

**Virtual Influencer Marketing and its impact on customer purchase Behaviour****Prof. Dr. Simon Fauser**Faculty Int. Business
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German**ABSTRACT**

This study examines the phenomenon of Virtual Influencer (VI) marketing and its impact on customer purchase behavior. The aim is to understand the scope and impact of VI marketing. The study compares VI marketing to traditional Human Influencer (HI) marketing and identifies the unique benefits and challenges associated with VIs. A survey was conducted to gain insight into consumer attitudes and behaviors toward VIs. Key findings reveal varying levels of trust and acceptance of VIs among consumers. While some participants expressed openness to buying products promoted by VIs, others had reservations about their authenticity. The study also explores the potential role of VIs in the metaverse, highlighting business opportunities and challenges in this evolving digital landscape. Overall, this research sheds light on the growing influence of VIs and the need for further research in the field of marketing.

KEYWORDS: virtual influencer marketing, customer purchasing behavior, social media, metaverse, consumer behaviour, digital marketing.

1. Introduction

The megatrend of digitalization is transforming marketing approaches in various ways. One marketing tool gaining increasing popularity is influencer marketing. An influencer is viewed as a high-profile social media individual with a relatively high number of followers (Boerman, 2020). Influencer marketing is when an influencer promotes branded content to their followers and the brand's target consumers.

In recent years, the investment in influencer marketing has grown exponentially. The global influencer marketing market value from 2016 to 2022 has skyrocketed from 1.7 billion to 16.4 billion U.S. dollars (Statista research department, 2022d). This increase is not only nudged by digital technology advancement but also spawned by the young generation who spend a high amount of time on various social media platforms. As companies might enjoy the increased exposure, traffic, sales, and loyal fans that result from influencer marketing, the risk of scandals and fraud remains a problem. Many companies have turned to virtual influencers (VIs) marketing to avoid potential scandals and overcome the limitations of human influencers (HIs). VIs, also

known as digital characters or avatars, are computer-generated imagery (CGI) created by humans that imitate human behavior (Sookkaew & Saephoo, 2021). As the name suggests, VIs possess the merits of influencer marketing by embodying digital characters.

This study aims to analyze the phenomenon of VI marketing and examine its impact on customer purchasing behavior.

2. Current landscape

In the U.S. alone, a survey conducted in March 2022 found that 58% of the respondents were following a virtual influencer at the time (Guttmann, 2022). During another survey in the U.S., 35% of 1,044 respondents said that they had bought products/services promoted by a VI (Statista research department, 2022a). The number of companies offering influencer marketing-related services has also increased substantially, showing a 30% year-over-year growth in 2021 in the U.S. alone (Guttmann, 2022).



2.1 Best practices

The escalating popularity of Virtual Influencer marketing on a global scale has prompted a comprehensive examination of the most followed VIs across the world. As of 2022, the top ten VIs have a range of followers from 5.4 to 31.2 million. These influencers, commanding vast digital audiences, have become focal points for businesses and marketers aiming to leverage their reach for brand exposure and product promotion.

Three notable VIs, Lu of Magalu, Miquela Sousa, and Nobody Sausage, were chosen for an in-depth study due to their substantial followership and distinctive creation models. The first, Lu of Magalu, was developed by Luizalabs and has amassed the highest number of followers among VIs. Lu's content primarily consists of unboxing videos, product reviews, and software tips, establishing her as a credible and influential voice in product endorsement. Her marketing clout is further underscored by her rate of \$26,000 per Instagram post, making her the most expensive VI in the world (Statista research department, 2022c).

On the other hand, Miquela Sousa, also known as Lil Miquela, is a unique case study. She is a creation of Brud at Dapper Labs and has made a significant name for herself on

Instagram. Despite revealing her robotic identity, Miquela's audience continues to perceive her as trustworthy, resulting in over 2.9 million followers and collaborations with top fashion brands. To increase engagement rate, Miquela interacts with her audience in a humanoid way. She phrases every post in the tone of a typical 19-year-old musician and change-seeker living in Los Angeles. She comments on hot social issues such as "Black Lives Matter", revealing human feelings such as insecurities and ambitions, and interacts with real humans (Drenten & Brooks, 2020). Her endorsement posts on Instagram are valued at \$13,500 each, placing her as the 4th most expensive VI globally (Statista research department, 2022c).

Nobody Sausage, a private creation, is a testament to the emerging trend of individual creators in the VI industry. Garnering substantial followership across various platforms, including Instagram, Twitter, YouTube, TikTok, and Facebook, Nobody Sausage is the epitome of self-branding success (Khamis et al., 2017). Its influence is evident in its collaborations with world-renowned brands and its \$19,000 rate per Instagram post, the 2nd highest globally (Statista research department, 2022c).

Name	Country	Followers	Operator
Lu of Magalu	Brazil	31.2M	Luizalabs
Nobody Sausage	Portugal	19.3M	Private
Miquela Sousa	United States	8.3M	Brud at Dapper Labs

Table1. The three examples of top VIs

These three VIs, despite their different origins and approaches, have all proved to be of considerable marketing value. They have managed to command high market prices, secure collaborations with famous brands, and have a positive impact on the financial performance of marketers. This observation aligns with previous research indicating that VIs, with their unique influence, can position brands favorably in the eyes of viewers (Leung et al., 2022). This evolution of marketing strategy via VIs and its implications on the sales process in the digital age warrant further exploration and research.

2.2 The VI marketing iteration (adapted from the sales funnel)

To thoroughly understand the role of Virtual Influencer (VI) marketing in the sales process, it's essential to consider all

stages of a standard VI marketing model. Rather than using traditional sales funnels models, such as the re-entering loop framework (Järvinen & Taiminen, 2016) or the four-category system of suspects, prospects, leads, and customers (D'Haen & Van den Poel, 2013), this study utilizes a revised model where the funnel is transformed into an iteration.

VI marketing, anchored on social media and content marketing, requires an iterative framework that better reflects customer behavior in the digital landscape. Hence, this study utilizes an adapted model that combines marketing and sales phases into an iterative system, replacing the traditional sales funnel to reflect the agile aspects of the modern sales process.

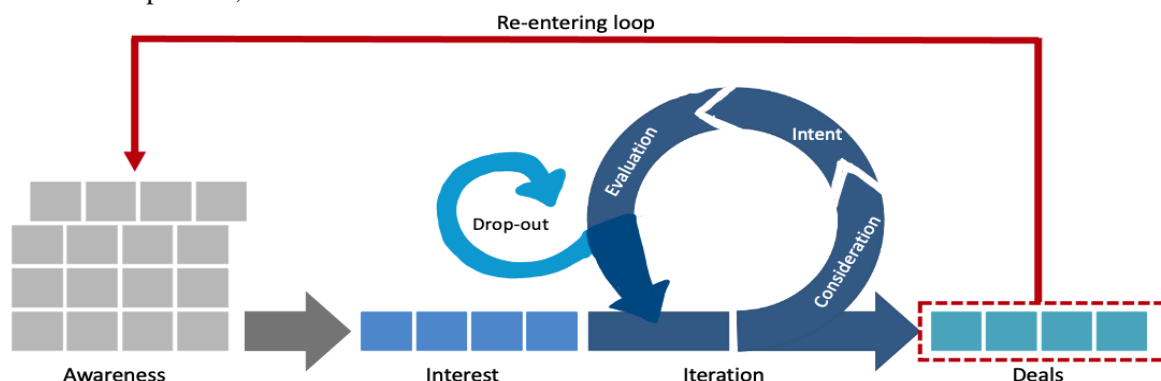


Figure 1. Marketing and sales iteration of VI marketing (own illustration)



Phase 1. "Awareness" includes all potential buyers that are exposed to VI content, either directly on social media or via electronic word-of-mouth (eWOM). The size of this market can be vast, but it's constrained by the reach of the social media platforms and the demographics available through eWOM.

Phase 2. After viewers are exposed to the VI marketing content, a proportion of the awareness group who is interested in the VI content enters the next phase: "Interest".

Phase 3 and 4. The "Interest" group will now enter the iteration circle which is consisted of "Consideration", "Intent", "Evaluation" and/or "Drop-out". For instance, a viewer interested in sponsored VI content with a purchase link might rewatch the content, consider purchasing by clicking the link, evaluate the product/service, and either drop out or place an order.

A **Re-entering loop** exists for historical or current customers who may become potential targets for repurchasing or cross-selling. Existing customers can re-enter the "awareness" group due to the same VI promoting a different product/service.

3. Success factors

The success of VI marketing stems from its unique selling proposition over HI marketing. Thus, a systematic comparison between VI and HI is required to discover attributes of VI marketing's success. This is done through an interview with an industry expert, combined with analyzing netnography data and literature.

The interviewed expert graded VI and HI marketing on 9 criteria (Figure 2) and shared extensive explanations.

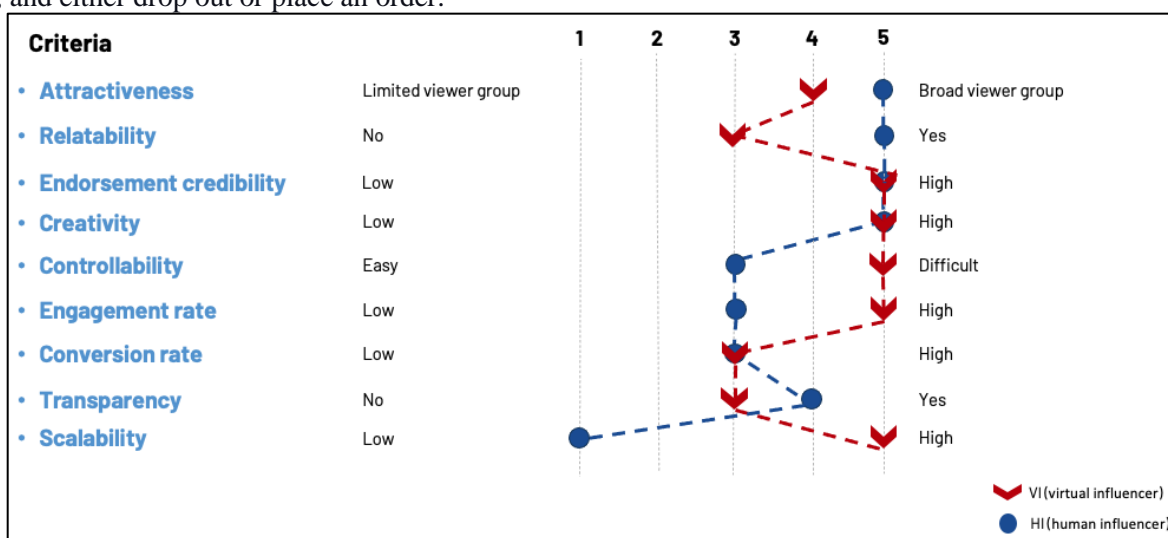


Figure 2. Comparison matrix between VI and HI marketing (own illustration)

The expert finds that VI and HI marketing perform similarly in the "Endorsement credibility," "Creativity," and "Conversion rate" categories. This corresponds with research indicating that consumers show no preference between VI and HI personalization when deciding to follow, leading to similar levels of eWOM once an online relationship is established. Both VIs and HIs are managed by humans creatively, yielding comparable outcomes.

However, the expert rates VI marketing lower in "Attractiveness," "Relatability," and "Transparency" compared to HI. Supporting research reveals that top VIs has fewer followers than top HIs, reflecting less "attractiveness," partly due to HIs' earlier social media presence. Additionally, VIs' audiences are typically confined to their home country, while HIs attract followers globally, indicating higher relatability (Conti et al., 2022). Concerning "transparency," the expert contends that since most VIs are produced by large, unknown corporations, the beneficiaries of their content are less clear than HIs', who are usually individuals.

The expert, however, posits that VI marketing surpasses HI marketing in "Controllability," "Engagement rate," and "Scalability" categories associated with the success of VI

marketing. These connections are discussed in the subsequent section.

3.1 Non-sentient: higher controllability

VIs, lack sentience, don't age, tire, or experience emotional distress, offering marketers greater control over their image and compliance. VIs can be custom-made to align with societal trends or specific requirements, enhancing their appeal and adaptability (Sookkaew & Saephoo, 2021). As an example, avatar Miquela's appearance is tailored to fit contemporary beauty standards, endorsing diverse brands without contradicting storylines.

Further, VIs is predictable, offering brand safety in marketing activities. Unlike HIs, VIs doesn't present risks like conflicts of interest, emotional distractions, or physical constraints. Consequently, brands using VIs for endorsements can ensure brand safety, free from concerns about scandals or inappropriate comments negatively affecting the brand image.

3.2 Grasp on entertainment market: higher engagement rate

A key success factor for VIs is their hold on the entertainment market, notably in the anime gaming community. Evidence from existing research is that some VIs appears to be less critical and easier to be trusted by viewers because of their



explicitly nonhuman nature (Batista da Silva Oliveira & Chimenti, 2021).

Despite VIs' lack of physical existence compared to HIs, this doesn't hinder their marketing effectiveness. Previous research about consumers' purchase intentions, suggested that endorsers' features, such as perceived expertise and attractiveness, impose positive effects on consumers' purchase intentions (Lafferty et al., 2002). None of these endorsers' features require physical existence.

This view aligns with the growing popularity of virtual characters in the anime gaming community, exemplified by a Japanese man who married a virtual character (Chandler, 2018). VIs is argued to be more engaging in social feeds as they allow immersion into fiction. When correctly paired with a human influencer at a similar career stage, VIs, like Miquela, can yield higher engagement.

3.3 Hybrid empowerment: higher scalability

VIs combines the benefits of HIs and digital characters, blending human management and digital technology for marketing success. This dual empowerment allows for faster, more cost-efficient scalability; for example, a VI can host simultaneous concerts worldwide, an impossibility for a human artist. Furthermore, the ability to alter VIs digitally lowers costs, particularly in the fashion, lifestyle, luxury, and entertainment industries.

In addition, VIs offers increased entertainment value, enhancing marketing outcomes. They enable the delivery of more visually compelling and controlled narratives, combining human-

like persona traits with digitally-generated appearances and movements, facilitating deeper connections with viewers.

4. Challenges for companies using virtual influencers

The digital age and Internet access have revolutionized information consumption and introduced both opportunities and challenges for companies. The rise of social media and influencers has impacted traditional advertising significantly. Content from these influencers, viewed as more authentic and credible, targets specific follower demographics and heavily influences their decisions (Silva et al., 2020).

The impact of Virtual Influencers, however, remains uncertain. Despite being relatively new with potential initial mistakes, they offer a fresh marketing approach. Yet, they present brands with risks such as legal issues, public relations challenges, and potential customer loss due to perceived artificiality (Moustakas et al., 2020).

Primarily targeting Millennials and Gen Z, Virtual Influencers may struggle to appeal to all age groups and maintain interest, as their artificial nature may eventually diminish their perceived authenticity. Furthermore, while Human Influencers can personally try products, Virtual Influencers lack this direct capability, potentially reducing their relatability and effectiveness (Moustakas et al., 2020).

4.1 Risk of making the wrong choice

According to Miao et al. (2022), there are four categories of avatars. Companies must be aware of what kind of avatar best suits their product. It is not always the best solution to go with the most famous virtual influencer, as it affects the consumers' trust and experience.

	Low form realism	High form realism
	Simplistic Avatar	Superficial Avatar
Low behavioural realism	<ul style="list-style-type: none"> 2D, static, cartoon image Low intelligence, unrealistic appearance Low consumer expectations concerning behavioural competence Good for basic customer inquiries 	<ul style="list-style-type: none"> 3D, dynamic, realistic image Low intelligence Negative consumer experience as realistic appearance raises expectations of avatar's intelligence Good for low-risk transactions
	Intelligent Unrealistic Avatar	Digital Human Avatar (Virtual Influencer)
High behaviour realism	<ul style="list-style-type: none"> Cartoon image Intelligent, lacks realistic anthropomorphic appearance Low consumer expectations concerning intelligence due to visual image Good for sensitive personal information (consumer does not feel judged due to nonhuman appearance) 	<ul style="list-style-type: none"> 3D, dynamic, realistic image Intelligent (cognitive and emotional) Highest level of customer experience due to alignment of visual appearance and depth of intelligence Good for complex transactions that require personalized service Good for long lasting relationships with customers

Table 2. Form and behavioural realism of 4 kinds of avatars (adapted from Miao et al., 2022)

Understanding the suitability of virtual influencers for a brand or product is vital for companies. The high initial investment needed for Digital Human Avatars doesn't always guarantee returns.



Consumer expectations for avatars with unrealistic physical features are low, while superficial avatars with realistic features but low cognitive abilities can lead to customer dissatisfaction. Virtual influencers with high realism in both behavior and form can deliver the best customer experience but aren't suited for all products. For instance, Intelligent Unrealistic Avatars are best for medical uses where non-human appearances prevent judgment (Miao et al., 2022; Nisandzic, 2022).

Therefore, companies should identify which avatar type suits their target groups before jumping onto the virtual influencer trend. Lack of authenticity and relatability could negatively impact the trust relationship with customers.

4.2 Risking Reputation and Investments

Public figures, including virtual influencers, must be cautious with their statements as 'cancel culture' is unforgiving. Brands choosing influencers for campaigns, virtual or real, may face scrutiny over their choices, including concerns over ethnicity and specific facial features. Consumers are going to closely observe all the attributes of the influencer, therefore the brands must be careful to protect their reputation, as they cannot blame the virtual influencer's personal life for anything.

For example, controversy surrounded Shudu's¹ creator, a white man, who profited from the image of an African-American-inspired model, raising issues of cultural appropriation. Despite the lack of personal lives, missteps with virtual influencers can seriously harm brands' reputations, especially given the large initial investments required. Hence, brands should learn from others' errors to prevent reputational or financial damage (Moustakas et al., 2020).

5. Potential downsides on the consumer side

Virtual influencers (VIs) offer an advantage to brands by lacking private lives and reducing the risk of scandals associated

Age (in years)	18-20	21-25	25-30	31-40	40+
Participants (in integer numbers and percentages)	2 13,3 %	7 46,7 %	2 13,3 %	3 20 %	1 6,7 %

Figure 3. Survey demographic

To get a better understanding of the current consumer behavior of the participants, a quantitative analysis was applied to the figure below:

The survey results reveal that the majority of participants (93%) are not currently influenced by VIs when it comes to making purchasing decisions. However, it is worth noting that almost half of the respondents expressed no opposition to the idea of buying products featured in influencer marketing campaigns. This suggests a potential future shift towards accepting VIs as viable endorsers of products.

One respondent even expressed that the endorsement by a VI generates a feeling of a personal recommendation. However, this sentiment wasn't universal, with about two-thirds of the respondents expressing reservations. Their hesitation largely stems from a general disinterest in influencers or doubts about the authenticity and reliability of the VI's endorsement. These doubts are in line with the existing literature that emphasizes the importance of authenticity and trust in influencer marketing.

with human influencers. However, the absence of ethical codes for VIs may confuse customers and contribute to self-esteem issues linked to unattainable beauty standards presented on social media (Horton, 1956; Moustakas et al., 2020). To enhance relatability, intentional flaws could be added to VIs, but this may blur the lines between reality and virtuality, confusing young people.

Lil Miquela, popular among Millennials and Generation Z on Instagram and TikTok, partners with luxury brands and supports social causes (Bojanić, 2019; Eliaçik, 2022). While millennials seek entertainment, trends, and discounts from influencers, baby boomers on Facebook and YouTube represent untapped growth potential, particularly for purchasing advice. Both generations share a negative view of influencers promoting misleading products (Thakker & Pabalkar, 2021).

Virtual influencers, with their constant content production, can reinforce addictive behaviors toward social media, especially among young people (Sands et al., 2022). In contrast, human influencers pose content control challenges for brands, as their creative freedom may lead to dissonant messages that impact credibility and consumer trust (Leung et al., 2022). Striking the right balance between controlling the output of virtual influencers and allowing them to showcase their "personality" is crucial for brands.

In summary, VIs offers brands greater control, but maintaining authenticity and trustworthiness while balancing the brand message is essential for success.

6. Survey results

The survey conducted in Germany held 15 participants of unknown nationality, as it was anonymous, (11 females, 4 males) with the following demographic:

Further questioning sought to understand if participants viewed VIs as less trustworthy compared to real HI. A significant number believed VIs were less trustworthy due to their artificial nature and inability to form personal opinions. Yet, it was also noted that both VIs and human influencers operate under similar constraints, given their financial incentives and contractual obligations to the brands they represent.

The topic of potential threats posed by VIs was also discussed, including issues like addiction and misinformation. While the majority of participants did not see a significant danger for themselves, there were concerns about the impact on younger individuals who may be more susceptible to manipulation and less able to differentiate between legitimate sources and unreliable ones.

¹ (first) digital supermodel.



Predictions of VIs varied considerably. Some participants hoped for the demise of VIs, while others saw them as a fleeting trend. On the other hand, some believed that VIs has a place in the

7. Outlook of Virtual Influencers in the Metaverse

Human-like VIs does not only exist in a scientific fantasy anymore. The COVID-19 pandemic has accelerated the interest in VIs as the world becomes increasingly digitized and virtualized (Batista da Silva Oliveira & Chimenti, 2021). Research by Emergen (2022) predicts that the market size for digital human avatars will reach USD 527.58 billion by 2030. Experts suggested that VIs in the future will increase their impact in the environment where humans and virtual humans coexist, like in the metaverse (Conti, Gathani, and Tricomi, 2022).

The metaverse, as defined by Hollensen, Kotler, and Oprensnik (2022), refers to a 3D world where businesses, information, and communication tools are immersive and interconnected. In this virtual realm, users can interact with each other and experience a variety of digital environments and experiences.

Millennials and Gen Z are particularly receptive to VIs due to their familiarity with avatars and virtual interactions through gaming and social media (Influencer Marketing Factory, 2022). The allure of VIs lies in their existence in a virtual world, providing followers with unique and unpredictable experiences (de Brito Silva et al., 2022; Choudhry et al., 2022). However, VIs face challenges related to authenticity and relatability, which can be overcome through engaging storytelling (Moustakas et al., 2020).

Advancements in technology, including AI and VR, will further enhance interactions between VIs and followers in the metaverse (Conti, Gathani, & Tricomi, 2022). Moreover, the rise of non-fungible tokens (NFTs) has opened up new possibilities for VIs, enabling luxury brands to leverage their unique characteristics and collaborate with VIs in marketing strategies (Rehman et al., 2021; Joy et al., 2022).

Considering the literature reviews, it is clear that the outlook for VIs in the metaverse is highly optimistic. As technology continues to advance and enable more sophisticated interactions between VIs and their followers, their influence and impact are expected to grow exponentially. The metaverse, with its immersive digital

7.1 Business Opportunities in the Metaverse

The relationship between brands, influencers, and audiences is expected to undergo three key changes in the metaverse, as predicted by Tomas Oscar Andrén, a founding partner and Chief Visionary Officer of UPRISE Management (2022). Firstly, collaborations between brands and influencers in the immersive 3D metaverse can enhance marketing efficiency by targeting active followers of influencers. Secondly, NFTs can create a sense of exclusivity and inclusion for consumers, positively impacting brand image. Lastly, virtual influencers can interact with consumers on a more personal level, fostering a closer connection between brands and their audience (Andrén, 2022). As a result, brands are increasingly participating in the

future of marketing due to their convenience and potential high market value. This divided opinion reflects the current status of VIs in the marketing landscape.

metaverse to provide 3D experiences and enhanced consumer interaction through VIs.

The presence of the metaverse extends beyond virtual influencers and can be found in various industries. According to Park, Park, and Lee (2022), the metaverse is perceived as an expansion of virtual space within existing business areas.

In the future, as Joy, Zhu, Peña, and Brouard (2022) concluded, the collaboration between brands and NFTs will become more feasible, with users potentially showcasing branded items in the metaverse, such as wearing Dior sneakers and Gucci bags in a gaming world. These items could be advertised by virtual influencers.

7.2 Critics of the Metaverse

However, the metaverse cannot avoid critics. Even though many experts expected the metaverse could reach \$800 billion in 2024 (Bloomberg, 2021), the current market currently demonstrates no positive signals. In 2022, Meta had stock plunged in October 2022 due to disappointing quarterly earnings and higher forecasted expenses (Q.ai., 2022). According to Q.ai (2022), the reason is summed up as a decrease in advertisers' spending and an expensive commitment to the metaverse.

8. Conclusion

VI marketing is a relatively new marketing strategy using computer-generated influencers. The VIs has shown positive impacts on marketers' financial performances and are expected to increase their impact. The fact that brands don't have to worry about the negative impact of VI has significant advantages because brands have greater control over their advertisers' image and compliance. Furthermore, VI marketing provides higher scalability and engagement rates for brands.

Companies seemingly have to be just as cautious, regarding the usage of virtual influencers, as with human influencers as well. Especially since it has not been in action for very long, many mistakes are yet to be made. Consumers tend to have an issue with inauthenticity. While this can be a general setback in the consumer-brand relationship regarding advertisements, it is even more observable with virtual influencers. Therefore, it can be said, that according to the survey, there appears to be an impact of VIs on the buying behavior of customers. This is especially due to reasons such as the lack of authenticity and trust but also the confusion around the inhuman form of digital avatars while partly still being controlled by their human creators.

VI is perceived to exist as a mixture of virtual and real, which attracts Gen Z who enjoys the feeling of the unpredictable virtual world. From the findings, the potential area of VIs in the future can be the metaverse where VIs has a personal interaction with their followers and evolve stories. The metaverse is still in the evolutionary stage and cannot be sure of this successful outlook. Nevertheless, many companies are entering this area, thus, in the future, the impact will increase.



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