

AI-Designed Clothing and Perceived Values:
What can Move Consumers' Minds with the AI-Designed Clothing?

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Introduction

A Nike-inspired collection created by artificial intelligence (AI) has drawn significant attention from the fashion industry owing to its potential to revolutionize the way clothing designs are created. As technology continues to advance, the fashion industry will likely continue to adapt and integrate AI into its design processes. However, little is known about how consumers perceive the value of AI-designed clothing. This study aims to fill in this gap in the literature by investigating the perceived value of AI-designed clothing and its impact on product attitudes and approach behaviors. In addition, the current research explores the moderating effect of gender difference. By understanding how consumers value AI-designed clothing, fashion designers and retailers can gain insights into how AI can be applied to their design processes.

Literature Review

Perceived value is defined as “the consumer’s overall assessment of the utility of a product based on perceptions of what is received and what is given” (Zeithaml, 1988, p. 14). The value–attitude–behavior hierarchy specifies that values can influence behavior through attitudes, indicating that relatively abstract values influence more specific attitudes, thereby influencing particular behavior patterns (Homer & Kahle, 1988). Thus, the current study explores the effect of perceived value of AI-designed clothing on behavioral intentions, mediated by product attitudes. Specifically, the current study explores the perceived value of AI-designed clothing by examining its utilitarian and hedonic aspects. This study investigates consumers’ perceptions of the quality, emotional value, and perceived ease of shopping associated with AI-designed clothing. Perceived quality refers to consumers' subjective assessment or judgment of the overall quality of a product. Emotional value refers to the emotional or affective benefits that consumers associate with a product. Perceived ease is defined as the perception of how easy or effortless a task or activity to engage in shopping for AI-designed clothing. In addition, this study focuses on two different types of approach behaviors of consumers: willingness to pay (WTP) and word-of-mouth (WOM). WTP is the premium that consumers are willing to pay for products or services and represents the value that they place on such products or services. WOM is a form of interpersonal communication, in which individuals share their experiences, opinions, and recommendations on products with others. By using WTP and WOM as measures to assess consumers’ approach behaviors, this study can determine the economic and social dimensions of consumer behaviors that indicate consumers’ willingness to adopt AI-designed clothing.

Regarding the moderating effect, previous research has revealed gender differences in the adoption and utilization of new technology in various fields. Thus, the current study also aims to examine whether or not gender plays a significant role in influencing the impact of perceived values on consumer attitudes toward AI-designed clothing products.

Methods

Data were collected through online questionnaires among the consumer panel of Amazon Mechanical Turk. Participants watched a video clip demonstrating how an AI system creates various clothing designs by altering such elements as structure, style, truncation, and size. After watching the video clip, they were asked to answer a series of questions. A total of 314 respondents completed the survey. The collected data were analyzed using SPSS 26.0 for descriptive statistics and reliability analysis. AMOS 26.0 was used for confirmatory factor analysis (CFA) and structural equation modeling (SEM) analysis.

Results

Results of CFA showed an acceptable fit of the measurement: $\chi^2 = 224.331$ (df = 62, $p < .001$), GFI = .891, CFI = .939, NFI = .919, RMSEA = .091. The instruments' convergent validity, composite reliability, and constructs' discriminant validity were also satisfactory. Results of SEM revealed that perceived quality ($\beta = .644$, $p < .001$) and emotional value ($\beta = .339$, $p < .05$) increased product attitudes, which also positively influenced WTP ($\beta = .922$, $p < .05$) and WOM ($\beta = .941$, $p < .05$). However, the effect of perceived ease on product attitudes was not significant ($\beta = .003$, $p = .977$). Furthermore, PROCESS Macro was performed (Model 7 with 5,000 bootstrap samples) to explore the moderating effect of gender between perceived value and product attitudes. The interplay effect of perceived quality and gender on product attitudes was not significant ($b = .087$, $p = .326$, 95% CI [-.088: .263]). However, the effects of emotional value ($b = .395$, $p < .001$, 95% CI [.220: .570]) and perceived ease ($b = .257$, $p < .001$, 95% CI [.088: .426]) on product attitudes were moderated by gender, indicating the significant of moderated mediation effect of product attitudes between perceived values and approach behaviors. The effect of perceived ease on WTP (Index = .169, BootSE = .087, 95% CI [.007: .348]) and WOM (Index = .195, BootSE = .010, 95% CI [.014: .400]) mediated by product attitudes was stronger for male than female consumers. The effect of emotional value on WTP (Index = .091, BootSE = .040, 95% CI [.013: .176]) and WOM (Index = .079, BootSE = .035, 95% CI [.012: .148]) mediated by product attitudes was also stronger for male than female consumers. According to previous research findings, females have been shown to exhibit higher levels of fashion involvement compared to males. However, it has also been found that males tend to be more interested in adopting new devices compared to females (Kim et al., 2011). In light of these previous findings, the results of the current study suggest that AI-designed clothing can be perceived as technology-driven items in the minds of consumers.

Discussion

For male and female consumers, the quality value of AI-designed clothing led to enhanced WTP and WOM. However, emotional value and perceived ease of shopping appeared to be more crucial in increasing approach behaviors for male than female consumers. Furthermore, emphasizing the perceived quality of AI-designed clothing is crucial for appealing to both male and female consumers. This finding contributes to the understanding of gender dynamics in AI-designed clothing consumption and highlights the need for further research on the differential effects of emotional and convenience-related factors in influencing consumer behaviors across genders. The findings of this study have practical implications for fashion marketers and retailers seeking to leverage AI-designed clothing in their product offerings.

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