From Metaverse to the Real World:
The Role of Avatar Identification in Consumer's Virtual Purchasing Behavior

Jinsu Park and Naeun (Lauren) Kim
University of Minnesota, USA

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Introduction

"*Metaverse*" is a virtual world extending beyond the physical universe where various activities occur (Papagiannidis et al., 2008). With the growing market of metaverse, retail industries are paying considerable attention to this new media and trying to utilize the metaverse as a new retail channel (Bourlakis et al., 2009). For example, luxury brand Gucci created 'Gucci Villa' in the metaverse, allowing users to visit the virtual space and try on virtual Gucci products and buy the items for their avatar at a lower price than the real (i.e., tangible) product (Tamola, 2021). What makes metaverse special compared to other media is the enhanced 'interaction' capability among users through the alternate identity known as an 'avatar'. However, academic studies have yet to examine how consumer behavior in the metaverse differs from and influences the real-world behavior. Therefore, the purpose of this quantitative study is to explore 1) the role of appearance similarity and avatar identification on virtual product purchase intentions and 2) link the virtual consumption intentions to that of the real world.

Literature Review

An avatar is a digital representation of the user through which the user interacts with and relates to others in the virtual environment (Hooi & Cho, 2014). According to Belk (1988; 2013) in his "*extended self*" study, regardless of the level of immersion, users are attached to their avatar while playing games and consider the avatar as their extended self in the digital world. The extent of identification between the user and avatar increases with greater sophistication of new technology as avatars look more like humans (Wang et al., 2020). For this reason, people tend to choose avatars featuring characteristics that are similar to their own (Ducheneaut et al., 2009; Nowak & Rauh, 2005). The more similar the avatar is to the user, the more likely the user will have a positive attitude towards the avatar, which also results in positively evaluating the quality and performance of apparel products worn by the avatar (Suh et al., 2011). Thus, we can infer that (**H1**) *the appearance similarity with one's avatar is positively related to avatar identification.* Further, just as people regard their possessions as parts of themselves through consumption, possessing virtual products also can be valued as the extended self (Belk, 1988; Belk, 2016). Several studies have indicated that avatar identification could influence virtual product purchase intention (Park & Lee, 2011; Wang et al., 2020). Therefore, we hypothesize that (**H2**) *avatar identification has a positive influence on virtual product purchase intention,* and (**H3**) *mediates the relationship between appearance similarity and virtual product purchase intention*.

Further, users' behavior in the metaverse can affect their real-life behavior (Papagiannidis & Bourlakis, 2014). Recent industry trends demonstrate how virtual consumption behavior can be directly linked to that of the real world. Louis Vuitton made virtual products worn by characters in the game, "*League of Legends*", and released the real-life version of the same products, which were sold out in less than an hour (Phelps, 2021). Balenciaga released a brand showcase in the virtual game, "*Afterworld*", and

the number of searches for the brand rose by 41 percent within 48 hours (Tashjian, 2021). Thus, we hypothesize that (**H4**) *users' virtual product purchase intentions in the metaverse positively influence real product purchase intention.*

Methods
To examine actual user behavior and perceptions in the metaverse, those who had prior experience in the metaverse platform called ZEPETO were recruited through a market research company. ZEPETO is one of the most famous metaverse platforms from South Korea with over 200 million users worldwide (Lancaster, 2021). A total of 162 responses were used in the analysis (10s: 19, 20s: 71, 30s: 72; Female: 131, Male: 31). The survey items were modified from existing measures to fit the context of this study. The data were analyzed with SmartPLS since Partial Least Square (PLS) is suitable for predictive applications (Hair et al., 2013).

Results
Both convergent and discriminant validities have been checked. All constructs were reliable with Cronbach's α > .7. The fit indices of the measurement model demonstrated an acceptable fit (χ^2 (162) = 235.369, SRMR = .07, and NFI = .84). The results revealed that appearance similarity has a significant positive influence on avatar identification (**H1 supported**: β = .760, p < .001), and avatar identification significantly influenced virtual product purchase intention (**H2 supported**: β = .444, p < .001). When it comes to the mediation effect of avatar identification, the direct effect of appearance similarity on virtual product purchase intention was significant without the mediator, avatar identification (β = .406, p < .001). However, the direct effect was not significant when the mediator was included (β = .068, p = .518) in the model. Such result indicates that avatar identification completely mediates the relationship between appearance similarity and virtual product purchase intention (**H3 supported**). This study also found the significant effect of virtual product purchase intention on real product purchasing intention (**H4 supported**: β = .596, p < .001).
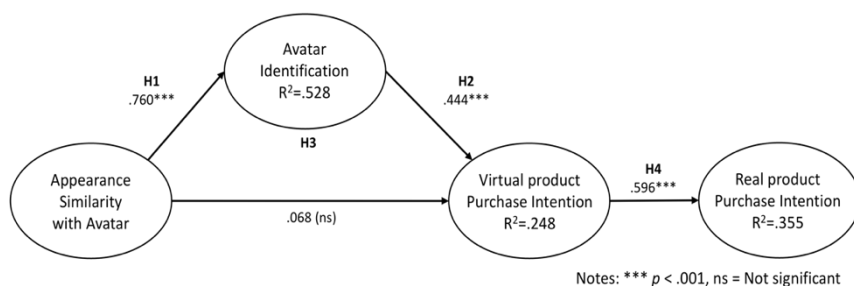

Figure 1. Results of PLS modeling of the conceptual model

Discussion and Implications
Since the concept of metaverse only emerged recently, how this medium is being perceived and used by consumers is largely unknown. Based on the extended-self theory, this study contributes to the existing literature by presenting the possibility that consumer behavior in the metaverse can influence that of the real world. Specifically, the more a user's avatar is similar to their real-life appearance, the more they identify with their avatars, and, as a result, are more likely to buy virtual products. These findings imply that in order to promote sales in the metaverse, the sophistication of avatar customization technology is

important, allowing users to make their avatar more similar to themselves. In addition, given the association between virtual and real-world consumption behaviors, retailers who are looking to expand their retail channel could use the metaverse as a testbed to check consumers' reactions by releasing new products in virtual forms first launching them in the actual market.

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