



How to promote sustainability by fueling digital fashion? An empirical study

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Research Rationale. Digital fashion can be created and used for individuals to dress both digital selves (avatars) and their real selves (on-screen physical bodies) in digital spaces. In three-dimensional (3D) games, various virtual skins and accessories are created and purchased for dressing avatars (Sparkes, 2021). Recently, fashion influencers started posting photos and videos in which their on-screen physical bodies are dressed up in various digital fashion attire on social media platforms (Palumbo, 2021).

The textile and apparel industry has been criticized for environmental and social issues (Atik & Ozdamar Ertekin, 2023). Overproduction and overconsumption create serious damage to the environment. The industry is also known for labor exploitation and sweatshops. The nature of digital fashion is dematerialization, so promoting digital fashion acceptance could largely mitigate environmental issues (McQuillan, 2020; Särämäkari, 2021). Meanwhile, fashionability could be abundantly and flexibly embodied in digital fashion items. For instance, advanced technologies like 3D design software and Artificial Intelligence (AI) enable digital fashion designers to create newness and trendiness continuously and rapidly (Särämäkari, 2021).

To stay in the lead in the fashion kingdom, maintain innovativeness, and win over young consumers, luxury fashion brands are embracing digital fashion. Furthermore, instead of constantly balancing exclusive values and accessibility, luxury brands could simultaneously enhance both through digital fashion items (Joy et al., 2022). For instance, luxury values like exclusivity and authenticity could be delivered through digital fashion as Non-Fungible Tokens (NFTs) with digital assets ownership and traceable transaction records (Joy et al., 2022). To promote the acceptance and diffusion of digital fashion, it is critical to understand how consumers perceive and evaluate digital fashion and their acceptance of luxury brands' digital fashion.

Research Model and Hypotheses. A review of the literature noticed that there is a lack of empirical research regarding how consumers perceive and assess digital fashion. To fill the gap, the current research intends to (1) examine consumers' perceptions of and attitudes toward digital fashion in general, and (2) investigate consumers' evaluation and acceptance of luxury brands' digital fashion specifically. Attitude theories, self-image congruence theory, customer value theory, and consumer involvement theory have been widely applied to understand and examine consumers' acceptance of innovations (e.g., Anand and Kaur, 2018; Kobia and Liu, 2016). We reviewed and integrated these theories to develop a theoretical foundation for identifying the key determinants and proposing a conceptual model with hypotheses specified (see Figure 1). We proposed that the general attitude

toward digital fashion (GA) is influenced by the specific attitude toward using digital fashion for dressing on-screen physical bodies (AP), the specific attitude toward using digital fashion for dressing avatars (AA), and perceived fashion self-congruity (FSC). Previous research found a positive relationship between attitudinal beliefs and purchase intention (Bian & Forsythe, 2012; Lawry, 2022); therefore, we proposed that individuals' attitudinal beliefs of luxury brands (LB) affect their intention to purchase luxury brands' digital fashion products (PI). Drawing on customer value theory (Kim et al., 2011), we hypothesize that consumers' perceived social value (SV) significantly impacts both GA and PI. Furthermore, given the critical role of consumer environmental involvement in sustainable consumption (Cheng et al., 2020), we proposed that consumer environmental involvement (CEI) significantly influences both GA and PI.

Research Design. An online survey was developed and administered. Multi-item scales were adopted or adapted from previous research to measure included constructs of FSC (Anand & Kaur, 2018), SV (Kim et al., 2011; Sweeney & Soutar, 2001), AA, AP, GA, PI (Spears & Singh, 2004), LB (Bian & Forsythe, 2012), and CEI (Zaichkowsky, 1985). Seven-point semantic and Likert scales were utilized to assess all research constructs. A convenience sample with 160 complete responses was collected from a U.S.-based major university. SPSS and Amos were utilized for data analysis. The reliability and validity of constructs were assessed through exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and Cronbach's alpha testing. Indicators were created by averaging all the measure items respectively. Then multiple regression analysis was conducted to examine the proposed model and hypotheses.

Results and Findings. Eight out of the proposed nine hypotheses were supported, and the results are summarized and illustrated in Figure 1. Specifically, the result of R^2 indicated that AP, AA, FSC, SV, and CEI combined account for nearly 64% of the variation in GA ($F(5, 154) = 54.72, p < .001$).

Also, the combination of the four independent variables (GA, LB, SV, and CEI) accounts for approximately 53.7% of the total variation of the dependent variable of PI ($F(4, 155) = 45.03, p < .001$). The study's findings indicate that consumers view digital fashion items as a

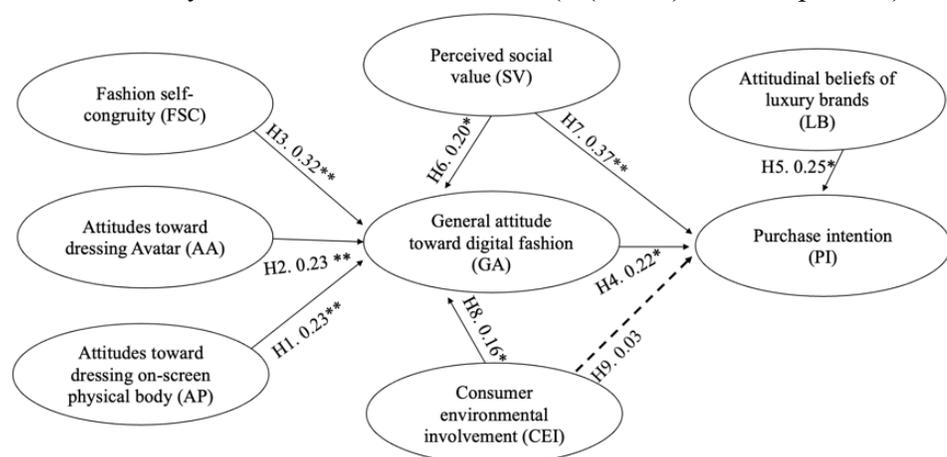


Figure 1. Results of hypotheses testing
Notes: *, $p < .005$; **, $p < .001$; numbers, Standardized Coefficients.

means of self-expression, presentation, and communication in both digital spaces and the physical world. Dressing avatars and outfitting on-screen physical bodies are equally perceived as appealing functions of digital fashion. Consumers with high levels of environmental involvement display more favorable attitudes toward digital fashion. Attitudinal beliefs of luxury brands extend effects into digital spaces to shape consumers' willingness to accept luxury brands' digital fashion. Consumers' overall positive evaluation of digital fashion benefits luxury fashion brands' digital fashion creation and transaction. From a digital fashion marketing perspective, fashion brands, including the luxury segment, should offer more opportunities or services to satisfy consumers' social needs for expressing and presenting a consistent self. Establishing online or offline communities to create venues for members to showcase their digital fashion selfies might increase the acceptance of digital fashion. Collaboration among stakeholders is critical to fueling the diffusion of digital fashion, and fashion companies could work together and utilize diverse media channels to broadcast the sustainability benefits of digital fashion. The study contributes to the literature by validating existing theories in the digital fashion context and provides valuable marketing and managerial suggestions for digital fashion marketers, particularly for luxury fashion brands.

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