

Digital Persona Power: A Thematic Analysis of Consumer Attitudes towards Virtual Influencers

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Abstract

In the dynamic landscape of social media and the digital economy, virtual influencers have emerged as a novel and impactful phenomenon, garnering increasing attention from both consumers and businesses alike. The rapid advancements in information technology and artificial intelligence have given rise to remarkably human-like virtual influencers, who now prominently populate various online platforms. This study aims to delve into the effectiveness of virtual influencers based on consumer attitudes towards them and their purchase intention. Exploring journals and leveraging recent data, this research aims to offer actionable insights into consumer reactions to virtual influencers.

Key Words: Virtual influencers, Consumer Attitudes, Purchase Intention, Digital landscape, Influencer marketing

Introduction

Utilizing endorsers has proven to be a potent marketing tactic for corporations seeking to cut through the noise of advertising and amplify brand visibility. Historically, endorsers comprised celebrities, authorities in relevant fields, and individuals within consumers' social circles. However, the advent of widespread social media adoption ushered in a new era of influencers. Now, cutting-edge technology introduces computer-generated avatars modeled after fictional personas, revolutionizing the landscape of virtual influencer endorsers. In contrast to human celebrities, advertising through Instagram using virtual influencers proves to be a more cost-effective approach. These digital personas operate seamlessly, with no downtime, regardless of the intensity of the advertising campaign (Dodgson, 2019). Nevertheless, due to the novelty surrounding the utilization of virtual influencers by brands, there remains a restricted comprehension of the potential implications and effects that these digital personalities may exert on brand dynamics. As the demand for collaborations between virtual influencers and brands continues to escalate (Hype Auditor, 2021), and with existing literature remaining sparse, a noticeable research gap emerges, underscoring the urgent need for additional comprehensive studies to elucidate the effects of virtual influencers on consumer attitudes.

Statement of the research problem and research questions

The research problem revolves around the effectiveness of virtual influencers in endorsing products and consumer attitudes toward these digital personas. As mentioned above, there is limited bibliographic reference on how consumers would react to virtual influencers' endorsements. Specifically, the study aims to explore the following research questions:

- RQ1: How do consumers perceive with virtual influencers?
- RQ2: Do consumers show interest in purchasing products endorsed by virtual influencers?

Literature Review

Influencer Marketing

Influencer marketing is a dynamic and evolving digital marketing strategy that leverages the reach and credibility of social media influencers to promote products, services, or brands to a targeted audience. The term "influence" can be defined broadly as the ability to influence a person, thing, or course of events (Brown & Hayes, 2008). As per Brown and Hayes, an Influencer is defined as "a third party who profoundly influences the customer's purchasing decision but often eludes accountability for it" (Brown & Hayes, 2008, p. 50). Influencers are individuals who possess the capacity to sway the purchasing choices of others by virtue of their authority, expertise, status, or relationships" (businessdictionary.com-Influencers). The internet enables individuals to gather large audiences and become social media influencers, guiding consumer decisions. The accessibility of social media platforms means anyone has the potential to become a social influencer, impacting others' brand preferences and buying behaviors (Singh et al., 2012). The concept of influencer marketing is both intriguing and potent, serving as a formidable marketing tool (Perrey et al., 2013). This approach enables brands to engage with opinion leaders to convey advertising, communication, or brand messages effectively (Scott, 2015).

Virtual Influencers

The swift advancement of digitalization and Artificial Intelligence (AI) has ushered in a new breed of social media influencers who leverage AI to wield influence in the digital realm (Sands et al., 2022). Termed as virtual influencers (VI), these entities represent a burgeoning category within the influencer landscape. Virtual Influencers (VIs) represent one of the most recent developments in influencer marketing strategies (Kadekova and Holienčinova, 2018). These entities are digitally crafted avatars created through computer vision-driven graphic

technologies and artificial intelligence (Park et al., 2021; Thomas & Fowler, 2021). More specifically, a VI can be operated by a third party (freelance creator, digital agency, or brand) who defines its appearance, personality, and storyline for influence (Audrezet & Koles, 2023). VI can vary in appearance, from resembling flawless humans to taking on robotic or cartoon-like forms. According to Miyake (2023), Virtual influencers (VIs) have been increasing in number, as well as in followership, in recent years. VIs ultimately represent innovative extensions to the field of influencer marketing (Cheung & Leung, 2021; Laszkiewicz & Kalinska-Kula, 2023; Miao et al., 2022). Virtual Influencers (VIs), unlike typical AI-driven technologies such as chatbots or virtual assistants, offer sophisticated content creation capabilities (Tsai et al., 2021; Wang, 2021). Additionally, VIs relies heavily on their development teams and currently lack full autonomy.

AI influencers are nothing new; Eight years ago, in 2016, using artificial intelligence, Instagram launched a computer-generated imagery feature, now known as a “virtual influencer,” that has changed the landscape of the advertising industry (Leighton, 2019). Two years later, in 2018, French luxury brand Balmain replaced the Kardashians with three AIs, Shudu, Margot, and Xhi. Balmain’s press release claimed that these personalities best exemplified the brand’s commitment to diversity and tolerance (Aboul-Dahab et al., 2021; Kim and Kim, 2021; Barta et al., 2022). Several prominent companies, including KFC, LVMH, Mini, Netflix, Nike, and Samsung, have forged partnerships with AI influencers (Agag, 2019; Koay et al., 2022). For instance, numerous virtual influencers have collaborated with esteemed brands like Chanel, Burberry, and Prada to engage with social media users from Generation Z (Drenten & Brooks, 2020).

When compared to human influencers, VIs offer distinct advantages (Conti et al., 2022; Ameen et al., 2023). They are consistently available, easily manageable from a logistical standpoint (Drenten & Brooks, 2020), and are associated with reduced risks of PR controversies and

scandals (Duffy & Hund, 2019). As they are not humans, the image can remain consistent, and the risk of indiscretions is minimized as they don't exist offline, so their "behaviour" and image can be calibrated in the background (Tan, 2019). VIs also present brands with novel opportunities, offering increased adaptability, customization (Robinson, 2020), and the enhancement of brand communities (Sands, Ferraro, et al., 2022). They enable unlimited storytelling (Moustakas et al., 2020) and offer the advantage of perpetual youth unless their creators decide otherwise, allowing for endless unique and imaginative storylines, such as showcasing fashion items ablaze on a virtual catwalk. Additionally, Virtual Influencers potentially even mitigating concerns about authenticity: as a virtual influencer is "authentically fake" (Wills, 2019), the user is well aware that they are consuming staged content.

Consumers' reactions to Virtual Influencers

Sands et al. (2021) noted a growing consumer comfort level with virtual entities within the sphere of brand interactions. Virtual influencers act as a form of diversion by bridging real and imaginary worlds, thereby offering consumers a form of escape (Arsenyan & Mirowska, 2021). Thomas & Fowler (2021) found that, akin to human influencers, virtual influencers stimulate favorable brand attitudes, foster word-of-mouth recommendations, and elevate purchase intentions. However, other studies indicate that consumers show more affinity, trustworthiness, and preference for human influencers compared to virtual influencers (Seymour et al., 2020).

Although their findings indicate that people view AI influencers as less reliable, discovered that there is no distinction between an AI and a human influencer for some outcomes. Sands et al. (2022) found consumers are as likely to engage with AI influencers as with human influencers. Personalization capabilities are perceived equally, suggesting AI influencers can tailor content like humans. Marketers are encouraged to integrate virtual AI influencers into their strategies. Other studies also noted that a Virtual Influencer's (CGI influencer) personality and life stories,

factors which contribute to social attractiveness (da Silva Oliveira and Chimenti, 2021; Moustakas et al., 2020), influence consumer response. Also, many brands believe that virtual influencers are just as effective, if not more, as human influencers in building interpersonal relationships and increasing consumer engagement with the brands or products (Baklanov, 2021; Thomas & Fowler, 2021). Samsung effectively conveyed the futuristic appeal of their product through a collaboration with a virtual influencer (Rasmussen, 2021). Appel et al. (2020) further suggested that virtual influencers could serve as a viable alternative to traditional human influencers.

In contrast, recent studies show that endorsements from virtual influencers are less effective in generating positive attitudes toward advertising compared to human influencers (Franke, Groeppel-Klein, Müller, 2022) and virtual influencers are perceived as uncannily and authentically fake (Lou et al., 2022). Also, virtual influencers' inability to produce emotive storytelling also contributes to the unease some consumers hold. When virtual influencer Lil Miquela shared her vlog about experiencing sexual assault, it was seen as fake by some, despite the authenticity of the human experience (Klein, 2020).

The uncanny valley theory

The term "uncanny" stems from literary analysis, describing situations causing intellectual uncertainty (Freud, 2004). The uncanny valley theory suggests that as artificial faces become more human-like, they may trigger fear or rejection (Ho & MacDorman, 2010; Mori et al., 2012). Recent research shows a shift in user reactions from 2D to 3D virtual influencers (VIs), with human-like VIs receiving less positive feedback compared to human influencers (Xie-Carson et al., 2023). This impacts advertising effectiveness, as VIs are perceived as less trustworthy and generate less favorable attitudes towards sponsoring brands (Sands, Campbell, et al., 2022; Franke et al., 2022). However, perceived human likeness can improve attitudes

toward VIs (Um, 2023). Overall, the uncanny valley hypothesis cautions that as non-human entities become more human-like, negative reactions may arise due to an eerie resemblance to humans (Mori, 1970; Mori et al., 2012).

Parasocial relationship theory

Parasocial relationship theory, rooted in parasocial interactions (PSIs), explains the perceived companionship between media figures and fans (Jin and Muqaddam, 2019). It's applied to understand connections with virtual entities like avatars (Yi, 2022). In influencer marketing, parasocial relationships outweigh opinion leadership in influencing purchase intentions (Bi and Zhang, 2022; Farivar et al., 2021). PSI is a stronger predictor of purchase intent than credibility, especially among younger demographics like Gen Z (Sokolova and Kefi, 2020). Wishful identification and closeness enhance followers' stickiness and contribute to influencers' economic value (Hu et al., 2020; Taillon et al., 2020).

Methodology

A thematic analysis was performed to assess current knowledge, review existing literature, and address research questions using data from academic journal papers. The program we used for findings was NVivo12. Three main stages were identified: a) Identifying essential databases and publications b) Selecting and compiling a publication database c) Conducting thematic analysis.

In the first stage, databases were selected based on repeated reports by other authors, which showed that the Scopus database offers the most extensive collection of scientific journals in management science (Abbate et al., 2022; Centobelli et al., 2020). Besides Scopus, we used Web of Science, EBSCO Business Source Ultimate, Emerald, and Research Gate.

The keywords used to search the databases and select the publications were identified in two stages. First, a focus group contacted including only experts (4 academics and 4 marketing

specialists) to help us identify the best key words that could lead us closer to the data with our research questions. Then, according to their opinions, we used first the term “Virtual Influencers” and “computer generated influencer” to see in general what is written already about virtual influencers in general due to the fact that it is a new phenomenon and the research around them is still limited. Then, we got a step deeper and we searched for consumer reactions and buying behavior based on the endorsement of Virtual Influencers to be closer with the research questions, so the terms we used as key words were also “consumer reactions” “purchase intention” “buying behavior” with “virtual influencer”. Following established practices in systematic literature reviews (Macpherson & Holt, 2007; Pisani et al., 2017), titles, keywords, and abstracts were searched.

Following a thorough examination of available literature, we conducted a meticulous full-text review of scholarly articles pertinent to our research questions. Out of the initial pool of 87 articles, we narrowed our focus to 25 publications that offered substantive insights aligning with our study objectives. This selection process was guided by the relevance of the data obtained from surveys within these articles, as they provided valuable information conducive to addressing our research inquiries. In filtering our selection, redundant publications were systematically omitted to ensure a refined and comprehensive analysis. This deliberate curation of literature, comprising solely of full-text, English, and peer-reviewed sources, aimed to optimize the quality and relevance of data examined in our study, thus enhancing the robustness of our research findings.

Coding

Using NVivo as mentioned above, we imported the publications we singled out (25) and started coding. We created two codes which are listed as nodes in the program. Each node was related to the research questions: **RQ1: Consumer Reactions, RQ2: Purchase Intention**

Under each node, two subcategories were created: positive and negative. For consumer reactions, these subcategories encompassed positive and negative reactions, while for Purchase Intention, they denoted positive and negative intentions. Following the coding of all publications, a keyword frequency analysis was performed, revealing the most recurrent keywords within the set of phrases: "virtual," "influencer," "consumers," "human," "positive," "perceived negatively," and "intentions". In addition, a Hierarchy Chat compared by number of coding references was held depicting nodes and their subcategories to understand the number of reactions for each category and compare them. Finally, a Framework Matrix was created to categorize and see in detail the exact phrases for each node.

Discussion

Utilizing a systematic review approach alongside thematic analysis, this study provides a comprehensive exploration of consumer reactions to virtual influencers, drawing insights from existing research data. Analysis of a word cloud [Table 1 near here] place tables and figures after the references and indicate their position in the text using reveals the prominence of both "negative" and "positive" sentiments, indicating a balanced spectrum of consumer perceptions. This observation is further supported by the Hierarchy Chat [Table 2 near here], which depicts a marginal prevalence of positive reactions. Moreover, the Framework Matrix [Table 3 near here] corroborates findings from previous studies, highlighting a strong correlation between positive consumer reactions and purchase intentions. Specifically, a majority of positive responses align with favorable intentions to purchase products endorsed by virtual influencers. About purchase intention, in Hierarchy Chat it is noticed that positive intention is a bit wider than negative intention. It's noteworthy that across various studies, there exists a consistent linkage between positive reactions and subsequent purchase behavior, emphasizing the influential role of consumer sentiment in driving purchasing decisions. Table 4 [Table 4 near

here] highlights the Journal of Retailing and Consumer Services as the leading publication venue for research on virtual influencers, underscoring its significance for scholars interested in exploring and disseminating findings in this domain. In conclusion, while virtual influencers offer promising opportunities for brands, further research is needed to comprehensively understand their effectiveness and implications for marketing strategies.

Theoretical and managerial implications

This study, which examines how consumers respond to virtual influencers, fills a crucial gap in influencer marketing research by exploring the growing trend of virtual influencers in today's marketing landscape. Theoretical contributions involve extending previous research on consumer reactions to virtual influencers, providing a comprehensive understanding of their responses and comparing them. Our findings reveal a slight predominance of positive reactions. In terms of managerial implications, businesses should be encouraged to integrate virtual influencers into their marketing strategies due to their cost-effectiveness and proven ability, as demonstrated by our research, to elicit positive consumer responses, thereby influencing purchasing decisions.

Limitations and Future Agenda

Our study sheds light on consumer attitudes towards virtual influencers and their impact on purchases. However, it's limited by existing literature and while thematic analysis provides valuable insights, its subjective nature and potential for researcher bias could impact the interpretation of findings. Also, given the novelty of the virtual influencer phenomenon, further research should aim to elucidate the frequency with which positive reactions translate into actual purchases, thereby providing valuable insights for leveraging virtual influencers effectively in marketing campaigns.

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Shao, Z. (2024). From human to virtual: Unmasking consumer switching intentions to virtual influencers by an integrated fsQCA and NCA method. *Journal of Retailing and Consumer Services*, 78, 103715.

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Zhou, Q., Li, B., Li, H., & Lei, Y. (2024). Mere copycat? The effects of human versus human-like virtual influencers on brand endorsement effectiveness: A moderated serial-mediation model. *Journal of Retailing and Consumer Services*, 76, 103610.

Table 1: Word Cloud, Key word Frequency



Table 2: Hierarchy Chat compared by number of coding references

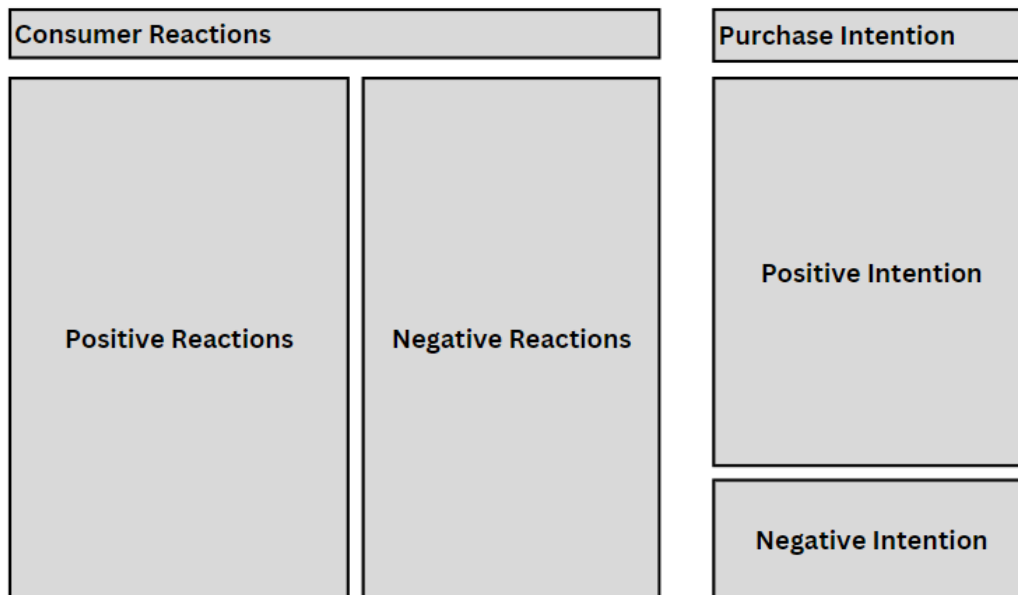


Table 3: Indicative publications and the results from the Framework Matrix

	A : Consumer Reactions	B : Purchase Intention
5 : Böhdnel, M., Jastorff, M., & Rudeloff, C. (2023). AI-driven influencer marketing Comparing the effects of virtual and human influencers on consumer perceptions. <i>Journal of AI, Robotics</i>	VI tended to be assessed more negatively overall than SMI. it can be deduced that VI are perceived as likeable less often and less strongly than SMI. In other words, in terms of likeability, VI are perceived significantly more negatively than SMI.	it can be observed that purchase intentions were rated generally low in both groups
12 : Kim, H., & Park, M. (2023). Virtual influencers' attractiveness effect on purchase intention A moderated mediation model of the Product-Endorser fit with the brand. <i>Computers in Human B</i>	Digital influencers' attractiveness has a positive impact on consumers' behavioral intentions	Our study discovered that SNS users are motivated to buy an endorsed product due to a subconscious imitation of the virtual influencer's behavior. our findings indicate that virtual influencers' attractiveness affects purchase intention due to strong emotional attachment toward the brand.
15 : Laszkiewicz, A., & Kalinska-Kula, M. (2023). Virtual influencers as an emerging marketing theory A systematic literature review. <i>International Journal of Consumer Studies</i> , 47(6), 2479-2494.	For observers who care about uniqueness, AI influencers can achieve better results users felt more comfortable and intimate when they perceived a digital human as technology.	VIs amass millions of followers on SM and can influence consumer engagement and decision making showed that the popularity, homogeneity, relevance, and anthropomorphism of virtual idols increased customers' willingness to buy
6 : Conti, M., Gathani, J., & Tricomi, P. P. (2022). Virtual influencers in online social media. <i>IEEE Communications Magazine</i> , 60(8), 86-91.	only 12 percent of people would trust a VI equally or more than an RI.	

Table 4: Journal with the Most Publications on Virtual Influencers: Journal of Retailing and Consumer Services

Author (s)	Title	Year	Journal
Akhtar, N., Hameed, Z., Islam, T., Pant, M. K., Sharma, A., Rather, R. A., & Kuzior, A.	Avatars of influence: Understanding how virtual influencers trigger consumer engagement on online booking platforms.	2024	Journal of Retailing and Consumer Services
Shao, Z.	From human to virtual: Unmasking consumer switching intentions to virtual influencers by an integrated fsQCA and NCA method.	2024	
Jiang, K., Zheng, J., & Luo, S.	Green power of virtual influencer: The role of virtual influencer image, emotional appeal, and product involvement.	2024	
Zhou, Q., Li, B., Li, H., & Lei, Y.	Mere copycat? The effects of human versus human-like virtual influencers on brand endorsement effectiveness: A moderated serial-mediation model.	2024	
Kim, H., & Park, M.	When digital celebrity talks to you: How human-like virtual influencers satisfy consumer's experience through social presence on social media endorsements.	2024	
Li, H., Lei, Y., Zhou, Q., & Yuan, H.	Can you sense without being human? Comparing virtual and human influencers endorsement effectiveness	2023	
El Hedhli, K., Zourrig, H., Al Khateeb, A., & Alnawas, I.	Stereotyping human-like virtual influencers in retailing: Does warmth prevail over competence?	2023	
Deng, F., & Jiang, X.	Effects of human versus virtual human influencers on the appearance anxiety of social media users.	2023	