

Visual Cues, Brand Essence and Purchase Intention of Virtual Luxury NFTs: A Moderated Moderated Mediation (MMD) Model

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Introduction Non-fungible tokens (NFTs) refer to “digital tokens that represent ownership of a particular piece of content, which cannot be copied and substituted since a unique digital identifier is recorded in a blockchain, certifying authenticity and ownership” (Sharma *et al.*, 2022, p. 2). Acknowledging the potential of NFTs to enhance consumer-brand relationships, major luxury fashion brands continue to enter the virtual NFT market, releasing exclusive collectibles (Sung *et al.*, 2023). As the virtual luxury market is projected to reach \$50 billion by 2030 (Reuters, 2021), it opens up a significant, yet largely untapped, revenue opportunities. However, this emerging market poses unique challenges for luxury fashion brands in crafting virtual NFTs that successfully convey consistent and integrated brand meanings of luxury. In the extant literature on brand essence, product design/styling was found to play a significant role in translating essential aspects of a brand to product forms (Chen *et al.*, 2009; Newman & Dhar, 2014). Given the visually oriented nature of NFTs, this study aims to empirically examine how visual design features of virtual luxury NFTs, including brand visibility and visual quality, interact with perceived prototypicality of products (fashion NFTs vs. art NFTs) in generating consumers’ perceived essence of the brand, resulting in consumers’ purchase intention.

Literature Review Perceived essence, which captures consumers’ understanding of a brand’s core value and identity, is fundamental in building brand equity and shaping purchase intentions (Rekom *et al.*, 2006). Within the domain of virtual luxury NFTs, three visual design elements play pivotal roles in forming this perception: 1) brand visibility, defined as the extent to which a brand displays highly noticeable markings (Aw *et al.*, 2021), 2) visual quality, associated with the clarity and unambiguity of visual presentation (Bhandari *et al.*, 2019; Im *et al.*, 2010), and 3) prototypicality, the degree to which new products align with a brand’s typical product family or category (Wang *et al.*, 2023). Brand identity comprises a set of associations concerning outward symbolic representations of a brand as well as product attributes that are necessary for the product category, such as premium quality (Danciu, 2010). Thus, visual design features that facilitate brand associations and quality inference can be the key determinants of perceived essence, such as brand visibility and visual quality (Aw *et al.*, 2021; Bao *et al.*, 2024; Heitmann *et al.*, 2020). While such visual design features are crucial in understanding consumers’ aesthetic preferences and baseline responses, consumers can base their evaluations not only on similarity but also on typicality (Roux *et al.*, 2016). That being said, category cues concerning prototypicality can play a vital role in product-brand identification and aid in building consumer expectations regarding how a luxury fashion product should look like in the virtual marketplace (Brunner *et al.*, 2016; Roux *et al.*, 2016). As previous studies highlighted the importance of the

categorization process for consumers in building expectations regarding the product appearance and quality (Dzyabrua & Peres, 2021), a three-way interaction effect of brand visibility, visual quality, and prototypicality on perceived essence is predicted. Further, consumers’ purchase decisions are influenced not only by the aesthetic liking of the product but also by how well the product aligns with the core values offered by the brand. Thus, perceived essence was proposed to mediate the impacts of visual design features on purchase intention.

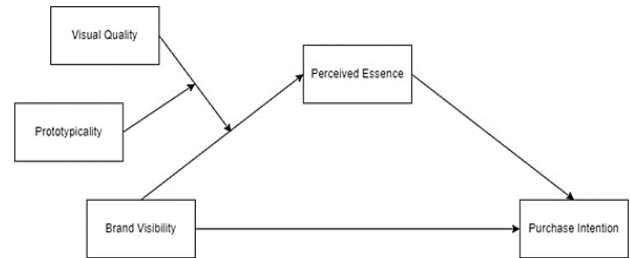


Figure 1. Conditional Process Moderated Mediation Model (Perceived Essence)

Method An online survey based on a 2x2x2 mixed experimental design was administered to 448 young consumers in the U.S., who had at least heard of NFTs. A three-way ANCOVA (analysis of covariance) was performed with brand familiarity controlled. Further, Hayes’s Model 11 PROCESS Macro was used to conduct the moderated-moderated mediation (MMD) analysis (Figure 1). Established measures were used. Before the main test, a pre-test was conducted to develop the stimuli, followed by the manipulation check.

Results The results revealed significant main effects of brand visibility ($F_{1,445} = 4.554, p < .05$), visual quality ($F_{1,445} = 18.193, p < .001$), and prototypicality ($F_{1,445} = 9.559, p < .01$) on perceived essence, along with a three-way interaction effect ($F_{1,445} = 52.352, p < .001$). Specifically, for

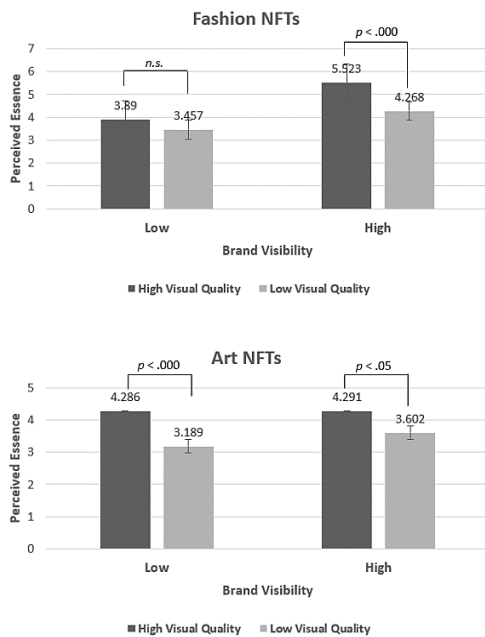
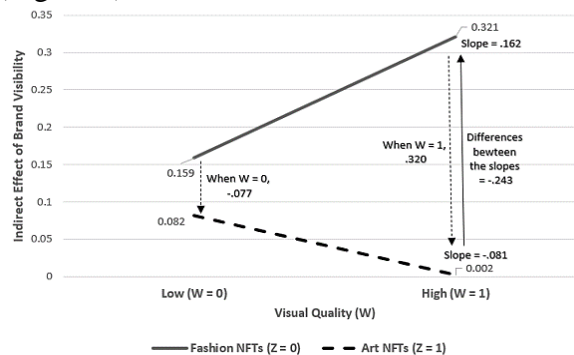


Figure 2. Estimated Marginal Means of Perceived Essence (A*B*C)

fashion NFTs (i.e., high prototypicality), higher brand visibility generated greater perceived essence only in the high visual quality condition (See Figure 2). However, for art NFTs (i.e., low prototypicality), consumers perceived greater essence when visual quality was high in both high and low brand visibility condition. Additionally, perceived essence mediated the interaction effect of the three design features on purchase intention, with the significant index of MMD ($a_7b = -.243$; 95% Confidence interval = $[-.416, -.103]$) (Figure 3).



Note: A visual depiction of the indirect effect of brand visibility on purchase intention through perceived essence as a function of visual quality (W) and the type of luxury NFTs (Z). The line represents the function $a_7b + a_7bW + a_7bWZ + a_7bWZ^2 = .159 + .162W - 0.77Z - .243WZ$ as suggested in the Hayes (2017).

Figure 3. A Visual Depiction of the Moderated Moderated Mediation Results

Conclusion and Implications This study enriches the understanding of how visual design features impact consumer perceptions and purchase intentions toward virtual luxury NFTs, identifying brand visibility, visual quality, and prototypicality as the critical factors. It bridges theoretical gaps by highlighting the combined effects of symbolic and impressive visual elements and their role in articulating brand essence digitally. Further, the value-anchoring role of a category cue, prototypicality, is empirically explained. Managerially, the results offer insights for luxury fashion brands regarding the effective way to design luxury NFTs. It offers actionable insights on the way to visually elicit the core value and identity of a luxury fashion brand, suggesting that luxury fashion brands should be cautious in the process of visually reinterpreting their essence through product design, considering the varying strengths of associations facilitated by brand visibility and visual quality per category that differ by prototypicality.

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