant of active performances in web activities

and their positive influence. Other studies (e.g., Fiore et al., 2005; Klein, 2003) report that sensory-rich online environment brings a sense of control, a determinant of positive attitudes to the vendor.

The findings have some useful managerial implications on ways of utilizing e-store atmospherics for quality online experiences (Mollen & Wilson, 2010). In essence, the results suggest that the social context of a virtual store should be strategically manipulated to produce an optimal virtual environment for shoppers. The cue-based approach is particularly useful in developing practical ideas for improving the e-social ambience. Manipulating the social signals in web content assures a rich e-store e-social ambience, leading to positive consumer responses in a context highly beneficial to the firm. When no direct product or service experience is available, attracting and entertaining customers is difficult; the number of social cues available on the website's text-based content may help companies in improving the shoppers' on-site emotions. The results suggest that web-based retailers should pay more attention to the delicate, subtle 'signals' of their websites, as they may have a critical impact on customers' evaluations and shopping value. In designing retail websites, careful efforts should be made to enhance consumers' perception of the cue on the website. Technology is not the only feature that can advance the perceived quality of an e-store's environment; there are many ways to improve the e-shopping experience by managing simple the common text-type information on websites. Features for company representatives, warm greetings, portraits of smiling faces, fresh and up-to-date product information, active postings on customer reviews, and quick responses to inquiries should be developed and incorporated into e-commerce websites. In essence, the results of this study highlight the fact that companies' investments in website characteristics are worthwhile and retain customers, and the customers reciprocate with positive e-store evaluations.

VI. Limitations and Future Studies

The findings of this study can be expanded by incorporating various sources of e-tail social contexts.

The application of technology-aided web service features like avatar, speech interfaces (e.g., Lee et al., 2005), and embodied agents (e.g., Dautenhahn et al., 2002) may reveal a stronger influence on the e-social ambience and its subsequent psychological results. Future work may even consider the effect of the non-human social context. The literature contains indications that the e-social ambience may be formed by non-human sources. For instance, Nasr Bechwati and Xia (2003) found that people appreciated the efforts of others more than their own when engaging in web-based decision making even when they knew the counterpart was a non-human computer program. Moreover, the source of social context may be extended to include social interactions with branded websites. A possible approach to this idea is found in the parasocial relationship theory (Rubin & McHugh, 1987). In sum, these other types of social context could contain rich social cue beyond what the basic task-relevant cue examined in this study can provide.

A more comprehensive theoretical explanation may be developed by amplifying the psychological organism and responses resulting from the social context of e-store atmospherics. For instance, according to the social support theory generated by social psychology (Cohen & Wills, 1985), a variety of social consequences arise from positive interpersonal contacts. A possible research direction is an investigation into whether social support benefits occur from an e-social ambience involving cue, and, if so, whether they contribute to enhancing consumption value. Furthermore, the framework developed in this study may be extended by incorporating other aspects of context, such as an individual's category knowledge and media characteristics (Klein, 2003). This study used T-shirt as the main stimulus, based on the pretests' results, and this may lead to limited external validity of the results. Different product types may influence consumers' attitudes towards the social cues. Therefore, subsequent studies may consider expanding the results by including a variety of product categories to generalize the results.

Further research could investigate the viable intradynamics of types of context cue in the e-social ambience mechanism. Particularly, subsequent research

analysing effect of different types of social cue will expand the current findings. Cue can perform a negative effect, since studies often find that interpersonal presence of others in a shopping site has a negative impact on consumer in-store attitudes. Conflicts amongst different types of cues can be expected, and needs exploration in the virtual contexts. One possible observation could be that using multiple types of cues may reduce the power of each type of cues. Theoretical explanation may come from conceptual notion in mediated communication psychology assuming complex dynamics amongst cue types. Thus, it is not the simple accumulation of cue that determines the final social effect of those cues; rather, there may be inter-cue dynamics that have yet to be discussed by the CMC literature. Addressing this question warrants future attention in an expansion of the findings of this study.

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