Consumer Experience with 3D lookbook: An S-O-R Approach

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Introduction and Purpose: With the rapid development of digital technology, the global fashion industry is actively restructuring, and the adoption rate of online marketing is increasing (Gornostaeva, 2023).   Literature also suggests that young consumers increasingly engage with brands on the Internet (Florenthal, 2019). Therefore, effectively showcasing their products online becomes strategically important to fashion brands. Traditionally, the print product catalog serves as a major advertising tool for fashion brands to showcase their products to consumers (Sokolick & Philip, 1969). With increasing online shopping, different forms of digital presentation of available products are adopted by fashion retailers, including cosmetics virtual try-ons, product show videos, and the recently emerging 3D lookbook. 3D lookbook is a digital catalog that uses computer-generated avatar models to showcase apparel and accessories in a three-dimensional look (Pin, 2023). It allows consumers to see products from different angles, obtain product details, and get a more realistic sense of how the item would look and fit in real life. By going virtual, the 3D lookbook not only avoids problems of the high printing cost of print catalogs, waste of resources, and difficulty in updating (B2B Wave, 2017). While 3D lookbooks provide advantages and unique benefits over traditional print catalogs, not much is known yet in terms of consumer response toward 3D lookbooks. Thus, this study aims to investigate the effectiveness of 3D lookbooks as a brand communication tool. Specifically, this study investigates the impact of 3D lookbook features on consumers' attitudes and intentions toward using 3D lookbooks.

Literature review: The Stimulus-Organism-Response (S-O-R) model (Mehrabian and Russel, 1974) has its origin in environmental psychology and has served as the foundation for many consumer behavior studies over the years (Russell and Pratt, 1980). The S-O-R model's central idea is that a stimulus (S) influences an individual's internal affective evaluations (O), which leads to approach or avoidance responses (R) (Do, et al., 2020). 3D lookbooks are a powerful communication tool that uses advanced computer graphics to create a virtual presentation of a product or collection in a 3D space. As a virtual reality technology, 3D lookbooks possess some key media characteristics shared by other VR technologies such as interactivity, vividness (Kim, et al., 2023), and realism (Ogawa, Narumi & Hirose, 2018). Literature suggests that these characteristics will elicit various consumers' cognitive and emotional evaluations (Triberti, et al., 2017). In addition, it has been found through the literature that perceived usefulness, ease of use and enjoyment have an impact on consumers' attitudes toward consumer adoption, which in turn affects behavioral intentions (Heijden, 2003). Therefore, this study proposes that the features of the 3D lookbook in terms of interactivity, vividness, and realism will lead to consumers' different cognitive and emotional evaluation in terms of perceived usefulness, perceived ease of

use, and perceived enjoyment, which will in turn influence consumers' attitude and intention toward using 3D lookbook.

Methodology: A nationwide online survey was conducted via the Qualtrics platform. A total of 524 usable data were collected, and about 51% of the participants were female, with ages ranging from 18 to 45 years old. All items in the questionnaire were measured using the 7-point Likert scale. The participants were instructed to view a 3D lookbook to complete the survey. The proposed relationships were tested using a structural equation modeling using AMOS 28. The CFA for the full measurement model had a good fit ($\chi2$= 563.376, df = 224, p < 0.001, CFI = .976, TLI = .970, and RMSEA = .054), and the fit indices of the structural model test were acceptable ($\chi2$= 713.447, df = 236, p < 0.001, TLI = 0.960, CFI = 0.966, and RMSEA = 0.062).
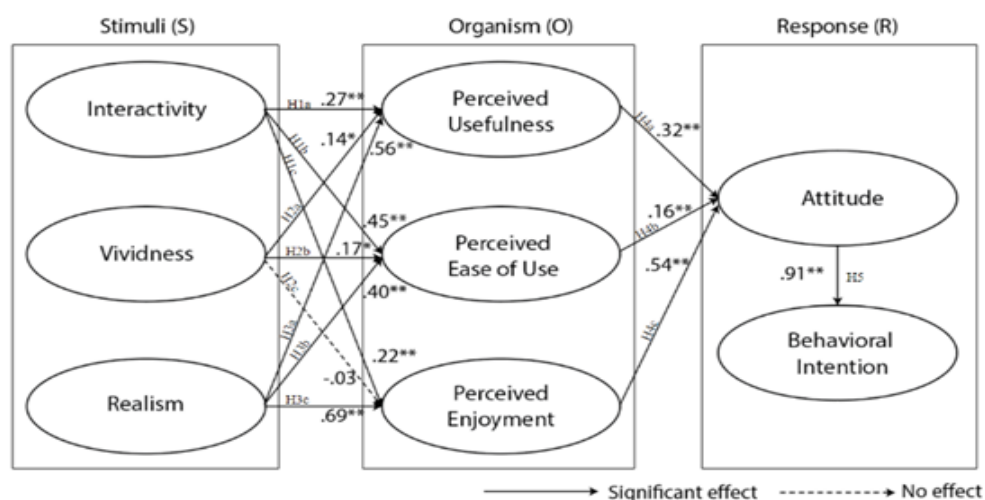

Figure 1. Model fit and path coefficients.

Results: As presented in Figure 1, Hypotheses 1a, 1b, and 1c propose that interactivity positively influences perceived usefulness, perceived ease of use, and perceived enjoyment. The results showed that all three hypotheses were supported (β=.27, p < .001; β=.45, p < .001; β=.22, p < .001). Hypotheses 2a and 2b were also supported, which propose that vividness positively influences perceived usefulness and ease of use (β= .14, p < .01; β=.17, p < .01). There was not a significant relationship between vividness and perceived enjoyment (β=-.03, p > .5), hence rejecting Hypothesis 2c. The results also supported Hypothesis 3a, 3b, and 3c (β=.56, p < .001; β=.40, p < .001; β=.69, p < .001), which propose that realism is positively related to perceived usefulness, perceived ease of use, and perceived enjoyment. Hypotheses 4a, 4b, and 4c propose that attitude is positively related to perceived usefulness, perceived ease of use, and perceived enjoyment. The results showed that all three hypotheses were supported (β=.32, p < .001; β=.16, p < .001; β=.54, p < .001). Lastly, the relationship between attitude and intention was positive (β= .91, p < .001), supporting Hypothesis 5.

Conclusion: According to the findings of this research, the vividness of 3D lookbooks as a fashion communication tool is not substantially correlated with perceived enjoyment. It is comprehensible that the vividness of the virtual picture of the 3D lookbooks does not arouse consumers' enjoyment in the operation process, but it can help to improve the effectiveness and reduce the difficulty of the 3D lookbook when consumers use it. The interactivity and realism characteristics will lead to positive cognition and emotional evaluations of consumers in terms of perceived usefulness, perceived ease of use, and perceived enjoyment, which will positively influence consumers' attitudes and behavior intention toward using 3D lookbooks. In particular, perceived enjoyment was the strongest predictor of a positive attitude. Therefore, companies can focus on enhancing the interactivity and realism of 3D lookbook features to increase consumers' enjoyment. Future studies could include other stimuli and organism variables (e.g., telepresence and satisfaction) to examine the effectiveness of 3D lookbooks.

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