Virtual Influencers: The Emergence and Impact of Digital Personas in the Social Media Landscape

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Abstract

Virtual influencers, computer-generated personas that engage with audiences on social media platforms, have become a significant aspect of the digital marketing landscape. Unlike their human counterparts, these influencers are entirely crafted and controlled by designers, animators, and marketers. The phenomenon raises important questions about authenticity, the future of marketing, and the potential risks associated with this novel form of interaction. This paper explores the rise of virtual influencers, analyses their impact on social media, discusses ethical considerations, and considers future trends in this evolving domain.

Keywords: virtual influencers, Digital Marketing, Artificial Intelligence, Machine Learning, metaverse.

1.   Introduction

1.1   Background

The rapid expansion of social media has fundamentally transformed advertising and marketing, leading to the rise of influencer culture. Influencers, "an individual who has important effects on the behaviors of others" [1] is generally known in social media (e.g. Instagram, Facebook, Twitter) able to sway purchasing behaviour through their social media presence have shaped brand narratives[11]. Traditionally, these influencers are real people, often celebrities or micro-influencers who cultivate a loyal following. However, the emergence of **virtual influencers**, computer-generated characters that mimic human behaviour and interact with audiences, represents a significant shift in this landscape[4] [9]. Teams of creators and marketers control these digital avatars and often boast millions of followers while collaborating with major brands. According to research conducted by **The Influencer Marketing Hub in 2021** [3], 90% of marketers found influencer marketing effective, highlighting the growing significance of both human and virtual influencers in contemporary marketing strategies[6].

In the past several years many companies and organizations have tried to implement marketing activities with influencers of the social media to gain new customers [1]. Additionally, because marketing activities with online influencers be more cost-effective ways than other marketing activities for companies in terms

of promoting their products and services [3]. As such, human engagements with such virtual influencers can be, and are, largely social and emotional. Despite knowing that they are "engaging" with non-human agents, users understand and treat the virtual influencers as real social agents. This propensity to interact computers based on social norms is thought of as a mindless, automatic aspect of human reasoning, evidenced by behavioral studies demonstrated using the computer are social actors paradigm [5]–[9]

1.2   Objectives

This paper aims to provide a comprehensive analysis of virtual influencers, focusing on their creation, impact on marketing strategies, consumer perceptions, ethical implications, and potential future developments.

1.3   Research Objectives

-    To describe virtual influencers and examine how they work in the context of digital marketing.

-    To assess audience engagement and brand collaborations between virtual and conventional influencers.

-    To investigate the moral issues surrounding the use of online influencers in advertising efforts.

-    To investigate prospective advancements and future trends in the usage of virtual influencers.

2.   Literature Review

2.1   The Rise of Influencer Marketing

Influencer marketing emerged as a dominant trend in the 2010s, leveraging the credibility and reach of individuals with substantial followings to promote products. Studies reveal that influencers provide an authentic form of marketing communication, making it easier for brands to reach targeted demographics. According to a 2022 survey by Statista [1], the influencer marketing industry was valued at over $16 billion globally, with projections indicating continued growth in the coming years. Research by **Pew Research Centre** (**2020**) suggests that 70% of teens trust influencers more than traditional celebrities, illustrating the effectiveness of influencer marketing in engaging younger audiences [2].

2.2   Emergence of Virtual Influencers

Virtual influencers have rapidly gained prominence, with notable examples such as **Lil Miquela, Shudu, and Imma** becoming household names [8][12]. The first generation of these digital personas often mimics human traits, with some influencers initially presenting themselves as "real" before later revealing their digital nature. Virtual influencers blend elements of **artificial intelligence (AI)**,**3D design**, and **social media management**, enabling them to exist in a constant state of perfection and adaptability. For instance, Lil Miquela, created by the company Brud, has over 3 million followers on Instagram and has collaborated with brands like **Calvin Klein** and **Prada**. This showcases how virtual influencers are not merely digital creations but powerful marketing tools [4][10].
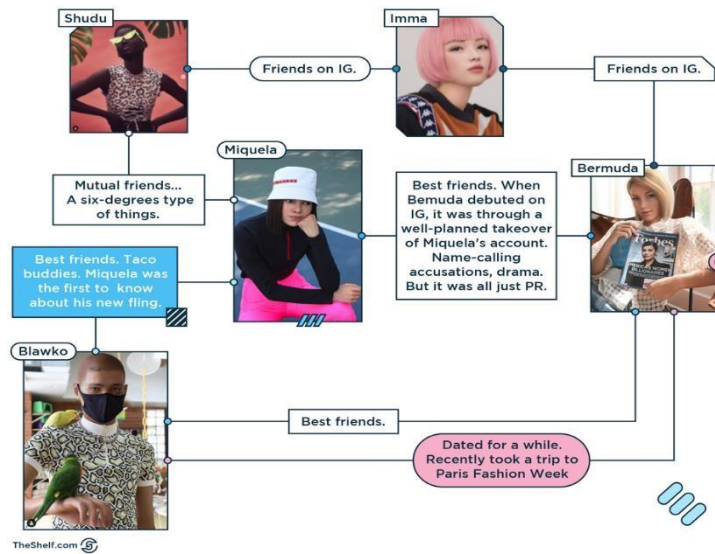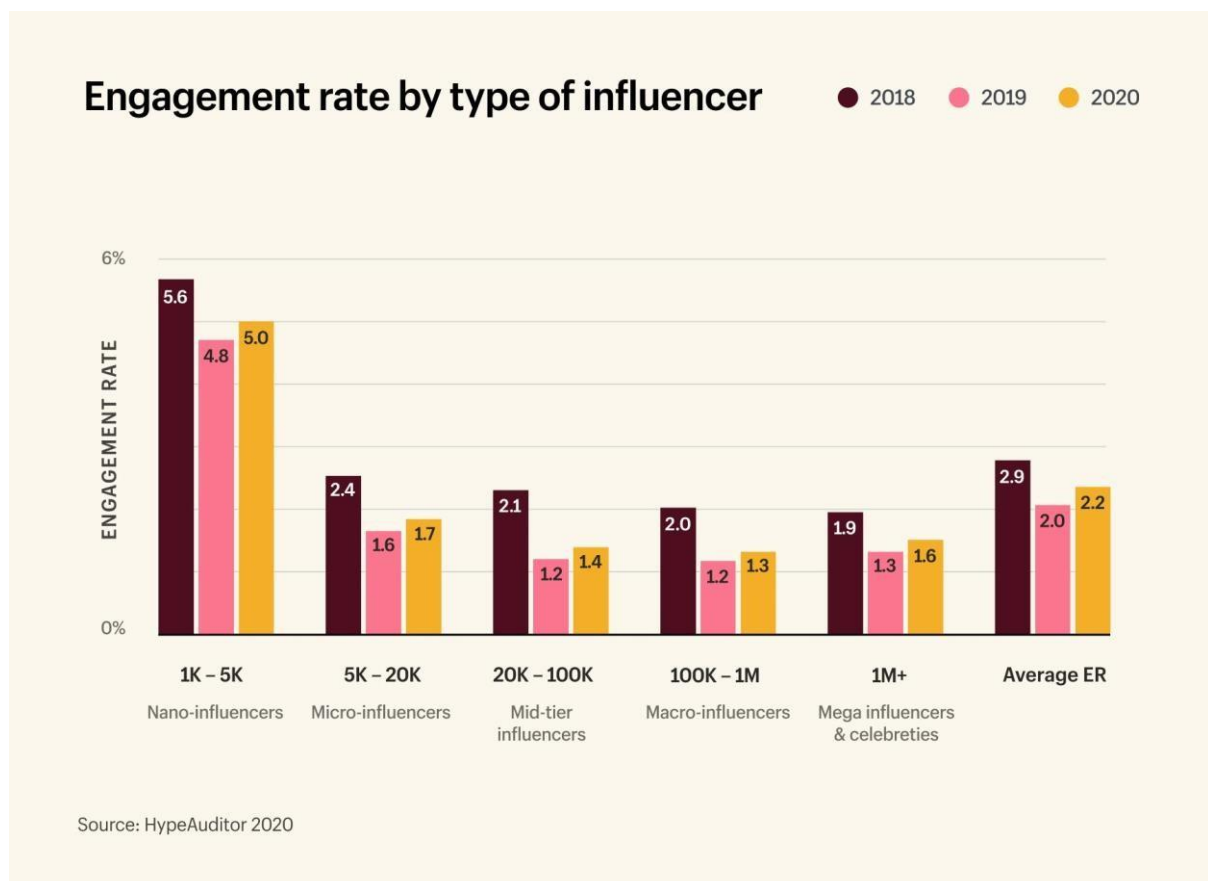
Figure No. 1 Emerging Influencers

Figure No. 2 Engagement rate by type of influencer

2.3 Consumer Engagement with Virtual Influencers

Research has begun to explore consumer engagement with virtual influencers. Some studies suggest that audiences engage with virtual influencers similarly to human influencers. A study published in the **Journal of Digital Marketing** found that users often suspend disbelief when interacting with virtual personas, treating them similarly to their human counterparts. This phenomenon can be attributed to the meticulously crafted backstories and personalities that virtual influencers possess, allowing them to resonate with audiences on an emotional level [5].

3. Methodology

This paper adopts a mixed-method approach, combining qualitative data from interviews with digital marketing professionals and quantitative data from surveys analyzing consumer perceptions. Secondary data from peerreviewed journals, industry reports, and case studies of notable virtual influencers were also utilized to contextualize the findings.

3.1 Sample

- **Interviews**: These interviews were conducted with 10 digital marketers working with virtual influencers, selected based on their experience in the field.

Interview Questions:

• **Experience**: What industries have you worked in? What social media tools have you used?

• **Strategies**: How do you stay up-to-date with social media trends? What strategies do you use to grow your audience?

• **Success metrics**: How do you measure the success of your content? What metrics do you use to measure the ROI for brands you partner with?

• **Crisis management**: Can you describe a time when you had to handle a social media crisis? How did you manage it?

• **Brand collaboration**: What criteria do you use to decide which brands to collaborate with?

• **Analytical skills**: How do you use data-driven insights to optimize performance?

• **Adaptability**: How quickly can you adapt your content and strategy to align with new trends and platform updates?

Surveys: Distributed to 500 social media users between 18-34, a key demographic for influencer marketing.
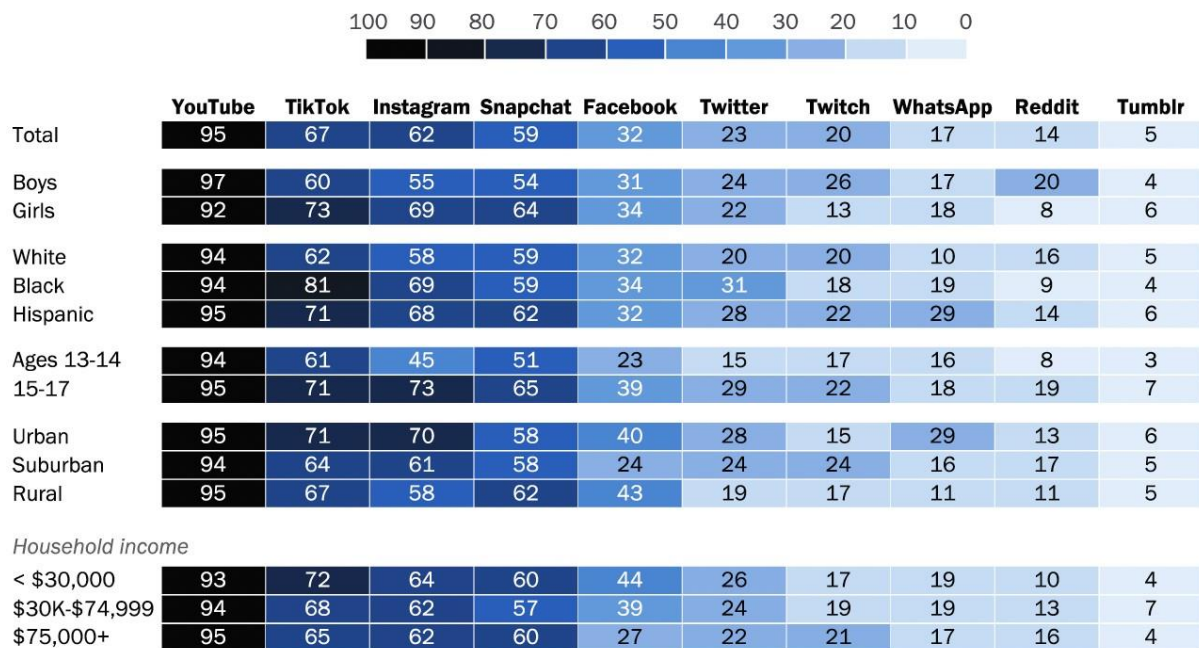
	YouTube	TikTok	Instagram	Snapchat	Facebook	Twitter	Twitch	WhatsApp	Reddit	Tumblr
Total	95	67	62	59	32	23	20	17	14	5
Boys	97	60	55	54	31	24	26	17	20	4
Girls	92	73	69	64	34	22	13	18	8	6
White	94	62	58	59	32	20	20	10	16	5
Black	94	81	69	59	34	31	18	19	9	4
Hispanic	95	71	68	62	32	28	22	29	14	6
Ages 13-14	94	61	45	51	23	15	17	16	8	3
15-17	95	71	73	65	39	29	22	18	19	7
Urban	95	71	70	58	40	28	15	29	13	6
Suburban	94	64	61	58	24	24	24	16	17	5
Rural	95	67	58	62	43	19	17	11	11	5
Household income										
< $30,000	93	72	64	60	44	26	17	19	10	4
$30K-$74,999	94	68	62	57	39	24	19	19	13	7
$75,000+	95	65	62	60	27	22	21	17	16	4

Figure No. 3 Data collection of social media platform usage among teenagers

3.2   Data Collection and Analysis

Data was collected through structured interviews and surveys over three months. Qualitative data were analyzed thematically, while quantitative data were analyzed using statistical methods to determine trends in consumer behavior. For the survey, descriptive statistics were used to summarize responses, with comparative analysis conducted to explore differences in perceptions based on demographics.

4   RESULTS

4.1   Characteristics of Virtual Influencers

Virtual influencers are typically hyper-realistic and maintain active social media profiles across platforms such as Instagram, TikTok, and YouTube. Unlike human influencers, they never age, and their digital perfection allows for an infinite range of looks, personalities, and backstories. For example, **Lil Miquela** not only engages with followers through aesthetic posts but also discusses social issues, blending marketing with meaningful content [4]. The careful construction of these characters allows brands to strategically align their messaging with the values and interests of their target audiences [12].

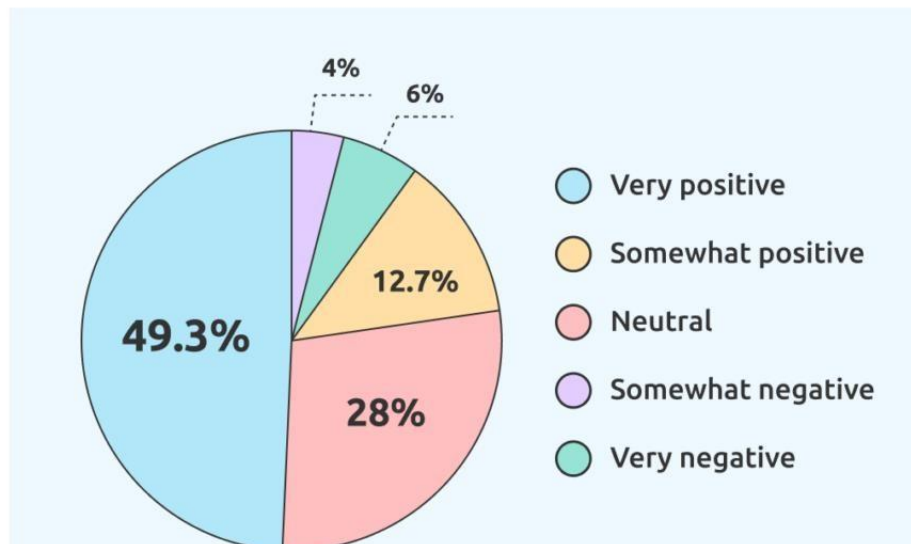## 4.2 Consumer Perception of Virtual Influencers

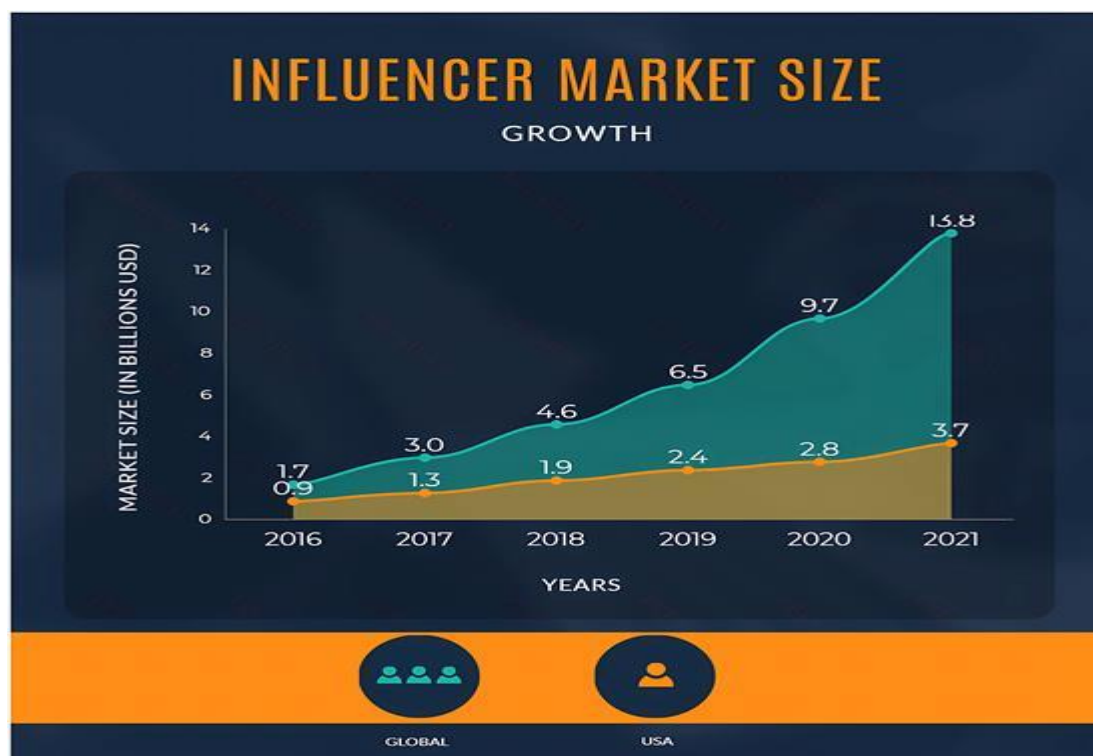**Figure No. 4 Perception of AI influencers effectiveness**

Figure No. 5 Perception of influencer market size growth graph

Survey data revealed mixed perceptions regarding virtual influencers:

- **42%** of respondents found virtual influencers "fascinating," appreciating their unique aesthetics and the creativity behind them.

- **35%** expressed concerns about the authenticity of virtual influencers, feeling that their artificial nature undermines the genuine connections typically formed with human influencers.

- **23%** were indifferent to the difference between virtual and human influencers as long as the content was engaging.

This indicates a growing acceptance of virtual influencers and highlights the ongoing skepticism surrounding their authenticity.

4.3   Brand Collaborations and Effectiveness

Brands have increasingly turned to virtual influencers for collaborations. In 2021, **Lil Miquela** was reportedly earning over $10,000 per sponsored post, collaborating with high-profile brands such as **Calvin Klein**, **Prada**, and **Chane**l[10]. Brands value the control and consistency that virtual influencers offer, as they can be tailored to align perfectly with campaign objectives without the unpredictability associated with human influencers [11]. The seamless integration of virtual influencers into marketing strategies exemplifies their utility in enhancing brand visibility and engagement [9].

Figure No. 6 Virtual influencers collaborating with different brands

4.4   Ethical Considerations

The use of virtual influencers raises ethical concerns, primarily related to transparency, manipulation, and body image standards. Critics argue that the digitally engineered perfection of virtual influencers

perpetuates unrealistic beauty standards. A report by the **World Health Organization (2020)** indicates that exposure to idealized body images can contribute to body dissatisfaction and eating disorders, particularly among young women. Furthermore, concerns about transparency arise when users are unaware that an influencer is computer-generated, which may lead to deception in marketing practices [6].

5 Discussion

5.1 Authenticity and Trust in Virtual Influencers

While virtual influencers can create highly polished and curated content, their ability to build trust and authenticity with audiences remains debatable. Human influencers are often valued for their personal experiences and relatability, which fosters deeper emotional connections with followers. A study by **Mediakix (2021)** indicates that authenticity is a critical factor for 86% of consumers when choosing to follow an influencer. Virtual influencers, despite their growing popularity, may struggle to achieve the same level of emotional connection due to their artificial nature.

5.2 Ethical Challenges and Regulatory Concerns

The ethical issues surrounding virtual influencers are multifaceted. The lack of clear regulations governing the use of digital personas in marketing raises concerns about accountability and transparency. Brands may circumvent regulations concerning disclosure by creating hyper-realistic avatars that appear human, leading to potential manipulation of consumer perceptions. Moreover, the use of these avatars may exacerbate body image issues, perpetuating unrealistic standards of beauty and success [5]

5.3 Future Trends in Virtual Influencers

The rise of **artificial intelligence** and **machine learning** will likely enable virtual influencers to evolve further, incorporating sophisticated conversational AI that allows them to interact with followers in real-time. This could lead to more personalized marketing experiences. Additionally, the integration of virtual influencers into the **metaverse**—an immersive virtual reality space—may provide new opportunities for brand engagement. For instance, companies may create entire virtual worlds where users can interact with their favourite virtual influencers, participating in branded experiences that blend entertainment and commerce.

6 Conclusion

Virtual influencers represent a fascinating and disruptive force in the digital marketing ecosystem. They offer significant advantages in terms of control, consistency, and creative possibilities; however, they also raise important ethical and regulatory questions. As technology advances and these digital personas become more sophisticated, it is crucial for marketers, regulators, and consumers to navigate the challenges associated with this new form of engagement.

6.1 Recommendations

- **Transparency**: Brands should ensure transparency by clearly indicating when an influencer is computergenerated, using hashtags like #VirtualInfluencer.

- **Ethical Guidelines**: Industry-wide ethical guidelines are necessary to address issues like body image and manipulation. Collaborations between marketing organizations and mental health advocates can help create a framework for responsible marketing.

- **Consumer Education**: Educating consumers about the digital nature of these influencers can help mitigate potential deception. Brands could incorporate educational content into campaigns, informing followers about the creation and purpose of virtual influencers.

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16. Figure No. 4 Perception of influencer graph –
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