The Effects of Presentation Order of Apparel Product Images on Consumers' Information Processing Style and Purchase Intentions

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Introduction & Theoretical Background

Image presentation order has the potential to affect the way consumers process product information when shopping and to increase or decrease their product preferences, which may affect their interest in purchasing (Turley & Milliman, 2000). Because websites by the nature of their construction are viewed in a preset order, presentation order has the potential to affect website retail purchases. With a potential impact on sales, online retailers need to understand the image presentation order effect; however, no specific research has investigated this effect on consumers' preferences for online shopping. This study investigates how presentation order of apparel product images (i.e., which image is first or last) influences consumers' information processing styles (i.e., imagery and analytical) and ultimately their purchase intentions.

According to the belief-adjustment model, individuals process differently the same stimuli when presented in different orders. These processing differences affect their final judgment of the stimuli (Hogarth & Einhorn, 1992). Order effects can occur in three formats: primacy (i.e., overweighting on information presented first), recency (i.e., overweighting on information presented last), or no effect. Previous findings show mixed results. For example, Buda and Zhang (2000) found that product attractiveness was higher when a positive product rating from an expert was presented after rather than before product descriptions (i.e., recency effect), while product attractiveness was lower when negative ratings from a shopper were presented before rather than after the product descriptions (i.e., primacy effect). Biswas, Grewal, & Roggeveen (2010) explained that the recency effect explained preferences for experience products (e.g., wine) because initial sensory information (e.g., taste) and emotional experiences (e.g., pleasure) encoded in the memory diminish when additional sensory stimuli (e.g., new wine) enter memory. Work by Liu, Phau, and Teah (2017) found that participants provided higher affective evaluations when they saw a product image first before seeing video advertisements including information about experience attributes than when seen in the reverse order. When results of these studies are reviewed in the context of apparel (i.e., an experiential product [Ekelund, Mixon, & Ressler, 1995]), the recency effect is predicted to be in control, such as when showing an image with experiential content after a simple product image.

To explain the mechanism of image presentation order effect for this online presentation order study, the framework of information processing styles (i.e., imagery and analytical processing) was used. Imagery processing is holistic and based on sensory representation of perceptual information in memory, while analytical processing occurs when an individual

evaluates products in a feature by feature mode (Roy & Phau, 2014). Yoo and Kim (2014) found that an apparel product image with concrete consumption background (e.g., a model presented with an elaborated background describing a relevant lifestyle) positive emotions and purchase intentions through vivid and elaborated mental imagery processing. When showing an apparel product with consumption backgrounds, the hedonic aspect of product attitudes is expected to increase. Then, hedonic product attitudes can increase consumers' imagery processing and decrease analytical information processing. As a result, consumers who engage in imagery processing should be more likely to have high purchase intentions. In contrast, low hedonic aspects of a product image, focusing on product features not imagery, may encourage consumers to engage in analytical information processing, which in turn will decrease purchase intentions. As related to this study, the recency effect of image order should assist consumers to have higher imagery and lower analytical information processing, and higher purchase intentions when the high hedonic image is presented after rather than before the low hedonic image. Based on the framework, the following hypotheses are presented:

  H1. When the high hedonic image is presented after than before the low hedonic image, consumers engage in (a) higher imagery and (b) lower analytical processing, and (c) have higher purchase intentions.
  H2. The effect of image presentation order on purchase intentions is mediated by (a) imagery and (b) analytical processing.

Methods

The experimental design was a 2 (i.e., order of two images: high hedonic image first vs. high hedonic image last) × 3 (i.e., dress style replicates) between-subjects design. Three dress styles were selected through a pretest. Responses (n=190) from female participants were collected via MTurk. Participants were randomly assigned to one of the six conditions. They were asked to review the assigned dress information on an apparel retailer's website, including two images of the assigned dress (i.e., one image evoking high hedonic product attitudes, one image evoking low hedonic attitudes) in one of two presentation orders, product name, price, color, fabric contents, and fictitious retailer's name. Respondents were asked questions using a 7-point Likert scale about their imagery and analytical processing styles (Roy & Phau, 2014), and purchase intentions (Dodds, Monroe, & Grewal, 1991). For the manipulation check, each image evoking high and low hedonic attitudes was shown to participants, who were asked to answer hedonic product attitude toward the dress shown in the image (Voss, Spangenberg, & Grohmann, 2003).

Results

For data analysis, orders of image were coded as dummy variable: 0 = high hedonic image last; 1 = high hedonic image first. The MANOVA result showed that imagery processing and purchase intentions were higher when the high hedonic image was presented last (imagery: $F_{(1,184)} = 5.66$, $p = 0.01$, $M_{\text{Last}} = 4.54$, $M_{\text{First}} = 3.94$; purchase intentions: $F_{(1,184)} = 6.24$, $p = 0.01$; $M_{\text{Last}} = 4.10$, $M_{\text{First}} = 3.39$), supporting H1a and H1c. Image order effect on analytical processing style was not significant, rejecting H1b. No significant main effect of dress style was found, and no interaction effect between image orders and dress styles on imagery and analytical processing style, and purchase intentions was found. This finding indicates statistically that the effect of

image order did not depend on dress styles. Using PROCESS analysis, mediating effects of imagery and analytical information processing were examined. The results showed the indirect effect of the image order on purchase intentions through imagery processing was significant ($-0.94 < CI < -0.04$), while analytical information processing did not mediate the relationship between image order and purchase intentions. H2a was supported, but H2b was rejected.

Conclusions and Implications

The result of this study showed that consumers' imagery processing and purchase intentions were higher when presented with an apparel product image with consumption background after rather than before an image focusing on features. The result has a theoretical contribution to consumer behavior research by supporting the recency effect of high hedonic product image through the imagery processing in an online apparel retailing context. As a practical implication of this study, guidance is given to retailers on how to best order their product images to result in the most profitable outcome. The specific order has the potential to attract more consumers, and consequently increase sales. As setting order of images on a retail website does not have associated costs beyond the website development costs, this finding can be especially important to small online retailers who do not have extensive budgets for advertising and promotion.

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