Virtual Influencers versus Real Connections: Exploring the phenomenon of Virtual Influencers

Abstract

While there is growing interest in the use of social media influencers in digital marketing campaigns, little is known about virtual influencers and their impact on consumers and brands. Virtual influencers are becoming efficient advertising tools. However, instead of being simple promoters, customers develop complex relationships with them. This study seeks to uncover how social comparisons and parasocial relationships manifest within the virtual influencer phenomenon, through the lived experiences of their followers. The findings indicate that perceiving virtual influencers' human-like traits induces some form of social comparison among followers that triggers several responses such as jealousy, scorn, motivation/determination, and gratitude. It also shows that anthropomorphism plays a crucial role in the development of strong relationships between virtual influencers and their followers. Followers experience a paradoxical multidirectionality of parasocial relationships, whereby a co-occurrence of actual multidimensionality (community-based interactions between followers) and a strengthened perceived, but not actual, multidimensional interaction with virtual influencers has been observed. Drawing on followers' experiences, this study extends Husserl's life-world concept to digital lifeworlds, in which virtual influencers are embedded. This study contributes to influencer marketing by conceptualizing comparisons between humans and virtual influencers, and how humans develop parasocial relationships with them.

Keywords: Influencer advertising, Anthropomorphization, Social Comparisons, Parasocial Relationships, Virtual Influencers, Digital Life-worlds

Influencer marketing is an emerging and fast-developing field that is now embedded within the marketing communication mix (Lou et al. 2023), with recent estimates of 480 billion USD by 2027 (Goldman Sachs 2023). It relies on a strategic partnership between influencers and brands to market products through electronic word of mouth (eWOM) (Zhou et al. 2021). Although social media influencers are becoming valuable in digital marketing, this domain faces several challenges in managing and evaluating influencers (Leung et al. 2022).

Although influencers have invested years in establishing their status and persuasive power on their followers (Bringé 2022), technological advances have reinforced the growth of virtual characters, namely virtual influencers. Virtual influencers have been growing in number, the most popular being Lil Miquela, who has up to three million followers on Instagram (Ahn et al. 2022). These digital personas possess human-like characteristics that blur the line between the real and unreal (Mrad et al. 2022). Researchers have lauded virtual influencers as having a relatively effective influence and three-fold higher engagement with followers than their human counterparts (Belanche et al. 2021). One study demonstrated that 58% of surveyed consumers followed at least one virtual influencer and 35% of them had purchased a virtual influencer-endorsed brand (Bringé 2022).

As usage of virtual influencers by brands is somewhat recent (e.g., Franke et al. 2023; Mrad et al. 2022; Thomas and Fowler 2020), a limited number of studies have investigated the implications of adopting virtual influencers. While it is important for marketers to understand how to maintain the "intimate human relationship qualities" offered by social media (Labrecque 2014), to date, there are no direct guidelines nor a clear understanding of virtual influencer use in consumer

relationship building (Mrad et al. 2022). In this context, relationship building can be explained through the parasocial relationship theory, which is a one-sided relationship that develops between customers and distant media figures and can still feel highly intense and intimate from the customer's viewpoint (Lou 2021). Therefore, this theory informs our study of how consumers interact with and develop connections and emotions – both negative and positive – towards distant non-human figures.

There is a dire need for studies examining the relationships between consumers and these influencers, and their impact on interpersonal needs and well-being (Ahn et al. 2022). Previous research has indicated that influencer-follower interactions are more direct and reciprocal than parasocial relationship theories have attempted to explain (Lou and Kim 2019). This recent conceptualization focuses more on influencers' perspectives and lacks an empirical examination from followers' perspectives (Lou et al. 2023). While some studies suggest that virtual influencers have weaker parasocial relationships with their followers than with human influencers (Lou et al. 2023), there is a need for a conceptual examination of the nature of relationship formation between virtual influencers and followers from the perspective of the followers. In line with this, a notable gap exists in the extant literature on virtual influencer marketing, which calls for a more in-depth examination of this new relational form, especially through the lens of social comparison theory (Festinger 1954). This theory explains how individuals compare themselves to the virtual influencers using non-human points of comparison, which in the past were primarily human-to-human comparisons.

The literature on virtual influencers is not currently keeping pace with relevant managerial practices and needs. Although some researchers found that influencer marketing has a positive

effect on advertising effectiveness (e.g., Lou and Yuan 2019), others revealed that virtual influencers' lack of authenticity and transparency could damage consumers' perceived credibility and trust as well as positive reactions to virtual influencers' sponsored posts (Arsenyan and Mirowska 2021). Owing to the artificial nature of virtual influencers, it is crucial to understand the extent of their marketing effectiveness (e.g., Sands et al. 2022) as it remains unclear whether they are more suitable endorsers than human influencers (e.g., Franke et al. 2023). Although influencer marketing has recently gained significance (Ye et al. 2021), the emphasis on virtual influencers remains scant in the advertising and consumer behavior literature. In this study, we responded to recent research calls (e.g., Lou et al. 2023; Miao et al. 2021; Mrad et al. 2022) to develop a better understanding of the phenomenon of virtual influencers from the perspective of followers.

This study provides important theoretical contributions by examining the evolving nature of the virtual influencers —follower relationship, and its implications for future research on virtual influencers. In addition, the findings advance the literature on parasocial relationship applications and social comparison theory by expanding them to human-non-human relationships in the context of influencer advertising. Social comparison theory captures humans' inner drive to compare themselves (their abilities, attributes, and achievements) to others, which influences relationship-building efforts and self-esteem (Gulas and McKeage 2000). As virtual influencers are non-sentient, humans can only form one-sided and mediated parasocial relationships with them. Parasocial relationship theory allows for the exploration of attachment, emotional connection, and engagement in one-sided relationships. As social comparison theory was originally developed for human-to-human interaction, it has limitations when applied to one-sided relationships. However, by combining it with parasocial relationship theory, the interplay between social comparisons and parasocial relationships becomes accessible. This is important because individuals compare

themselves with virtual influencers and develop connections with them, leading to an impact on social behaviors and self-worth (He 2023). Capturing both social comparisons and the parasocial nature of human-virtual influencer relationships enables a more in-depth understanding of the complex and multifaceted dynamics specific to virtual influencers, as these concepts also proved relevant in the context of human influencers (Aw and Chuah 2021). Drawing on followers' experiences, this study extends Husserl's life-world concept to digital life-worlds, in which virtual influencers are embedded. In addition to outlining theoretical contributions, the authors present much-needed managerial implications for brands on the modern operandum of virtual influencers and effective strategies to adopt.

Literature review

Influencer marketing and virtual influencers

Brands continue to use celebrity endorsements to promote products and brands and achieve favorable results in advertising campaigns (Lou et al. 2023). Recently, influencer marketing has become increasingly important as the main aspect of brand communication strategies. Social media influencers have become opinion leaders who have substantial influence on their followers and can be either human or virtual (Leung et al. 2022). They build distinct personal brands and a visible identity (Lee and Eastin 2020) that their network of followers finds appealing and with which they identify. Followers perceive themselves as more trustworthy and persuasive than traditional celebrities because of the closeness of their audience (Belanche et al. 2021). Followers' parasocial relationships shape the audience's persuasive power, which can increase purchase intention (Lou 2021). Social media influencers enable brands to reach larger audiences (Zhou et al. 2021), create inspirational connections with followers (Ki et al. 2022), increase engagement, and drive sales (Ren et al. 2023). Recent studies (e.g., Boerman and Van Reijmersdal 2020) indicate that the

relationship between influencers and their followers can diminish the adverse effect of advertising literacy triggered by sponsorship release on the success of advertising. Table 1 summarizes key insights from flagship studies that address the role of influencers and different approaches to influencer marketing.

Insert Table 1

As shown in Table 1, diverse theoretical perspectives and methodological approaches have emerged in relation to the study of influencers. Follower and human influencer perspectives are common (Franke et al. 2023). Recently, the emergence of virtual influencers has provided brands with new ways to communicate with consumers (Ramadan et al. 2021). This development offers a fresh perspective on the role of influencers, particularly concerning the role of virtual influencers (e.g., Lou et al. 2023; Mouritzen et al. 2023) within traditionally human-focused social media ecosystems. Virtual influencers are computer-generated, animated characters that behave like real humans, and are usually controlled by firms or agencies (Hofeditz et al. 2022). They are becoming increasingly realistic, narrowing the gap between humans and virtual agents (Sands et al. 2022). They tend to gather a large number of followers (Thomas and Fowler 2020) as they offer consumers unique social interactions that bridge the real and imaginary worlds (Arsenyan and Mirowska 2021).

Virtual influencers represent the direction in which brands embed artificial intelligence (AI) in their communications (Ahn et al., 2022), enabling new forms of interaction between consumers and AI-powered agents (Huh et al. 2023). Virtual influencers can offer brands a number of advantages over human influencers, such as content control, flexibility (Miao et al. 2021), and enhanced perceived ad novelty (Franke et al. 2023). Therefore, it is not surprising that brands leverage the unique relationship between virtual influencers and followers. However, our current

knowledge of this phenomenon is limited, because virtual influencers integrate both human and virtual features. To uncover the nature of the virtual influencer-follower relationship, there is a need to understand the identity of virtual influencer, as it defines their relationships with their followers (Mrad et al. 2022). To attest to their identity, virtual influencers rely on perceived anthropomorphism (Ahn et al. 2022).

Anthropomorphism is an inductive inference process by which consumers attribute human-like characteristics, intentions, or mental states to nonhuman agents (Waytz et al. 2010). It can lower reactance towards virtual agents (Fernandes and Oliveira 2021), make interactions more effective, and influence consumer trust in promotional content (Touré-Tillery and McGill 2015). A growing number of researchers have explored the influence of anthropomorphism on consumer interactions with AI agents, particularly chatbots (e.g., Crolic et al. 2022). Anthropomorphism enhances consumers' perceptions of chatbots' social presence and emotional connections to firms (Araujo 2018). A highly anthropomorphic chatbot can prompt consumers' perceptions of a human actor and satisfy their human interaction needs (Sheehan et al. 2020). However, the nature of interactions with chatbots differs from that with virtual influencers, and the findings from this literature may not apply to virtual influencers. Companies use chatbots to engage with consumers in conversational settings (Youn and Jin 2021). Their relationships with consumers are two-sided, short-lived, goal-oriented, and functional. Consumers engage in conversations with robots to perform tasks. Nonetheless, the relationship between virtual influencers and consumers is different, as it involves repeated interactions, leading to strong bonds and relational patterns (Mrad et al. 2022). Knowledge of the relationship with the audience is crucial for understanding the impact of virtual influencers on consumers.

To date, researchers have addressed the relationship between human influencers and followers through parasocial relationship lenses, as discussed in the next section. A parasocial relationship is readily applicable to human influencers (Labrecque 2014) but it is even more relevant in the case of virtual influencers, as they are non-sentient and unable to build bonds by themselves. However, consumers can develop an attachment to virtual influencers that resemble human interaction with the help of the human-like identity that virtual influencers present.

Parasocial relationship theory

Parasocial relationships are one-sided relationships that humans form with media figures or online characters such as social media influencers (Lou et al. 2023). Similarly, relationships between humans and virtual influencers fall within the parasocial relationship category. A sense of connection, relational intimacy, and emotions may develop even when the 'subject' is unaware of their existence.

By definition, parasocial relationships are primarily one-sided because relational knowledge and interest remain unreciprocated (Escalas and Bettman 2017). Although there is a friendly atmosphere between the media persona and their audience (Horton and Wohl 1956), the media persona does not possess the same relational knowledge as the individuals in their audience. Parasocial relationships represent unreciprocated bonds driven by feelings of intimacy, kinship, and attachment. Traditionally, researchers have identified these dynamics in TV and radio contexts (Horton and Wohl 1956); however, they are also deemed relevant in various other settings, including social media, where influencers reveal life events and everyday moments that create relationship intimacy and perceived reciprocity among their followers (Lou 2021). Researchers

have extended the notion of parasocial relationships to avatars, robots (Whang and Im 2021) and brands in general (Labrecque 2014).

The frequency of engagement, including even low-level interactions, such as seeing others, helps in relationship development (Heide and Miner 1992). This is relevant in both real-life and online settings. Marketers draw on trust in parasocial relationships, for instance, in celebrities endorsing products (Chung and Cho 2017), which is well-received by consumers and increases their purchase intention to endorse products (Lou 2021). Nonetheless, developing a parasocial relationship also depends on perceived authenticity and credibility (Whang and Im 2021), including an organic fit between the influencer and the endorsed products/services.

Perceived similarities strengthen relationships: humans are naturally drawn to others who have similar traits and characteristics, even if these similarities only exist at the level of perception and even if the subject of attraction is non-human (Whang and Im 2021). However, a non-human entity is typically perceived as genuine when it is anthropomorphized and human-like (Whang and Im 2021). Perceived mutuality is stronger with human-like non-humans (Whang and Im 2021), and consumers associate higher levels of consciousness and responsibility with them, as opposed to less human-like non-humans (Aggarwal and McGill 2007).

Both the study of parasocial relationships and social comparison theory are concerned with relationships, social interactions, and self-worth. Parasocial relationships influence self-evaluation and perceived self-worth. For instance, when people compare themselves unfavorably to celebrity figures, their self-esteem may decrease (Staniewski and Awruk 2022). The existing literature in this area lacks an in-depth understanding of how anthropomorphization influences parasocial

relationships and social comparisons between virtual influencers and their followers. The following section delves into the relevant aspects of social comparison theory.

Social comparison theory

Social comparison processes can influence identification; thus, followers may assess their position within a group of fans. This may be a human or non-human fan group; in either case, the parasocial relationships within the follower group can contribute to an individual's social identity (Aw and Chuah 2021). Social comparison is a widely shared human trait that involves comparing ourselves to others and is an important element of human life. This theory explains how individuals compare themselves to others and gain or lose self-esteem, depending on evaluations of their abilities, achievements, beliefs, attitudes, and appearances compared to those of their peers (Festinger 1954). Advertising scholarship shows that social comparisons to idealized celebrities can lower one's self-esteem related to physical attractiveness and financial success (Gulas and McKeage 2000), and increase the sharing of materialistic values enacted through imitation, such as the purchase of products that celebrities possess (Chan and Prendergast 2008).

Goethals (1986) views social comparison theory as a natural extension of researching how people evaluate themselves, approach their reference groups, and the comparative functions reference groups provide, including pressure towards conformity. Suls and Wheeler (2013) identified influencing factors in social comparison theory, such as individuals' adaptiveness, egocentrism, tendency for projecting, approaches to belief formation, and whether individuals critically revisit or review beliefs. Social comparisons may lead to both positive (e.g., feeling motivated to improve) and negative emotions. For instance, envy towards those perceived as more attractive may lead to undervaluing them in other areas, such as professional skills (Bower 2001).

Incorporating social comparison theory into our theorization opens up versatile possibilities. Comparisons are inherent in relationships with others and in one's own relationships with oneself. Researchers have used it to study burnout (Buunk and Schaufeli 2018) and deception regarding consumption (Argo et al. 2006). This theory identifies multiple ways of making comparisons. Comparisons can range from extremely negative (upward comparisons) to highly positive valence (downward comparisons) (Goethals 1986). Examples of negativity relate to a lack of self-appreciation, depressive feelings, distress, and offending others, whereas positivity is typically about feeling more motivated and grateful as a result of social comparisons. Despite their practical relevance, little is known about social comparisons that occur between humans in relation to virtual influencers. Hence, this study addresses the following research question: How does the virtual influencer phenomenon influence followers' online social experiences through social comparisons and parasocial relationships?

This study sought to uncover how social comparisons and parasocial relationships manifest in the virtual influencer phenomenon. It aims to further understand how individuals perceive themselves in comparison to virtual influencers and how they form emotional relationships with them. Utilizing a theory of knitting approach following De Pelecijn et al. (2023), synergies have been identified between the key theoretical streams of anthropomorphization, parasocial relationships, and social comparison theory:

Insert Figure 1

Anthropomorphization makes non-living beings more human and relatable. Thus, the anthropomorphization of virtual influencers can strengthen bonds with their followers, which is an aspect of building and nurturing parasocial relationships. Relationships in general, and parasocial

relationships in particular, are not exempt from comparisons made between those who are related. In fact, the intersection of Parasocial Relationship Theory and Social Comparison Theory allows us to examine how followers compare themselves to others, including non-human entities. To scrutinize relational dynamics through followers' lived experiences and social comparisons from a holistic perspective, we apply a qualitative approach.

Method

Considering the limited academic work on virtual influencers, this study employs a qualitative approach to address the research question. This method is robust and suitable for understanding a complex, socially constructed phenomenon that has not been sufficiently examined (Corbin et al. 2014; Creswell 2013). This study follows the qualitative approach adopted in recent studies on influencer marketing (Leung et al. 2022) and, more specifically, on virtual influencers (Lou et al. 2023). Drawing on a phenomenological approach, it aims to uncover the meaning of multiple individuals' lived experiences in relation to a specific concept or phenomenon (Creswell 2013). Our analysis is based on deeply exploring virtual influencers from followers' perspectives to capture the virtual influencer phenomenon through consumers' lived experiences, offering a holistic perspective. Thus, to capture the virtual influencer phenomenon and obtain diverse consumer perspectives, in line with the phenomenological approach, purposive sampling was used to select participants based on their experiences relating to the phenomenon to be explored (Groenewald 2004). The authors recalled their own experiences with the virtual influencer phenomenon as part of meetings dedicated to bracketing and reflexivity to increase awareness of certain presuppositions. This included the assumption that followers care deeply about the social and environmental issues that virtual influencers highlight. It was important for us to explore followers' lived experiences without judgment. Thus, setting aside appreciation for social and

environmental challenges was part of this journey. Going back to the Husserlian notion of 'epoché' that is phenomenological reduction, we practiced a form of this by reflecting on our own social media usage, how curated content may influence our worldviews and the predispositions we may have towards virtual influencers. Bracketing continued to be relevant during the interview analysis; for instance, notes were taken where we had previous or emerging assumptions and expectations to ensure that we authentically captured followers' interpretations of virtual influencers. For example, followers' jealousy on virtual influencers was expected, but being mindful of this presupposition hindered us from overemphasizing it as part of the data analysis.

Participants and Data Collection Procedure

After obtaining ethical approval (LAU.SOB.MM1.11/Jun/2021) from the Institutional Review Board (IRB) of one of the authors' institutions, Lebanese American University, two of them conducted semi-structured in-depth interviews to allow flexibility when exploring themes (Patton 2015). To collect data from followers, the official Instagram accounts of the virtual influencers were used to recruit participants through direct messages. Those who responded were included in interviews. Consequently, the authors conducted 40 in-depth interviews with followers aged between 18 and 56. While followers come from different walks of life, digital natives – those born after 1980 and who tend to have greater adaptability and online interaction (Kirk et al. 2015) – comprise the majority, which reflected well on followership.

The interviewers began with grand tour questions, such as "Why do you follow this virtual influencer? On which platforms? Can you describe your relationship with the influencers you follow? What do you think about virtual influencers?" These questions were asked to engage the

participants in the virtual influencer phenomenon. (See Appendix A for the semi-structured interview question guide).

The interview duration varied between 50 and 90 minutes, with a total of 2416 minutes and an average of 60.4 minutes. The total number of transcribed pages was 611. The authors completed data collection when no further insights were obtained from the interviews. They conducted the interviews through Zoom video conferencing and audio recorded with the interviewees' consent. Respondents were reassured of the confidentiality of their interviews, as the authors anonymously analyzed and reported the results. In order to conduct 'member checking' (Motulsky 2021), the authors reached out to interviewees again after the data collection and analysis were completed. Some participants provided valuable feedback on the results, which were presented to them conscientiously.

Data Analysis Procedure

Similar to the phenomenologically informed approach presented by Flowers et al. (1997), our exploration is phenomenon-focused and identifies themes. The data analysis presented below focuses on themes relevant to the virtual influencer phenomenon, including parasocial relationships and the comparisons followers make with them. The process of identifying the themes involved multiple steps. First, the researchers familiarized themselves with the collected data by thoroughly reading the transcribed manuscript multiple times. The phenomenological analysis (e.g., Thompson et al. 1989) of the transcribed data involved an iterative and reflective process, starting with the analysis of each individual interview and then comparing the entire body of interviews (Thompson et al. 1989). Reflexive bracketing has been adopted, requiring researchers to tune into themselves to be consciously aware of their own subjectivity and how this

can potentially influence data analysis. The core is to understand how researcher positionality influences the research and maintains a 'phenomenological attitude' (Finlay 2008): an open mind on the way the phenomenon unfolds. Within the research team, we have intersectional positionalities, representing different genders, languages, and origins. Researcher positionality involves navigating the roles of insider, outsider, and in-between researcher positions (Kamlongera 2023). In our case, this initially involved an outsider positionality, as we did not actively engage with virtual influencers as followers. However, during data collection and analysis, a more intense review of virtual influencers activities and interactions within follower communities moved us from being outsiders towards being in-betweeners. Raising awareness of this helped us maintain neutrality instead of becoming more favorable towards certain virtual influencers and followers. All researchers coded the data using NVIVO, in which both semantic content and language keywords, phrases, and explanations were scrutinized. This was then converted into codes that conveyed the core content. For instance, codes such as human-like characteristics, lifestyle, age, character, personality, scorn, and jealousy emerged.

The authors discussed the codes that surfaced along their individual analysis and noted common codes and underlying concepts directly pertinent to the study. For example, the comment "I'm envious of her clothing, her lifestyle" was coded as feeling envy; and the statement "digital influencers are perfect both in appearance like facial symmetry helps us find people beautiful and makes them more trustworthy and charismatic" as physical appearance. The researchers continued this analysis by moving from the codes to themes. In this phase, all the data were assessed to generate logical patterns. In line with other studies conducted using phenomenological research (e.g. Flowers et al. 1997; Karanika and Hogg 2016; Kreuzer et al. 2020), while getting the themes, the researchers explored how the data supports/contradicts existing theories (Thornberg 2012).

The prevailing literature on social comparison and parasocial relationship theory has directed researchers to broadly label codes under every concept into broader categorical themes (e.g., anthropomorphization) (Charmaz 2006). For example, the researchers moved the abovementioned code signifying feeling envy into the theme of jealousy and moved the code denoting physical appearance to the anthropomorphization theme. Next, they looked for themes based on the collected data, re-evaluated them to guarantee logical pattern formation, and combined the shared themes under similar general themes (Attride-Stirling 2001). The researchers then assessed potential themes, consolidated them, and designated each theme with an appropriate name. Furthermore, the researchers assessed the analyzed data with special regard to credibility, dependability, and confirmability (Hirschman 1986; Lincoln and Guba 1985). Establishing trustworthiness was crucial throughout all steps of the research process. To ensure that the data analysis maintained a high level of confirmability, as per Chen and Haley (2014), the researchers analyzed the interviewees' verbatim quotes to identify the themes that emerged from the data. To ensure credibility through authentic representations of the interviewees' social experiences (Hirschman 1986), the authors adopted the following steps: While identifying interviewees through purposive sampling (Groenewald 2004), the researchers developed a semi-structured interview guideline to immerse themselves in the participants' discourse. Additionally, the researchers engaged in suitable discussions to fine-tune the questions to better understand the interviewees' perspectives. The participants were probed to obtain additional information through laddering whenever needed. Next, interviews were audio recorded and transcribed verbatim. In addition, data analysis was cross-checked between the first author and another researcher within the team who had expertise in qualitative data analysis. In addition, the analysis was undertaken by combining participants' perspectives aligned with theoretical foundations, providing meaningful interpretations of the findings (Lincoln and Guba 1985). Continuous discussions were held to resolve any discrepancies and lessen idiosyncrasies in interpretation (Hirschman 1986). Along the way, aligned with interpretative phenomenology, the research team reflected on potential biases, for instance, whether there are preferences towards certain virtual influencers and how followers' experiences reflect on the researchers' experiences; raising awareness of potential biases was useful in the interpretative process of constructing an understanding (Larkin et al. 2006) of followers' lived experiences in relation to virtual influencers. Notes were made regarding the identified biases. Finally, member checking confirmed the findings as well as some extensions to the interpretation of the virtual influencer phenomenon.

Findings

This study aims to understand how the virtual influencer phenomenon influences the followers' social experiences. The analysis presented below focuses on two main themes: (1) Social comparison between virtual influencers and followers and (2) Virtual influencer anthropomorphization.

Social comparison between virtual influencers and followers

These findings shed light on the potential comparisons between virtual influencers and their followers. The anthropomorphic and idealistic characteristics of virtual influencers seem to exacerbate social comparisons, thereby introducing interesting dynamics. Both upward and downward social comparisons were evident among followers. For instance, followers compared themselves to virtual influencers that they perceived as superior. This comparison might result in negative feelings among individuals who would compare themselves to others, and hence, act as a motivator for self-enhancement. Conversely, downward social comparison responses were also apparent, whereby followers compared themselves to those who were inferior to them, resulting

in enhanced self-evaluation (e.g., Vogel et al. 2014). The social comparison with virtual influencers induced several subthemes as responses among real human followers such as (1) jealousy, (2) scorn, (3) motivation/determination, and (4) gratitude.

Jealousy

The emergence of virtual influencers seems to have affected both followers' and human influencers' feelings of jealousy leading to dissatisfaction in a person's life, as follows:

"Lil lives a very glamorous life... I'm envious of her clothing, her lifestyle, I know she is not real, but she is having lot of fun all the time, she can do what she wants and buys what she wants and hangs out with people. She is very thin, I'm not going to lie, I'm envious of that even if she is a robot" (Follower 1, Female, 21).

Also, other followers stated the following:

"They always share their nice places, their coffees, their expensive brands, so it triggers the jealousy of sometimes not being able to do something when you maybe wish to do it" (Follower 10, Female, 23).

"Some teenagers are already wishing to be her. Yeah, because they don't think of the robot side of her. They feel like they envy that robot. I want to be like her, let me dress like her, let me talk like her. Let me move like her" (Follower 17, Female, 55).

These statements express sentimental reactions, such as feelings of jealousy that virtual influencers can trigger in their followers, whereby the follower envied their appearances and lifestyles while simultaneously recognizing that they were unreal. This contradiction demonstrates the power of

social media in blurring the lines between reality and fiction, which has a lasting effect on followers' lived experiences.

Scorn

Some emotions of scorn emerged because virtual influencers present unrealistic images and lack real human experiences, which may result in feelings of contempt. Our findings show that some of the followers (who are human influencers themselves) compared themselves to the virtual influencers as follows:

"Lil Miquela, I feel like she dresses up cool, but I'm like: Why would someone just make a robot to prove a point? Why the person behind her Instagram doesn't reveal themselves? But they are getting a million to hundreds of millions of followers. So, this makes me feel bad about myself and questioning why people follow her and not me." (Follower 3, Female, 29).

The above quote shows that humans struggle to maintain the idealized image of virtual influencers have. This aspiration to show oneself as perfect may result in feelings of being scorned. This shows the profound multifaceted dynamics of the virtual influencer world, whereby virtual influencers have amasses a large number of followers; therefore, eliciting self-reflections and uncertainties for human influencers makes them question their own self-worth.

The feeling of scorn was also experienced by other followers. Some individuals developed feelings of disdain owing to comparisons with virtual influencers who had a crafted presentation of physical appearance and lifestyle that was unattainable by followers:

"Her body has unattainable standards. This makes us feel bad really about ourselves." (Follower 30, Female, 21)

"Their lifestyle is not realistic. I follow them to know about their lifestyle. This makes me feel very bad about myself especially with those who are always playing pretty and perfect pictures" (Follower 10, Female, 23)

Motivation

Virtual influencers seem to motivate followers positively, inspiring them to pursue their dreams and look for growth and development. They are perceived by some as role models who drive them to pursue accomplishments and improve themselves.

"The content is relatable to me. It inspires me for the future to become somehow rich, then I can just travel with my friends like her to different nice places ... and have some fun" (Follower 9, Female, 21).

"It gives me strength to never give up, she is my role model. I feel like I can do my best.

Maybe not as successful as she is, but I can do something better than who I am today"

(Follower 38, Female, 23).

"Lil pushes me to keep on working on myself and always improve... She is my motivation" (Follower 16, Female, 18).

Besides that, our findings reveal that there seems to be upward aiming among followers as virtual influencers do not judge them as inferior. In addition, a self-betterment drive is expressed when individuals are attracted to certain virtual influencer traits. For example, some followers were highly motivated to compare themselves to virtual influencers who were supporting initiatives of general interest (e.g., sustainable practices) as follows:

"I personally keep following her because she is like me, she supports different causes such as black lives matters and cares about environment. She really makes me feel I want to support and give back" (Follower 16, female, 18).

Another follower mentioned:

"virtual influencers are more interactive than influencers, if you send something with a cause they would respond. They do stuff that are cause-related, events, support a good cause, environmental, human, anything like this I believe is a good way... makes me feel I want to always follow them and be up-to-date with what they do" (Follower 4, Male, 21).

These statements imply that virtual influencers make meaningful contributions to motivation and determination through the lens of social comparison theory. For instance, virtual influencers' cause-related content makes them aspirational models, whereby followers are motivated to replicate dedication to fundamental matters, such as taking actions against discrimination and protecting the environment.

Gratitude

Social comparison with virtual influencers evoked gratitude among followers. Some followers shared their gratitude toward the virtual influencers, particularly when they were able to provide the community with positive initiatives and meaningful content. One follower mentioned:

"I am thankful for what Lil shares such as her care about the environment and important causes that other influencers do not talk about... She has meaningful content that drives people to take positive action (Follower 10, Female, 23).

Followers also seem to be positively impacted by virtual influencers who use their social media platforms to raise awareness of certain social issues as follows:

"It does support human rights, like I've seen that many of them support Black Lives Matter and take care of human causes. They are fabricated to look like an idol for a better person or community" (Follower 16, female, 18).

Moreover, followers seem grateful for the products promoted by virtual influencers, which may truly benefit them. For instance, one follower stated:

"virtual influencers opened my eyes to check the brand... This leads to a lot of people looking into it- search and check it out... It was really helpful in some cases" (Follower 5, Male, 20).

These statements clearly show that followers experience feelings of gratitude towards virtual influencers because of the content, knowledge, and insights they offer. Additionally, followers seem to appreciate the fact that, through virtual influencers' social media platforms, they are capable of engaging with shared content, responding to posts, and expressing their thoughts as follows:

"When I follow them, other people with similar interests also start following me and I interact with them. Even if these digital characters don't contact me directly it's still a community around us" (Follower 2, Male, 33).

Apparently, these interactions make followers become part of a virtual community that connects individuals with common interests in life, for which followers may be grateful. This further strengthens the parasocial relationship between virtual influencers and their followers.

Figure 2 provides an overview of the comparisons that emerged from the interview data in light of social comparison theory.

Insert Figure 2

This figure highlights the findings regarding both positive and negative social comparisons with virtual influencers. In upward comparisons, followers perceived virtual influencers as higher achievers and more advanced entities than themselves. This creates motivation for skill development and personal growth, but the flipside of the coin is that it also incites jealousy, for instance, because of the unachievable virtual influencers' lifestyle. In downward comparisons, humans perceive virtual influencers as subordinate beings. They may experience gratitude for their service in recommending products and helping create a community of followers; however, some followers feel scorned for the idealized image of virtual influencers.

Virtual Influencer Anthropomorphization

Anthropomorphism, which is associated with the way something is described as having a human form or attributes (Nowak and Rauh 2008), is a crucial aspect because these characters are assessed based on human traits, signaling a particular social existence (Nass and Moon 2000). The combination of apparent gender and ethnicity, attractive looks, young age, and a realistic and euphonious voice seems to have a major impact on followers' perceptions of and social interactions with virtual influencers. The anthropomorphization of virtual influencers is considered a fundamental component of relational bonding, which emanates from the interaction between followers and virtual influencers. Indeed, when a virtual influencer is perceived to have human-like cues, followers develop closer relationships with the virtual influencer. The main

characteristics that enhance this perception are based on a mix of the following subthemes: (1) lifestyle, (2) personality traits, and (3) physical appearance.

Lifestyle

Lifestyle seems to hold significant importance among followers as per this interviewee's comment:

"What they post is very beneficial. The nice places where they travel are mostly very beautiful or when they introduce me to new fashion brands or they are sitting in the front row of a fashion show. It's really nice to see their content, take advantage of them going to places, and see new things where you normally wouldn't go or be invited to" (Follower 10, Female, 23).

Virtual influencer content seems to be very effective in further engaging followers as well as evoking interest and excitement. They also allow followers to travel virtually with them to different parts of the world, exposing them to new cultures and trends. Another follower stated the following:

"What drives me... curiosity, intrigue, and fascination, and seeing what she does or creates next. Where will she go next?" (Follower 8, Male, 56).

Virtual influencers seem to play an important role in showcasing the latest fashion trends and newly launched brands to their followers, which increases their influence on followers' preferences and choices. As one follower stated:

"I think they are fashion influencers. They are the first to know things like the front row at Paris Fashion Week. 'They're going to know more about fashion than the average person. They do have influence in that sense" (Follower 39, Female, 25).

Therefore, through virtual influencers (that can play the role of an enabler of access), fashion shows and events are expected to be further democratized on digital platforms, allowing followers to see these events from an insider's perspective.

Personality traits

Personality traits emerged as a consistent and significant theme in this study. Interviewees perceived virtual influencers as extroverted and sociable through their heavy engagement in several real-life activities (e.g., fashion shows and events). They also considered themselves very active, always organizing traveling trips and sharing their parasocial lives. Virtual influencers' digital lives are built on a continuous set of activities that incorporate daily routines and personal hobbies to enhance their anthropomorphization and entertain their followers. Additionally, followers have discussed and cherished virtual influencers' personal interests, such as their passion for art, fashion, music, and sustainability. For example, one follower shares the following:

"Lil asks questions and replies to good content. She'll ask for music suggestions, and she'll thank people for posting them" (Follower 2, Male, 33).

"They are very active and sociable, they always post about their life and document what they are doing with their friends. They are always open to new experiences, take selfies when they travel and go to different level events" (Follower 7, Male, 27).

"She's got like a bubbly cheerful personality of you know like a cartoon of a young woman" (Follower 2, Male, 33).

In this context, the interviewees did not perceive virtual influencers as passive but as exhibiting conviviality, whereby they actively and continuously responded to followers' comments and requests, thus further engaging followers. Additionally, some followers shared deep respect for altruistic values and the dedication of virtual influencers to make positive changes. One of the followers stated:

"What I love about Noonoouri is the purpose and mission. I have respect and appreciation for what she is doing for environment, for animals, you know, like it's not only fashion" (Follower 26, Female, 53).

This indicates that the interviewees perceived virtual influencers' activities and support for specific causes to empower followers and give them the confidence to make a difference. Another follower stated,

"Things are still uncertain about the climate of our world right now! Noonoouri is precisely what she's doing! That's why I follow and love her! I love when influencers want to make our planet a better place! So, this makes me want to involve as well! This makes me feel involved about the topic they are sharing" (Follower 35, Female, 30).

Physical appearance

Physical appearance has emerged as a recurring theme. Most followers in this study shared positive emotions toward virtual influencers while highlighting their qualities and inspiring effects, as follows:

"She has cool and attractive looks and cool clothes, I follow her on Insta and I really like her music... I think this is the future. We are more connected to robots" (Follower 12, Male, 24).

Like others, this follower seems to emphasize the physical appearance and attractiveness of virtual influencers.

Accordingly, most followers mentioned that they were not influenced by the unique appearance of virtual influencers.

"Digital influencers are perfect in appearance like facial symmetry helps us find people beautiful and makes them more trustworthy and charismatic since everything can be created for digital and no one would create an unsympathetic character to captivate the public, unless it is purposely part of the character" (Follower 11, Male, 27).

"I really like her skin tone, she looks very young, she has a very hydrated skin tone" (Follower 15, Male, 24).

This suggests that facial symmetry and the extent to which it contributes to a virtual influencer's charisma are the focal elements of interest. Followers are fascinated by virtual influencers' charming looks created in a specific form of idealized perfection that is unachievable in the real world. This implies that the anthropomorphism of virtual influencers plays a major role in driving their appeal.

Previous studies have demonstrated the correlation between the extent of anthropomorphic features in certain characters and the increased perception of their trustworthiness and proficiency by consumers (Westerman et al. 2015). Interestingly, this study observed distinct generational preferences. Older participants seemed more interested in highly anthropomorphized virtual influencers, whereas cartoonish characters were more appealing to younger participants.

"I mean I know that she's just a cartoon like, she is well crafted... she is as credible as any cartoon character and maybe more interesting" (Follower 16, Female, 18).

"They make it look and seem as a character that has very soft skin and hair... they make them look pretty cool because they're kind of gaming for the Gen Z... They keep Lil Miquela pretty on trend" (Follower 7, Male, 27).

"Immature, cartoon, like still, it still looks like a fantasy. It's not as real as it needs to be" (Follower 17, Female, 55).

Additionally, virtual influencers are considered immortal because they do not age, which means that they will always have the same appearance. While they may appeal to the younger generation, particularly Generation Z, because of their perpetual youth, the acceptance of this feature among older age brackets remains uncertain. For instance, some followers questioned whether older consumers would view virtual influencers as credible.

"... is very youth oriented, but can she break that and be taken more seriously by a broader age group?" (Follower 8, Male, 56).

"Someone that's at a young age mini-teens will be deeply affected by them but it will not be someone at an adult age because they always look young." (Follower 4, Male, 21)

"Even though it does seem very artificial, it raises some interest among young followers, because she does not age, she is always 19" (Follower 6, Female, 26).

This presents a possible discrepancy in how members of diverse age groups view virtual influencers' content. Older individuals may have different life experiences and values that affect their evaluation of influencers. This delves into the idea of generational differences, whereby virtual influencers are not universally attractive but rather tightly connected to generational choices. Member checking confirmed that the findings were well-received by followers and reflected on their experiences, including the findings about perceptions of virtual influencers'

physical appearance and their relationships with them. However, one interviewee mentioned that, in addition to the presented findings, they would expect to see some physical changes in virtual influencers' appearances over time. For instance, they suggested that virtual influencers with youthful appearances might be expected to show signs of aging as time progresses.

In conclusion, the findings indicate that the virtual influencer phenomenon has a strong social impact on followers. This study explores the different ways in which consumers perceive themselves in comparison to idealized virtual influencers, thus triggering several responses such as jealousy, scorn, motivation/determination, and gratitude. This comparison can affect consumers' self-worth and overall well-being, while at other times motivating them to pursue professional and personal growth. Virtual influencers' social influence moves on a broad spectrum from a strong positive influence by providing motivation for self-improvement to negatively impacting well-being due to scorn and various tensions. The findings also reveal the importance of anthropomorphism in contributing to the development of virtual influencer-consumer relationships.

Discussion

Theoretical Contributions

As the literature on virtual influencers is still nascent due to their rapidly growing nature (Lou and Kim 2019; Lou et al. 2022; Koles et al. 2024), there is a pressing need to explore the relationships that followers form with them. From a general viewpoint, this study contributes to parasocial and social comparison theories through an anthropomorphization lens, ultimately enriching the

advertising, consumer behavior, and influencer marketing literature. Both theories are suitable for guiding research on virtual influencers, especially in capturing the *social* nature of human connections to virtual influencers and human-to-human interactions in virtual influencer-follower communities. The parasocial relationship theory has contributed to the development of a deeper understanding of how followers form perceived relationships with virtual influencers. Social comparison theory permitted further assessment of the drivers of engaging with and following virtual influencers. The integration of different theories offers a comprehensive understanding of the dynamics between virtual influencers and their followers, with special regard to relational-social context. We acknowledge that these theories informed our initial understanding and helped us formulate our theoretical contributions. There were other theoretical streams vis-á-vis Husserl's work on life-worlds that did not inform our theorization initially but emerged through this research.

Contributions to the Parasocial Relationships Theory. While contemporary influencer marketing research has discussed parasocial relationships that study followers' behavioral intentions (e.g. Aw and Chuah 2021; Jin and Ryu 2020), the full relational aspect integrating both ends of the relationship alongside the personal bonding ensuing from such interactions needs further exploration (Whittaker et al. 2021). This study extends the anthropomorphization literature in the context of virtual influencers' advertising effectiveness, whereby it develops a better understanding of the characteristics and potential of humans in comparison with virtual influencers (e.g., trust, credibility, and friendliness) (e.g., Franke et al. 2023). In line with prior research (Mrad et al. 2022), this study's findings show that anthropomorphism plays a crucial role in the development of an intense relationship between virtual influencers and their followers. Humanlike cues were found to enhance bonding with virtual influencers following the depiction of a human-like lifestyle, appearance, and personality traits. Indeed, consumers felt very close to virtual

influencers despite knowing they are non-human. Thus, our study reveals emerging parasocial relationships between human followers and virtual influencers partly influenced by their anthropomporphic features. This contradicts the findings of Lou et al. (2023), who suggested that virtual influencers are perceived as having weak parasocial relations because of the natural barrier of looking different from humans. Ultimately, followers' sense-making (Larkin et al., 2006) of virtual influencers and parasocial relationships with them is influenced by the holistic context, in which the social media environment is the primary lifeworld influenced by followers' physical lifeworld experiences. The notion of the lifeworld (Husserl 1938) refers to the everyday world of experiences that are directly and intuitively provided to humans. It encompasses practices and widely accepted meanings embedded in sociocultural and historical contexts. Drawing on Husserl's phenomenological lifeworld concept, the relative strengths of parasocial relationships with virtual influencers testify to a shift in consumers' lifeworlds from a primarily physical to a digital social media context. The authors did not expect the multitude and depth of the lived experiences of followers that connect to virtual influencers; the extended community of virtual influencer followers provides spaces for interaction and immersive experiences, where followers share personal opinions and aspects of their personal lives, contributing to a shared, collective lifeworld that exists online, informed by both online and analog occurrences. The platforms on which virtual influencers appear act as repositories of cultural memory, documenting and influencing interaction and self-expression in real time. Therefore, we acknowledge that the virtual influencer phenomenon is symbiotically embedded in the digital life-world. Virtual influencers represent an early example of non-living digital beings with which followers create relationships or a sense of relatedness. This is intriguing both as an exemplification of the use of parasocial relationship theory to describe connections to digital beings and as an extension of Husserl's

(1938) (physical) life-worlds concept to digital life-worlds. One would assume that digital life-worlds are imprints/representations of physical 'real' lives but considering the emphasis on digital experiences in the conducted interviews with several followers, digital life-worlds may have become primary life-words.

Another key contribution to the parasocial relationship theory (Horton and Wohl 1956) is the paradoxical multidirectionality of the parasocial relationships experienced by followers. Theorizing parasocial relationships presumes unidirectionality, which is a one-sided connection where followers feel attached to the subject of their admiration (for instance, a celebrity) and in which the relational dynamics are not reciprocated by the other involved person. In contrast, paradoxical multidirectionality infers that while parasocial relationships are mainly one-sided, they can contain multiple directions or dimensions that can have a considerable impact on followers' behaviors, attitudes, and feelings. While the virtual influencer-follower relationship deserves more research scrutiny (e.g., Farivar et al. 2021), its relationship with virtual influencers creates various interactions. For example, it can create a community-based aspect with other followers involving multidirectional interactions and can also create occasional interactions with the person/team or algorithm that influences virtual influencer activities through reactions to followers' comments. Thus, the co-occurrence of actual multidimensionality (community-based interactions between followers) and strengthened perceived, but not actual, multidimensional interaction with virtual influencers has been observed. This is an important observation relevant to the theoretical discussion on parasocial relationships because, unlike traditional media, the interactions in the virtual influencer follower community are largely visible and transparent; the interaction that takes place in the follower community setting enhances parasocial relationships with virtual influencers.

Contributions based on the application of Social Comparison Theory. Although some studies have explored virtual influencers' identity (Hu et al. 2020) and the resultant relationship forms (such as the virtual influencer-human influencer, virtual influencer-endorsed brands, followers-followers, and virtual influencer-follower relationship) (Mrad et al. 2022), no research to date has shed light on the social comparisons made in relation to virtual influencers. Social Comparison Theory (Festinger 1954) distinguishes between upward/downward comparisons between humans and those that take a proactive stance (positive evaluation towards one's own situation or potential improvements) or are filled with negativity (wishes that the point of comparison would be in a worse position); however, little is known about human comparisons with virtual influencers. Interestingly, as our study demonstrates, virtual influencers' non-human nature seems to hinder downward comparisons, that is, to view oneself as superior to virtual influencers. While several followers adore virtual influencers, the drive that normally comes from positive upward comparisons, which is usually about self-development towards something more similar to whom we compare ourselves, has different dynamics. As one of the interviewed human influencers expressed, humans find it difficult to become similar to virtual influencers because of the gap between humans and nonhumans. This extends the theorization of envy as part of social comparison (e.g., Bower 2001), especially in comparison to human-to-human envy, as human-tovirtual influencers jealousy does not come with an underestimation of other qualities of the envied entity. Instead, self-distancing occurs on a human/non-human comparison basis by perceiving virtual influencers as even less human (i.e., arguing that certain standards are unachievable because they are represented by a non-human). Thus, our findings extend research on the ambivalence dimension that humans in interaction with non-human entities experience (Nagy and Koles 2014), i.e., that the perceived perfection of non-humans – in this case, virtual influencers – makes people

wish to experience the unachievable, while they are aware of the impossibility of their wishes (for instance, to achieve a perfectly balanced appearance virtual influencers have). Phenomenologically, these dynamics connect to collective intentionality (Zahavi 2018), where a sense of connectedness, human-like interactions and the intention to interact with virtual influencers, as well as feelings such as virtual influencers-related jealousy and inspiration become shared experiences in the follower community.

Contribution to the Influencer Marketing Literature. While some brands have started using virtual influencers, an understanding of how typical virtual influencer-follower relationships might endure is urgently needed (Mrad et al., 2022). By applying Social Comparison Theory, it becomes apparent that virtual influencers can create both jealousy and motivation among human followers, encouraging them to achieve life standards similar to those conveyed through virtual influencers. This shows patterns similar to the impact of human influencers (e.g., Eastman et al. 2020). Anthropomorphism proves to be an important aspect for influencer marketing and this study also shows that anthropomorphism influences the parasocial relationship between the virtual influencers and human followers by making human followers feel closer and more similar to them.

Managerial implications

From a managerial perspective, this study provides a much-needed understanding of brands in the modern operandum of virtual influencers and effective strategies to adopt them. In relation to social comparison theory, the findings show that comparisons between followers and virtual influencers lead to several negative and positive emotions. Immersive content that blends the real with the unreal would build further on that core social aspect, which would emphasize virtual influencers' and actual consumers' emotions. In fact, through storytelling, companies are advised

to develop emotional yet relatable content that can emphasize individuals' self-worth to foster positive emotions, such as gratitude and determination for further improvements. This strategy transforms social comparison into a virtual influencer follower comparison, whereby the virtual influencer begins comparing itself to human beings. This study shows that the impact of virtual influencers' content on followers' perceptions and behaviors allows them to match perfect influencers with campaign targets. The findings in relation to the social comparison theory can enlighten brands, marketers, and advertisers on how to drive effective and relevant content when it comes to influencer marketing, as these become empowered by virtual influencer anthropomorphization.

Parasocial relationships also seem crucial in the engagement between virtual influencers and their followers. Thus, companies are encouraged to develop an engaging influencer marketing strategy, such as cause-related content, to call for greater interaction from followers. Lifestyle, personality traits, and the overall anthropomorphization of virtual influencer provide higher resonance and value for reciprocity. Accordingly, companies should include reciprocity as a key output and key performance indicator from the virtual influencer, as it would boost the reach, effectiveness, and relationship with both the brand and virtual influencer. Furthermore, brands should consider using virtual influencers and specify their advantages and disadvantages as part of a risk assessment based on product/service categories.

Accelerating investment in virtual influencers is now apparent alongside growing acceptance among people, especially young generations, towards them. Indeed, companies have been increasingly focusing on younger generations as a key strategic choice, and have been addressing topics pertinent to these targeted segments. A deep understanding of the young generation's

preferences helps companies use relevant virtual influencers with particular physical appearances and traits that appeal to them.

The findings also show that virtual influencers follow the same rules of engagement as human influencers, whereby brands and virtual influencers developers should be cautious when selecting a brand/virtual influencer for endorsement. Brands jumping on the technology/virtual influencer bandwagon may alienate older and non-technology-driven generations, causing a digital divide between the targeted customer segments. Virtual influencers with cartoonish, unrealistic lifestyles that are animation-based and drive gamified content may appeal greatly to Generation Z, whereas those with high anthropomorphization may appeal to older age groups. Following this rationale, brands would also follow suit by using proper virtual influencers that cater to the brand's targeted consumer segment. Companies should monitor shifts in virtual influencers' preferences, which are a source of inspiration among younger generations, to maintain the brand's appeal to followers. Based on the followers' insights, virtual influencer creators should develop credibility, consistency, and relational bonding. Virtual influencers should extend beyond the boundaries of physical and body-related endorsements. Their presence and use will continue to rise in the near future, pushing brands to adjust their strategies to embrace the new virtual reality. Based on our findings, companies should focus on the lifestyle and personality traits of virtual influencers. Such an approach balances the potential feelings of scorn and jealousy (emanating from virtual influencers' idealized physical appearance) with feelings of gratitude and motivation among followers. For example, companies could develop engaging content that builds upon a virtual influencer's set of cause-related activities, which would ultimately support positive societal changes.

Limitations and future research

This study is not without limitations owing to its exploratory nature. We used a snowball convenience sampling approach to identify and interview followers, which may limit the generalizability of the findings. Additionally, this qualitative analysis based on interview data cannot inform causal relations that warrant potential future research on the subject matter through questionnaires and experiments. Furthermore, this study focused solely on one social platform (Instagram) and one virtual influencer with the largest number of followers (Lil Miquela), which may limit the generalizability of the findings. Accordingly, future research could empirically test and measure the different relational aspects across each social media platform (e.g., Instagram, Tiktok, Facebook, and Snapchat), compare the relational strength between virtual and human influencers, and drive a comparative study between various markets and cultures. Studies may also examine which human-like traits can further strengthen the anthropomorphic appearance of virtual influencers, and whether cartoon-like virtual influencers need to be further enhanced in a more anthropomorphic manner. While previous studies on avatars have examined the role of gender as a solid antecedent to the perception of an avatar's anthropomorphism (e.g., Nowak and Rauh 2008), researchers may explore whether such a context applies to virtual influencers. This study opted for an exploratory approach that acts as a basis for future experimental and empirical research focusing on particular brands in specific industries. Future studies could delve deeper into the use of virtual influencers across different industries (e.g., luxury, fashion, and FMCG) and examine how companies can leverage the sheer number of virtual influencers' followers.

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