

Are Virtual Fashion Influencers (VFIs) Cool and Eerie? Effects of VFIs' Form- and Behavioral-realism on Consumer Ambivalence

Inhwa Kim, University of Tennessee, Knoxville, USA
Chung-Wha (Chloe) Ki, Hong Kong Polytechnic University, Hong Kong
Youn-Kyung Kim, University of Tennessee, Knoxville, USA

Keywords: Influencer marketing; Virtual influencers; Consumer ambivalence; Coolness; Eeriness

Purpose/Background: Virtual influencers are changing the fashion marketing landscape. By definition, VIs are fictional AI-generated characters (also referred to as digital avatars) that mimic human features, personalities, and thoughts. Like human influencers, VFIs are designed to create the demand for a brand's products/ services by sharing positive posts about the products/services with their followers on social media, consequently increasing the products/services' reach. As the popularity of VFIs grow, much attention has been put on understanding why brands opt for VFIs. In so doing, the literature indicated that brands like to partner with VFIs because they have complete control over what VFIs say; VFIs are cheaper to hire than human influencers; and VFIs are much easier to work with as they can be anywhere at any time (Kamya, 2021). By contrast, the literature has been relatively passive in understanding how consumers perceive and evaluate VFIs. Understanding whether consumers feel ambivalent (e.g., cool and eerie) toward VFIs, given that VFIs are in its nascent stage, and if so, what traits of VFIs elicit consumers' positive and negative attitudes, respectively, remains an important gap in the literature.

The study builds on ambivalence theory (Otnes et al., 1997) to identify and analyze whether consumers find VFIs both favorable and unfavorable, e.g., whether they perceive VFIs as cool but also eerie. Further, the study bases on the theory of avatar marketing (Miao et al., 2022) to identify whether a VFI's form-realism (the extent to which a VFI's *shape* appears human) and behavioral-realism (the extent to which a VFI *behaves* as human) are the two critical dimensions affecting consumers' attitude, and by extension, determining the VFI's marketing effectiveness. *Theory of avatar marketing* provides conceptual clarity for defining digital avatars, including VFIs. The theory (1) defines digital avatars as virtual beings that have an anthropomorphic appearance (form-realism); (2) proposes interactivity (behavioral realism) as another critical requirement for digital avatars; and hence (3) suggests a 2 x 2 avatar taxonomy—the alignment of an avatar's form realism and behavioral realism—in explaining avatar effectiveness. *Ambivalence theory* proposes that it is fairly common for people to develop two opposing attitudes simultaneously toward an attitude object when the object includes conflicting positive and negative elements (Sipilä et al., 2017). To explore whether consumers feel ambivalent even in a VFI marketing context, we conducted a preliminary study by conducting two focus group interviews with 25 undergraduate female students in November 2021 and February 2022. As expected, the majority of the informants expressed ambivalent feelings toward VFIs; they shared that they find VFIs *cool* because they are novel and they look appealing, but also *eerie*, weird and creepy because they look so human and perfect.

Coolness is a concept often used in a marketing context to describe whether someone/ something is original, novel, iconic and extraordinary (Warren et al., 2019). The literature documents

that VFIs are perceived as cool among consumers (Zhang & Wei, 2021). Noting that people develop a positive attitude toward human-like robot's appearance as they find the robot with an anthropomorphic shape more sociable (Prakash & Rogers, 2015), we believe that a VFI with greater form-realism [a human-like (vs. character-like)] will also elicit consumers' positive attitude of coolness. Further, the uncanny valley effect (Mori, 1970) indicates that people tend to feel a sense of unease, or even revulsion, in response to an artificial object that are highly/too realistic/human. This led us to propose H1: A human-like VFI (vs. a character-like VFI) will elicit greater coolness (H1a) and eeriness (H1b) perception among consumers; and H2: A VFI with one-on-one response (vs. no response) will elicit greater coolness (H2a) and greater eeriness (H2b) perception among consumers. In addition, as the theory of avatar marketing underscores that avatar effectiveness should be explained by the interaction of two dimensions—an avatar's form realism and behavioral realism (Miao et al., 2022), we propose H3: A VFI's form realism will interact with the VFI's behavioral realism and concurrently affect coolness (H3a) and eeriness (H3b) toward the VFI. As there are no past, empirical studies that suggest a specific directionality of the interaction effect, we leave it empirically identified. Lastly, according to Warren et al. (2019), consumers' coolness perception toward a brand results in positive marketing outcomes. In contrast, according to Pavlidou (2021), when consumers develop eeriness perception toward an attitude object like AI chatbot, the propensity for them to activate aversive behaviors is high. This led us to propose H4&5: Perceived coolness (H4+) and eeriness (H5-) will affect the consumers' intention to purchase the same product/brand endorsed by the VFI, positively and negatively, respectively.

Methods and Results: This study employed a 2 (form realism: character- vs. human-like VFI) x 2 (behavioural realism: no interactivity vs. one-on-one interactivity) between-subjects design. An online US female consumer panel (n = 145), aged 18-42 (Gen MZ) who represent the majority of Instagram users (Statista, 2022), participated in the survey via MTurk. Each respondent was assigned to one of the four experimental conditions. All the survey questions in the questionnaire were adapted from existing studies and measured on 7-point Likert-type scales. For example, coolness scale items included "This influencer appears to have her own iconic style" (Ashfaq et al., 2021). The manipulations of our stimuli were successful: form realism (This influencer is humanlike) and behavioural realism (This influencer seems to be engaged in interactivity) ($p < .001$). All factors of our constructs were satisfactory ($> .80$). The hypotheses were tested using two-way ANCOVA, in which attitude towards artificial intelligence (Fietta et al., 2021) was entered as a covariate. This covariate was significant only for coolness ($p < .05$). The main effects of form realism on coolness was significant ($F = 4.274, p < .05$); whereas it was insignificant on eeriness ($F = 1.744, p = .189$), supporting H1a, but not H1b. The main effects of behavioural realism existed on both coolness ($F = 7.062, p < .01$) and eeriness ($F = 5.307, p < .05$); one-on-one response group ($m = 5.38$) had higher coolness than no response group ($m = 4.83$), while no response group ($m = 5.17$) had higher eeriness than one-on-one response group ($m = 4.67$). These results support both H2a and H2b. An interaction effect existed only on coolness ($F = 5.262, p < .05$), but not on eeriness ($F = .445, p = .506$), supporting H3a, but not H3b. We found that for no response, character-like and human-like VFIs did not differ in coolness ($m = 4.83$) but for one-on-one response, human-like VFI ($m = 5.65$) was perceived much cooler than character-like VFI ($m = 5.16$). Finally, H4 and H5 were tested with multiple regression. The model was significant ($F = 80.714, p < .001$) with adjusted R^2 of 52.5%. More coolness led to

greater purchase intention ($\beta = .736, p < .001$); supporting H4. The effect of eeriness on purchase intention was insignificant ($\beta = .040, p = .50$), rejecting H5.

Conclusions: This study contributes to the VFI marketing literature by documenting that a VFI's form-realism is important in affecting consumers' coolness perception. While the effect of a VFI's form-realism on eeriness was insignificant, we found that people perceived high eeriness on both character-like and human-like VFIs ($m > 5$), supporting the uncanny valley effect. Further, a VFI's behavioral-realism played a key role in shaping consumers' coolness and eeriness perceptions. Next, our study detected the significant interaction effect; Interaction between form- and behavioral realism indicated that consumers perceived human-like VFIs much cooler when VFIs did a one-on-one response than no response. Lastly, among the consumer ambivalence, only coolness had a positive significant effect on purchase intention. Thus, retailers may want to highlight ways to maximize consumers' coolness perception toward VFIs so as to enhance the VFIs' marketing effectiveness.

References

- Ashfaq, M., Yun, J., & Yu, S. (2021). My smart speaker is Cool! Perceived coolness, perceived values, and users' attitude toward Smart speakers. *International Journal of Human-Computer Interaction, 37*(6), 560-573.
- Fietta, V., Zecchinato, F., Di Stasi, B., Polato, M., & Monaro, M. (2021). Dissociation between users' explicit and implicit attitudes toward artificial intelligence: An experimental study. *IEEE Transactions on Human-Machine Systems*.
- Kamya, P. (2021, December 8). *What Is the Point of Virtual Influencers?* JUMPSTART. <https://www.jumpstartmag.com/what-is-the-point-of-virtual-influencers/>
- Miao, F., Kozlenkova, I. V., Wang, H., Xie, T., & Palmatier, R. W. (2022). An emerging theory of avatar marketing. *Journal of Marketing, 86*(1), 67-90.
- Mori, M. (1970). Bukimi no tani [the uncanny valley]. *Energy, 7*, 33-35.
- Otnes, C., Lowrey, T. M., & Shrum, L. J. (1997). Toward an understanding of consumer ambivalence. *Journal of Consumer Research, 24*(1), 80-93.
- Pavlidou, K. (2021). The Uncanny Valley: The human-likeness of chatbots and its paradoxical impact on consumers' purchase intention in e-commerce.
- Prakash, A., & Rogers, W. A. (2015). Why some humanoid faces are perceived more positively than others: effects of human-likeness and task. *International Journal of Social Robotics, 7*(2), 309-331.
- Sipilä, J., Sundqvist, S., & Tarkiainen, A. (2017). Winding paths: Ambivalence in consumers' buying processes. *Journal of Consumer Behaviour, 16*(6), e93-e112.
- Statista. Frequency of using social media as a news source in the United States as of February 2022, by generation. Accessed March 30, 2022. Retrieved from <https://www.statista.com/statistics/1124159/us-generational-social-media-news/>
- Warren, C., Batra, R., Loureiro, S. M. C., & Bagozzi, R. P. (2019). Brand coolness. *Journal of Marketing, 83*(5), 36-56.
- Zhang, Lu, and Wei Wei. (2021). "Influencer Marketing: A Comparison of Traditional Celebrity, Social Media Influencer, and AI Influencer."