

Viewer Number Cues in Fashion E-Commerce: The moderating effect of category knowledge

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Background. Just a mere existence of peer shoppers affects customers' emotional as well as cognitive responses towards the store environment (e.g., Argo, Dahl, & Manchanda, 2005). The size of an in-store mere social presence, or retail density, has received a significant research interest in traditional retail settings (e.g., van Rompay et al., 2012). Then, would a similar idea of mere social presence exist in Web-based environments, affecting shoppers? Fashion retail websites provide similar numeric cues signaling traffic, or virtual density, of their websites, such as viewer number cues (hereafter VNC). Compared to "Like" or "Recommend" numbers, orientation of the VNC is neutral, and does not indicate whether the viewers' responses (on the website/product) were positive or negative. The objectives of the present paper are (i) to explore the effect of VNC on online shoppers' emotions and shopping decisions, and (b) to test whether it is moderated by their knowledge level on the product.

Literature Review and Hypotheses. Research reports that the size of a mere social presence significantly affects in-store product/company evaluations, yet the orientation (positive or negative) depends on whether the social presence contributes to individual's goal achievement. In situations when shoppers have a high demand for social affiliation, a mere presence of peer shoppers improves positive brand attitudes and purchase decisions (van Rompay et al., 2012), whereas it would negatively affect if shoppers want privacy and consider others' presence as unpleasant. Perceptions of physical density and restriction, which are the primary antecedents of a negative effect of retail density, are not highly relevant to the virtual retail contexts that represent a socially-isolated communication environment where the level of social influence is minimal by default. Within the context, VNC performs an indication of other shoppers' presence on the website, and likely contributes to the shopper's goal achievement that is to receive a minimal level of social influence in the environment. Minimal level of social influence in the decision making process is essential in fashion-relevant purchases, particularly for those who need affirmation on their purchases. Moreover, the effect of VNC's size on online shoppers' psychology varies by the level of category knowledge, since consumer responses to mere social presence are subject to the level of skills and confidence on the context (Chocarro, Cortiñas, & Elorz, 2009). Consumers' capacity to correctly interpret attributes will cause them to use different types of information cues; thus, the relative importance they attach to information sources may differ.

H₁: VNC will have a positive effect on (a) attitude toward the website, (b) attitude toward the product, (c) purchase intentions, and (d) positive emotions.

H₂: Consumers of low-level category knowledge will report (a) higher attitude toward the product, (b) a higher attitude toward the website, (c) higher purchase intentions, and (d) more positive emotions, than those of high-level category knowledge.

Methods. As the study stimuli, two images of screen-captured webpages (of a fictitious handbag retail website) were developed, each of which represents the small- or large-VNC condition. A total of 156 participants were recruited through a professional research company and participated in the experiment and subsequent self-reported online survey. Each participant was randomly assigned to one of the two conditions, asked to observe the web content and evaluate the product/website. The item measures for the online survey were from the extant literature (for *positive emotions*, Argo et al., 2005; for *attitudes towards the website/product*, Song & Zinkhan, 2008; for *purchase intentions*, Park et al., 2010; for *category knowledge*, Chocarro et al. 2009). All scores were measured with 7-point Likert scales (anchored at 1 = “not at all” and 7 = “very much”), averaged for each construct.

Results and analysis. Hypotheses were tested with four hierarchical regression analyses, each of which set one of the four dependent variables (attitude toward the website, attitude toward the product, purchase intentions, positive emotions). The results indicate that the size of VNC has a significant contribution to attitudes toward the website (H_{1a} : $\beta = .30, p < .001$), attitude toward the product (H_{1b} : $\beta = .29, p < .01$), purchase intentions (H_{1c} : $\beta = .39, p < .001$), and positive emotions (H_{1d} : $\beta = .41, p < .001$). H_{1a-d} was supported. The effect of interaction terms between the VNC size and category knowledge is also significant for attitudes toward the website (H_{2a} : $\beta = .33, p < .01$), attitudes toward the product (H_{2b} : $\beta = .29, p < .05$), purchase intentions (H_{2c} : $\beta = .20, p < .05$), and positive emotions (H_{2d} : $\beta = .23, p < .01$), supporting H_{2a-d} . The results confirm the positive effect of VNC’s size particularly on shoppers with low category knowledge. Future research should explore the underlying mechanism.

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