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*Derleme Makale*

# REAL VS. RENDERED: A SCOPING REVIEW ON HUMAN AND VIRTUAL SOCIAL MEDIA INFLUENCERS

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***Abstract***[1]

*This conceptual study explores the comparative effectiveness of human influencers (HIs) and virtual influencers (VIs) by integrating marketing and sociological perspectives. As brands increasingly adopt virtual personas in digital campaigns, understanding how consumers respond to real versus rendered influencers has become essential for both scholarship and practice. The study employs a conceptual scoping review, drawing on interdisciplinary theories.* T*his scoping review analyzed studies published between 2020 and 2025, using Scopus, Web of Science, and Google Scholar databases. Following PRISMA-ScR guidelines, studies were screened and selected according to predefined inclusion and exclusion criteria. A total of 60 studies were synthesized. The review compares the influence mechanisms, authenticity perceptions, and social implications of HIs and Vis and highlights societal disadvantages of VIs over HIs. Findings suggest that HIs are more effective in contexts demanding emotional engagement, social trust, and authenticity such as lifestyle, fashion, and community-driven campaigns. In contrast, VIs demonstrate effectiveness in tech-forward, highly visual, and brand-controlled settings, particularly in sectors like gaming, digital fashion, and beauty technology. The emergence of VIs also brings up important sociological issues about identity norms, cultural representation, labor displacement, and the algorithmic creation of symbolic capital. This study contributes to literature by offering a multidimensional framework that combines marketing and sociological insights. It further proposes a research agenda addressing hybrid influencer strategies, ethical and regulatory considerations, cross-cultural adoption, and the transformation of social influence in digital environments. These contributions provide both theoretical grounding and practical relevance for researchers, marketers, and policymakers navigating the evolving social media influencer economy.*

***Keywords:*** *Influencer Marketing, Human Influencer, Virtual Influencer, Digital Authenticity, Social Influence, Scoping Review.*

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# GERÇEK YAPAYA KARŞI: İNSAN VE SANAL SOSYAL MEDYA ETKILEYICILERINE YÖNELIK KAPSAYICI BIR DERLEME

***Öz***

*Bu kavramsal çalışma, insan ve sanal etkileyicilerin karşılaştırmalı etkinliğini pazarlama ve sosyolojik perspektifleri birleştirerek incelemektedir. Markaların dijital kampanyalarda sanal kişilikleri giderek daha fazla benimsemesiyle birlikte, tüketicilerin gerçek ve sanal etkileyicilere nasıl tepki verdiğini anlamak hem akademik hem de uygulamalı açıdan önem kazanmıştır. Çalışma, disiplinlerarası kuramlara dayanan kavramsal bir kapsayıcı literatür taraması yöntemi kullanmaktadır. Bu kapsam incelemesi, 2020 ile 2025 yılları arasında yayımlanan çalışmaları Scopus, Web of Science ve Google Scholar veri tabanlarını kullanarak analiz etmiştir. PRISMA-ScR yönergelerine uygun olarak, çalışmalar önceden belirlenmiş dahil etme ve hariç tutma kriterlerine göre taranmış ve seçilmiştir. Toplamda 60 çalışma sentezlenmiştir. Mevcut literatür analiz edilerek insan ve sanal etkileyicilerin etki mekanizmaları, özgünlük algıları ve toplumsal yansımaları karşılaştırılmakta; ayrıca sanal etkileyicilerin insan etkileyicilere kıyasla toplumsal dezavantajları vurgulanmaktadır. Bulgular, insan etkileyicilerin duygu etkileşimi, sosyal güven ve özgünlük gerektiren moda, yaşam tarzı ve topluluk temelli kampanyalarda daha etkili olduğunu göstermektedir. Öte yandan, sanal etkileyicilerin teknoloji odaklı, görselliği yüksek ve marka kontrolündeki sektörlerde, özellikle oyun, dijital moda ve güzellik teknolojisi alanlarında, daha etkili olduğu görülmektedir. Sanal etkileyicilerin yükselişi aynı zamanda kimlik normları, kültürel temsil, emek yer değiştirmesi ve algoritmik sembolik sermaye üretimi gibi önemli sosyolojik sorunları da gündeme getirmektedir. Bu çalışma, pazarlama ve sosyoloji perspektiflerini birleştiren çok boyutlu bir çerçeve sunarak literatüre katkıda bulunmakta; ayrıca karma etkileyici stratejileri, etik ve düzenleyici konular, kültürlerarası benimseme ve dijital ortamda sosyal etkinin dönüşümüne yönelik bir araştırma gündemi önermektedir. Bu katkılar, değişen sosyal medya etkileyici ekonomisinde araştırmacılar, pazarlamacılar ve politika yapıcılar için teorik, temel ve pratik rehberlik sağlamaktadır.*

***Anahtar Kelimeler:*** *Etkileyici Pazarlama, İnsan Etkileyici, Sanal Etkileyici, Dijital Özgünlük, Sosyal Etki, Kapsayıcı Derleme.*

## INTRODUCTION

A new era of marketing, information sharing, and communication have been initiated by social media. The widespread use of social media has drastically changed how companies interact with their target audience. Over the past ten years, there has been a tremendous shift in marketing from traditional celebrity endorsements to complex tactics that make use of social media personalities, known as influencers who leverage their online presence to affect consumer attitudes and final purchasing decisions. (Kammoun, 2025; Yuan & Lou, 2020). As the influencer economy grew, marketers depended more on these people for targeted audience engagement, co-creation of content, and real-time trend adaptation.

Influencer marketing is transitioning from a trendy niche to a major advertising pillar, shaping the future of digital marketing. Influencer platform market specifically hit $25.4 billion in 2024, expected to reach $34.3 billion in 2025, with AI fueling discovery and performance optimization (Maguire & Schulz, 2025). Influencers have grown in popularity on social media (SM) in recent years, and influencer marketing has emerged as a crucial component of businesses' marketing strategies especially for the industries where identity expression, cultural relevance, and aesthetic appeal are essential components of successful communication (Barari, 2023).

Social media influencers (SMIs) create and share information in social networking sites (SNS) about their expertise in areas such as health, fitness, fashion, and lifestyle to cultivate a community of followers (Agnihotri et al., 2025; Casalo et al., 2020; Sokolova & Kefi, 2020). Human influencers have traditionally dominated the social media marketing land, taking use of their capacity to build parasocial bonds with followers, elicit emotional resonance, and offer meaningful stories based on actual experiences (Venciute et al., 2023). They have become key players in advertising tactics because of their capacity to represent a brand's identity while communicating with followers in an open, appearing natural manner (Jegham & Bouzaabia, 2022).

But new developments in computer-generated graphics, machine learning, and artificial intelligence impacted communication strategies of companies (Davlembayeva et al., 2025). In parallel with this evolution, the last decade has witnessed the emergence of virtual influencers -computer-generated characters- added as a novel layer to the influencer ecosystem. Many global businesses in a variety of industries, including fashion, technology, automotive, and entertainment, are increasingly using these digital characters, which range from cartoonish figures to hyper-realistic avatars (Jhawar et al., 2023). Because these digital agents can provide constant, brand-safe material without the unpredictability of real influencers, they have become increasingly popular among global brands since the 2016 launch of celebrities like Lil Miquela (Moustakas et al., 2020). Industries like fashion, beauty, and lifestyle where visual narrative and creativity are essential are using these avatars more. In contrast to traditional advertising efforts using celebrities and public figures, marketers view partnerships with fictional characters as strategically viable and distinct from traditional ones (Landgrebe, 2024).

As influencers become central to online branding, entertainment, and social interaction, virtual influencers introduce a new paradigm where synthetic identities participate in shaping consumer behavior, aesthetic norms, and social values. These entities do not simply promote products; they perform curated versions of lifestyle, gender, and culture, often devoid of lived experience or emotional depth. This evolution of influence reflects broader shifts in platform capitalism, where algorithmically driven personas challenge traditional forms of identity, labor, and symbolic representation (Couldry & Mejias, 2019). Such dynamics require a

sociological lens to interrogate how authenticity and social trust are reconfigured in digital markets (Fuchs, 2021). From a sociological perspective, there are critical concerns regarding the authenticity of social interactions, the homogenization of cultural narratives, and the commodification of identity under platform capitalism (Srnicek, 2017; Stein et al., 2024).

Although the existing literature provides valuable insights into influencer marketing, little is known about (a) how human and virtual influencers perceive authenticity and trust, (b) the sociological implications of algorithmic personas, and (c) how these differences shape consumer-brand relationships. This study adopts a scoping review approach, following the methodological guidance of Munn et al. (2018), focusing on mapping and synthesizing conceptual and empirical research on human vs. virtual influencers rather than testing hypotheses. Unlike systematic reviews that aim for exhaustive coverage and quantitative synthesis, scoping reviews are exploratory and map the breadth and conceptual boundaries of emerging fields.

The aim of this conceptual scoping review is to compare the perceived effectiveness of human influencers (hereafter HI) and virtual influencers (hereafter VI) through a multidisciplinary lens, incorporating psychological, sociological, and marketing theories. Specifically, the study seeks to synthesize existing academic findings on the differences and similarities between HIs and VIs in terms of trust, authenticity, emotional engagement, and message persuasiveness. By integrating perspectives from source credibility theory, parasocial interaction theory, and symbolic interactionism, this research aims to develop a nuanced framework that can guide future empirical investigations and inform marketers, policymakers, and society at large on the implications of replacing human influence with algorithmically generated personas.

The following review synthesizes prior research on influencer marketing to illuminate how HIs and VIs have evolved, the theoretical mechanisms underlying their effectiveness, and the key similarities and differences that define their roles within the contemporary digital ecosystem.

## LITERATURE REVIEW

### Evolution of Influencer Marketing

Social media platforms' widespread use has promoted unprecedented levels of social engagement and interaction. People's roles in the communication context have changed as a result of these platforms' revolutionary impact on sharing, communication, and interaction (Aldlimi et al., 2025). Rooted in traditional celebrity endorsement strategies, influencer marketing evolved as digital platforms shifted the locus of influence from mass media figures to more accessible, relatable individuals. These social media personalities, commonly referred to as “influencers”, create and

disseminate content, amass dedicated followings, and serve as opinion leaders within niche communities (Lou & Yuan, 2019).

Influencer marketing predominantly featured macro-influencers, including celebrities and high-profile bloggers (El Hedhli et al., 2021). Companies pay billions of dollars annually to have well-known celebrities support and advertise their goods, services, and brands (Hacking, 2023). These endorsements were often featured in traditional advertising formats such as print, television, and runway shows, aiming to transfer the celebrity's symbolic value to the brand. While effective in building brand image and global awareness, celebrity marketing lacked personalized engagement (Zhang & Wei, 2021). As engagement metrics and authenticity became more critical to brand success, the field expanded to include micro- and nano-influencers—individuals with smaller but more loyal and trust-based audiences (Joshi et al., 2023). Celebrities are well-known for their achievements in various fields, but influencers are well-known for their social media presence, which allows them to establish and preserve close relationships with a large following (Belanche et al., 2021). The increasing importance of parasocial relationships, one-sided emotional bonds between followers and influencers, has also contributed to this shift, enhancing perceived credibility and intimacy (Hwang & Zhang, 2018).

In recent years, this landscape has evolved further with the introduction of VIs, computer-generated characters designed to simulate human presence on social media with a distinct "personal" character and a sizable social media following (Audrezet et al., 2020). As technology continues to advance quickly, VIs are becoming more popular worldwide alongside HIs. Driven by advancements in artificial intelligence and virtual reality, these lifelike digital individuals have the potential to revolutionize customer engagement and influencer marketing (Azizakhon & Kim, 2024). This shift represents a blurring of boundaries between real and virtual, reshaping the dynamics of trust, authenticity, and engagement in social media (Laszkiewicz & Kalinska-Kula, 2023).

**The Rise of VIs**

While online platforms have been booming since the end of 2019, offline activities have drastically decreased as a result of the pandemic. During these unprecedented times, the Internet of Things and artificial intelligence advanced and every industry passed through a significant digital revolution. VIs as computer-generated digital personas operating on social media have rapidly emerged as a transformative force in marketing. Initially considered a niche novelty, VIs have rapidly grown in number and influence. Once perceived as fringe, VIs are now central to the influencer ecosystem, with prominent figures like Lil Miquela and Imma commanding millions of followers and representing major global brands such as Prada, Puma, and Samsung (Ju et al., 2024). Their expansion has coincided with consumer culture's shift toward digitalization, where image-driven interaction and constant visibility of brands are now crucial (Diao et al., 2025).

VIs are online personas associated with specific social media accounts that are made and maintained by businesses, digital agencies, or individuals (Sands et al., 2022). On social media, VIs can interact and build relationships with a huge number of customers, much like real-life (aka human) influencers can (Leung et al., 2022). Numerous companies are interested in using VIs to market goods and services, as millions of consumers engage with these characters on various social media platforms such as Youtube, Instagram and Tiktok (Conti et al., 2022). The diversification of VIs has reshaped digital marketing, particularly as brands seek scalable, controllable, and engaging alternatives to HIs. VIs vary significantly in visual style, autonomy, and affiliation. A foundational classification distinguishes between human-like VIs (HVIs) and anime-like VIs (AVIs). Further segmentation, as explored by Yan et al. (2025) identifies mimic-human, animated-human, and non-human (e.g., animal-like or fantastical) influencers. Though they resemble people, animated-human VIs are more like cartoons with simplified human traits. AVIs mimic human body shapes but add unrealistic elements, like as doll-like bodies or big eyes. Lastly, nonhuman VIs are all other non-human figures such as animal-like VIs (de Silva Oliveira & Chimenti, 2021). Because of their non-human look, NVIs include anthropomorphic foods, toys, and mythical animals (Choudhry et al., 2022).

VIs are increasingly seen as attractive alternatives or complements to traditional HIs. Brands from different industries such as Balmain, Louis Vuitton, Mac Cosmetics, Prada, Lenova and Renault have embraced VIs to reach younger, tech-savvy consumers who spend significant time on visual platforms like Instagram and TikTok (Ju et al., 2024). This shift is also supported by consumer behavior: over 58% of U.S. consumers report following at least one VI, and 35% have purchased a product endorsed by a VI (Bringé, 2022). These statistics point to the growing legitimacy of VIs as persuasive brand advocates.

The increasing use of VIs by marketers brings up a number of ethical issues that demand careful consideration, especially with regard to authenticity, manipulation, and transparency. Scholars emphasize that these avatars, entirely controlled by organizations or creative agencies, conceal the human agency behind them, potentially deceiving audiences such as younger or more vulnerable users, into perceiving them as independent entities rather than corporate constructs (Kim & Wang, 2023). By taking advantage of parasocial interactions and emotional attachment techniques that imitate HIs, this ambiguity erodes trust and could weaken consumer autonomy. Additionally, critics argue that the hyper-real aesthetics of many VIs might worsen psychological distress, promote unrealistic self-comparison, and impair identity development by reinforcing restricted beauty standards and idealized societal norms (Thompson et al., 2025).

## METHODOLOGY

This study follows the scoping review methodology proposed by Arksey and O'Malley (2005), further refined by Munn et al. (2018) and reported in accordance with PRISMA-ScR guidelines (Tricco et al., 2018) to explore and compare the

effectiveness of HIs and VIs across diverse marketing contexts. The scoping review approach is particularly suitable for emerging and under-theorized topics (Munn et al., 2018), such as VI marketing, where empirical work is still fragmented and rapidly evolving (Angmo et al., 2025; Tricco et al., 2018). Rather than testing hypotheses, this method aims to map existing knowledge, identify conceptual patterns, dominant theories, methodological approaches and propose future research directions based on the current state of the literature (Arksey & O'Malley, 2005).

Scoping review is the most appropriate literature review methodology based on main objective of this study, which is to synthesize the existing knowledge on HIs. vs. VIs, identify conceptual similarities/differences, discuss underlying theoretical foundations and explore patterns of their effectiveness for marketers, consumers and policymakers. The objective of this methodological approach is to systematically map, categorize, and synthesize the existing academic and conceptual knowledge comparing human influencers (HIs) and virtual influencers (VIs) across marketing, communication, and sociological perspectives.

The methodological process follows five sequential stages consistent with PRISMA-ScR recommendations (Munn et al., 2018):

(1) identifying the research questions,

(2) developing the search strategy and identifying relevant studies,

(3) selecting eligible studies,

(4) charting the data, and

(5) collating, summarizing, and synthesizing the results.

**Step 1. Research Questions**

The primary aim of this scoping review is to provide a comprehensive and structured overview of how human and virtual influencers have been examined in marketing, consumer behavior, and sociological research. A thorough exploratory approach is necessary given the quick spread of AI-generated personas in digital branding and the lack of established theoretical frameworks.

Accordingly, the review addresses the following research questions:

RQ1: How do human and virtual influencers differ in terms of perceived authenticity, trust, and consumer engagement?

RQ2: What psychological, marketing, and sociological theories are used to explain the effectiveness of human versus virtual influencers?

RQ3: In which contexts (e.g., industries, product types, platforms) are human and virtual influencers examined?

RQ4: What ethical, cultural, and societal implications emerge from the use of virtual influencers in marketing communication?

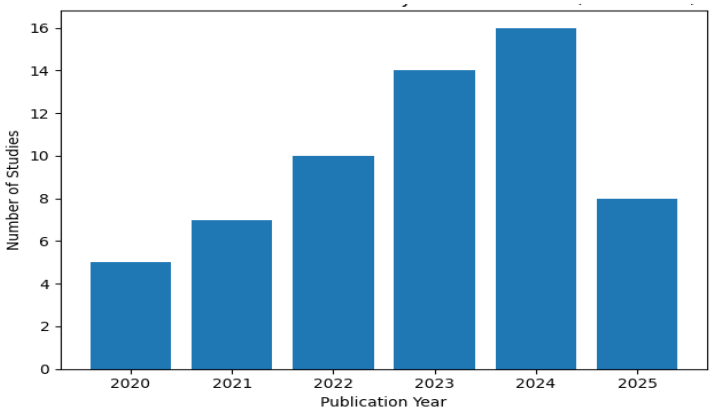
**Step 2. Information Sources and Study Selection**

The literature search was conducted across three major academic databases as Scopus, Web of Science, and Google Scholar to ensure comprehensive coverage of interdisciplinary sources. These databases were selected due to their extensive coverage of marketing, consumer behavior, communication, sociology, and human–computer interaction research (Angmo et al., 2025). A preliminary exploratory search was conducted to refine keywords and eligibility criteria. The final search string combined influencer-related terms with marketing outcome variables and was applied to titles, abstracts, and keywords with the following syntax:

("human influencer" OR "social media influencer" OR "virtual influencer" OR "AI influencer" OR "computer-generated influencer" OR "CGI influencer") AND ("authenticity" OR "influencer marketing" OR "consumer psychology" OR "sociology")

The review period was specifically chosen 2020-2025 to capture an influencer marketing phase that is structurally transformational. The COVID-19 pandemic increased reliance on mediated social connection, accelerated digitalization, and normalized the use of virtual and non-human entities in daily communication and consumption. During this time, VIs are becoming increasingly institutionalized as both socially and commercially successful actors (Panggati et al., 2023; Subramaniam et al., 2021), thus there is growing scholarly debate surrounding authenticity and digital identity in this timeframe. Figure 1 presents trends of publication per year from 2020 to 2025.

Figure 1: Publication Trends per Year (2020-2025)




Studies were included if they met all of the following criteria:

-Examined human influencers, virtual influencers, or both

-Addressed marketing- or consumer-related outcomes (e.g., trust, authenticity, engagement, persuasion)

-Were peer-reviewed journal articles, conference proceedings and books/book chapters

-Were published in English

Studies were excluded if they primarily focused on avatars, service robots, or digital agents without explicit relevance to influencer marketing, or if influencer type could not be clearly distinguished.

**Step 3. Data Collection**

The initial database search yielded a total of 531 records, including 140 from Scopus, 217 from Web of Science, and 174 from Google Scholar. All retrieved records were exported to a reference database and duplicates were removed prior to screening. Study selection was conducted in two stages. First, titles and abstracts were screened for relevance. Second, full-text articles were assessed against the inclusion criteria. After removing 186 duplicate records, 345 unique articles remained for title and abstract screening. Based on relevance to influencer marketing, digital communication, and authenticity, 176 records were excluded as out of scope. Consequently, 169 full-text articles were assessed for eligibility. During this stage, 109 papers were excluded for being conceptually weak, inconsistent with the study's objectives, or written in non-English languages. The final synthesis included 60 academic studies that met all inclusion criteria—specifically, peer-reviewed journal articles and conceptual or empirical works providing theoretical grounding in influencer marketing with human and virtual influencer comparison mostly. Figure 2 shows the article selection process.

**Step 4. Data Charting Process**

The screening and selection process was structured according to the PRISMA-ScR flow diagram, summarizing the identification, screening, eligibility, and inclusion stages described above. Data extraction and charting were conducted manually using Microsoft Excel, where each included study was coded for author, year, journal outlet, underlying theory or model, industry or product type, methodological approach, and key findings. This systematic process ensured transparency and reproducibility while allowing conceptual synthesis across disciplines. The charted data provided the basis for the thematic synthesis presented in the findings section. Table 1 summarizes some representative academic studies included in this scoping review.

Figure 2: Article Selection Process

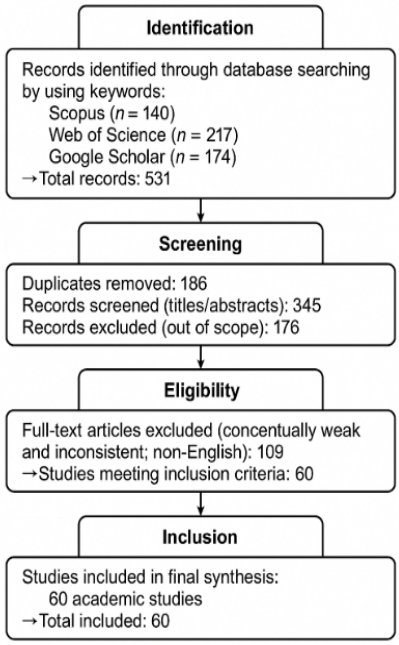



Table 1: Recent Studies on Human vs. Virtual Influencers

| Author(s) & Year | Journal/ Source | Theory/Model | Product/Industry Type | Methodology | Key Findings |
|---|---|---|---|---|---|
| Moustakas et al. (2020) | Proceedings of International conference on cyber security and protection of digital services, IEEE | Expert perspectives; Ethics & authenticity | Qualitative insights on VI effectiveness | Semi-structured interviews with digital media experts | VIs offer novelty and brand control yet are perceived as less authentic than HIs. Ethical transparency and narrative realism are crucial for credibility, indicating that VIs need clear disclosure and strong character design to approach HI persuasiveness. |
| Choudhry et al. (2022) | Proceedings of The ACM On Human-Computer Interaction | Grounded Theory, VI taxonomy (mimic-real, animated human, non-human) | Instagram VIs across domains beyond fashion | Qualitative interviews | Followers value VIs for creativity and storytelling but place more trust in HIs. Thus, VIs capture attention, while HIs more reliably |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | convert through perceived authenticity and relational closeness. |
| Barari (2023) | Marketing Intelligence & Planning | Social Comparison; Regulatory Focus; FOMO mediation | Beauty/Fashion SMIs | Text mining on SMI posts + Experiment | Both HI and VI exposure can harm well-being, but VIs more strongly trigger FOMO and social comparison. Compared with HIs, VIs' idealized aesthetics raise anxiety, suggesting careful targeting and messaging when using VIs. |
| Deng & Jiang (2023) | Journal of Retailing and Consumer Services | Social Comparison & Body Image | Influencer images /appearance outcomes | Experiment | Both HIs and VIs increase appearance anxiety relative to control, but VIs elicit lower anxiety and comparison than HIs. Less humanlike cues may buffer harmful comparisons, implying distinct ethical risk profiles for HI vs VI. |
| Franke et al. (2023) | Journal of Advertising | Match-Up Hypothesis; Disclosure/Identification considerations | Advertising endorsements (cosmetics & other categories) | Experiment | Consumers generally prefer HIs for credibility, while VIs boost novelty and memorability. Endorser–product congruence and disclosure shape outcomes, pointing to hybrid HI–VI strategies to balance trust and novelty. |
| Lou et al. (2023) | Journal of Advertising | Uses & Gratifications; Uncanny Valley | Followers of VIs (motivations & perceptions) | In-depth interviews (qualitative) | VIs are seen as 'authentically fake': strong on aesthetics/novelty but weaker on emotional realism. Compared with HIs, VIs build |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | awareness and image efficiently yet are less persuasive for purchase decisions. |
| Belanche et al. (2024) | Journal of Business Research | Social Identity Theory | Instagram endorsements; Utilitarian vs Hedonic products | Experiment | HIs outperform for hedonic products via identification, while VIs excel for utilitarian products via perceived usefulness. Matching influencer type to product type enhances persuasion relative to a one-size-fits-all approach. |
| De Cicco et al. (2024) | Technology in Society | CASA paradigm (Computers as Social Actors) | Instagram sponsorship scenarios; hedonic vs utilitarian messages | Experiment | Disclosing VI artificiality does not significantly damage trust or brand attitudes. When communication feels socially natural, VIs can perform on par with HIs, narrowing the authenticity gap. |
| Ferraro et al. (2024) | International Journal of Advertising | Diversity representation; Novelty & Likeability mediation | VIs representing diverse subgroups; brand collaborations | Experiment | Diverse VIs increase novelty and likeability, improving WOM and intentions. Relative to HIs, VIs allow scalable representation across identities, strengthening inclusion signals in campaigns. |
| Ju et al. (2024) | Fashion and Textiles | Authenticity & Humanlikeness | Instagram VI posts; operator type | Content analysis of profiles/posts | More humanlike and positively expressive VIs garner stronger engagement, yet HIs remain advantaged for trust-heavy messages. Operator transparency (non-brand vs |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | brand) also shapes acceptance, moderating HI–VI differences. |
| Kim et al. (2024) | Journal of Business Research | Avatar Marketing; Ambivalence (eeriness vs coolness) | VI design: form realism × behavioral realism | Experiment | Higher behavioral realism increases engagement, but extreme form realism can evoke eeriness. Compared with HIs, well-balanced VI realism yields engagement via 'coolness' without triggering the uncanny response. |
| Ameen et al. (2024) | Journal of Travel Research | Sociology of Trust & Risk | Tourism / Destination choice | Survey + Experiment | Influencer type moderates how trust translates into visit intention: HIs leverage perceived authenticity, while VIs are effective under informational, low-risk frames. The HI–VI choice should align with risk perception and message valence. |
| Davlembayeva et al. (2025) | British Journal of Management, | Social Influence Theory | General consumer behavior with VIs | Literature synthesis + Survey | Specific VI traits (competence, warmth, interactivity) can elicit compliance, identification, and internalization comparable to HIs. While HIs persuade through identification, VIs win via uniqueness and technological appeal when attributes are configured optimally. |

(source: by the author)

## FINDINGS

In line with the final step of scoping review methodology, this section collates and synthesizes findings from the selected studies to identify dominant themes, recurring mechanisms, and comparative insights into the roles of HIs and VIs.

### VI vs HI: Similarities and Differences

HIs and VIs serve overlapping functions in interactive advertising but differ substantially in their ontological nature, message construction, and audience engagement (Lou et al., 2023). Table 2 depicts the main characteristics of HIs and VIs regarding similarities and differences.

*Advertising Source:*

HI and VI share several core functions in influencer marketing. Both serve as brand ambassadors, promoting products and services via social media. They operate as content creators, generating engaging posts, stories, and videos to influence consumer behavior (Byun & Ahn, 2023; Jhawar et al., 2023). Both VIs and HIs function as advertising sources by endorsing products and shaping consumer attitudes and behaviors. According to Byun and Ahn (2023), both types of influencers are capable of activating source credibility constructs, such as trustworthiness, expertise, and attractiveness, which are foundational in the Source Credibility Theory (Ohanian, 1990). However, their differences lie in the origin of these traits. HIs are seen as genuine individuals who convey credibility through personal experience, emotional expression, and self-disclosure (Djafarova & Rushworth, 2017). Conversely, VIs derive their source credibility from technical perfection, visual appeal, and brand-controlled consistency (Sands et al., 2022). While HIs are prone to unpredictability (e.g., scandals or inconsistent messaging), VIs are valued for being fully programmable and scandal-proof, which enhances brand safety in communication (Jhawar et al., 2023).

*Message Content: Constructed vs. Experiential*

Regarding message content, both HIs and VIs can deliver informational and emotional appeals, yet the nature of those messages differs. HIs often integrate personal narratives and real-life experiences into their content, which enhances authenticity and emotional resonance (Audrezet et al., 2020). Their stories tend to reflect a human perspective with spontaneity and imperfection. In contrast, VIs create message content that is strategically curated and brand-aligned. According to Byun and Ahn (2023), VIs often deliver highly stylized, coherent, and polished content that appeals to aesthetics and novelty. However, the lack of lived experience may reduce the depth of emotional storytelling, making their messages more instrumental (Belanche et al., 2024). Interestingly, message effectiveness also depends on the product type. Lou et al. (2023) show that for utilitarian products, consumers perceive VIs as more effective due to their consistent and informational

nature, whereas HIs perform better with hedonic products that require emotional connection.

*Interactions with Audiences: Parasocial and Interactive Engagement*

In terms of interactions with audiences, both influencer types foster parasocial interactions (PSI), yet they do so in different ways. HIs engage in more authentic, two-way communication, often responding to comments, participating in live sessions, and sharing personal updates. This creates a feeling of closeness and interactivity with audience (Deng & Jiang, 2023). VIs, although inherently artificial, can simulate interaction through AI-generated responses or scripted Q&As. Some VIs even mimic emotional expression and activism (e.g., Lil Miquela supporting Black Lives Matter movement or climate justice), thus creating an illusion of social engagement. However, the recent research note that these interactions are predefined and lack spontaneity, which may limit the perceived depth of engagement (Jhawar et al., 2023). Furthermore, user empowerment affects interaction. HIs frequently collaborate with audiences by encouraging user-generated content, collaborations, or Q&As. VIs provide a more brand-controlled relationship, typically confined to comments or idealized storytelling. This influences how listeners perceive intimacy, responsiveness, and sincerity during the communication process (Byun & Ahn, 2023). While HIs and VIs share structural similarities in functioning as advertising sources, their differences emerge clearly in message generation and audience interaction. HIs offer relational warmth, experiential storytelling, and authentic engagement, while VIs deliver highly controlled, aesthetically consistent, and scalable messaging that aligns with brand safety and novelty-seeking behaviors. These distinctions suggest that marketers should strategically determine influencer type with campaign goals, product types, and audience expectations (Franke et al., 2023).

Table 2: Characteristics of HIs and VIs

| Dimension | HIs | VIs |
|---|---|---|
| **Ontological Nature** | Real people with genuine experiences, emotions, and social identities | Computer-generated characters designed by brands or agencies |
| **Authenticity** | Perceived as more authentic due to real-life stories, emotions, and transparency | Perceived as "authentically fake"; curated authenticity with no real-world grounding |

| | | |
|---|---|---|
| **Trustworthiness** | Built through relatability, vulnerability, and interpersonal connection | Built through consistency, error-free behavior, and brand-controlled persona |
| **Parasocial Interaction (PSI)** | Stronger due to human behavior, self-disclosure, and perceived emotional reciprocity | Simulated PSI through AI-generated interactions or scripted engagement |
| **Message Content** | Spontaneous, experience-based storytelling and self-expression | Aesthetically polished, brand-aligned, and consistently curated messages |
| **Control & Consistency** | Less predictable; subject to personal life events and scandals | Fully controllable; consistent and stable with minimal reputational risk |
| **Visual Appeal** | Varies by individual; can be polished or casual based on brand alignment | Highly stylized, hyper-realistic, and brand-controlled visual representation |
| **Engagement Style** | Responsive, emotional, and often improvisational (e.g., live videos, comment replies) | Pre-scripted engagement: limited real-time interaction, often relying on novelty |
| **Platform Presence** | Active across all social media platforms (Instagram, TikTok, YouTube, etc.) | Also active on same platforms, but particularly Instagram and TikTok |
| **Relatability** | High audiences identify with real-world challenges and shared values | Lower relatability depends on persona design and narrative construction |
| **Risk Profile** | High—subject to public scrutiny, ethical failures, and brand misalignment | Low—no personal scandals; easy to align with marketing goals and audience segments |

| | | |
|---|---|---|
| **Emotional Expression** | Natural emotional depth from lived experience | Simulated emotions through scripting, posing challenges in emotional resonance |
| **Legal/Ethical Concerns** | Bound by labor laws, disclosure guidelines, and influencer regulations | Raises questions around disclosure, transparency, and deception (if not labeled as synthetic) |
| **Product Fit** | More effective for hedonic, experiential, and emotionally driven products | More effective for utilitarian, aesthetic, or tech-oriented products |
| **Production Cost (long-term)** | High—ongoing fees, travel, management | High upfront design cost, but lower long-term operational cost |

(source: by the author)

## Psychological and Sociological Foundations of HIs vs. VIs' Impact

The strategic use of VIs and HIs in marketing is shaped by the major differences in their effectiveness across a number of aspects. Several marketing, sociological and psychological theories can be applied to comprehend their varying efficiency.

### *Parasocial Interaction Theory (PIT) and Emotional Attachment*

According to Horton and Richard Wohl (1956), parasocial interaction (PSI) refers to one-sided, imaginary relationships audiences form with media personas, based on feelings of intimacy and connectedness (Ma & Li, 2024). Recent PSI research has primarily focused on online contexts, especially social media platforms. In social psychology, PSI has been widely used to understand how audiences respond to media, develop emotional bonds with social media influencers, who are perceived as more accessible, authentic, and relatable than traditional celebrities. PIT has been adopted by media sociologists and cultural theorists to examine how media constructs social relationships, identity, and community (Hoffner & Bond, 2022). Social media influencers have been shown to effectively build PSI with followers (Gong, 2021). Followers engage with influencers using services such as immediate comments, likes, and retweets/shares, creating a personal relationship. HIs are particularly effective at fostering parasocial bonds due to their lived experiences, emotional vulnerability, and spontaneous self-presentation. By sharing personal narratives and responding directly to followers, HIs create a sense of reciprocal

engagement that enhances perceived authenticity and long-term relational trust (Belanche et al., 2024; Djafarova & Rushworth, 2017).VIs, by contrast, rely on simulated interaction and anthropomorphized cues to approximate parasocial intimacy (Jin et al., 2021) While carefully designed visual realism and scripted emotional expression can elicit engagement, the absence of lived experience constrains the depth of perceived reciprocity. As a result, PSI formed with VIs tends to be more fragile and contingent on novelty and aesthetic appeal rather than emotional realism (Ju et al., 2024; Muniz et al., 2024).

*Source Credibility and Source Attractiveness Models*

Source Credibility Theory (SCT) and the Source Attractiveness Model (SAM) are foundational frameworks in influencer marketing, helping explain why certain influencers are more persuasive than others (Meng et al., 2025). SCT, as defined by Hovland, Janis, and Kelley (1953), posits that a communicator's effectiveness is largely determined by their expertise and trustworthiness, which enhance message acceptance. In the context of influencer marketing, these traits are critical since consumers are more likely to trust and act on recommendations from influencers perceived as knowledgeable and sincere (Lou & Yuan, 2019).

Human influencers often derive credibility from lived experience, professional knowledge, or demonstrated product usage, which enhances perceptions of expertise and diagnostic value. Their credibility is further reinforced by transparency and personal accountability, making HIs particularly effective in persuasion contexts that involve experiential evaluation, uncertainty reduction, or advice-seeking behavior (Lee & Eastin, 2021; Sokolova & Perez, 2021). Virtual influencers, by contrast, construct credibility through brand-controlled consistency, technical precision, and scripted expertise rather than personal experience (Jin & Ryu, 2020; Sands et al., 2022). Although their knowledge claims are not grounded in lived experience, their stable personas and error-free performance can enhance perceived reliability, especially in low-risk or information-oriented communication settings. Prior research suggests that when virtual influencers are transparently disclosed and positioned as informational or aesthetic endorsers, consumers may evaluate their credibility favorably, particularly in technology-driven or utilitarian product categories (Belanche et al., 2024; De Cicco et al., 2024).

Complementing SCT, the Source Attractiveness Model emphasizes the persuasive influence of likability, similarity, and physical attractiveness (McGuire, 1985). Human influencers typically leverage similarity-based attractiveness, whereby shared lifestyles, values, or social identities foster identification and self–brand congruence. This form of attractiveness enhances persuasion by increasing perceived relevance and personal resonance of the message (Sokolova & Perez, 2021). Virtual influencers, on the other hand, excel in aesthetic and aspirational attractiveness. Their digitally constructed appearances enable idealized visuals, stylistic perfection, and seamless alignment with brand imagery, making them particularly effective in visually oriented industries such as fashion, beauty, and

luxury branding (Sands et al., 2022; Kim et al., 2024). While this form of attractiveness may reduce perceived similarity, it enhances attention, memorability, and symbolic appeal, which are key drivers of persuasion in image-centric communication environments (Belanche et al., 2024).

*Uncanny Valley Theory and Anthropomorphism*

Anthropomorphism is the human tendency to attribute human-like traits, intentions, or emotions to non-human entities (Epley et al., 2007). It has a major impact on how individuals interact with VIs. In contrast to visual simulations, people frequently perceive VIs as social beings when they exhibit human-like facial expressions, speech patterns, or emotional indicators. This interpretation can, to some degree, improve engagement and emotional connection. Moustakas et al. (2020) find that the more human-like a VI appears and acts, the more likely consumers are to attribute intentionality and form affective bonds, which in turn drives engagement and purchase intention. However, anthropomorphism is a double-edged sword. While some degree of human likeness enhances social presence and trust, excessive realism can lead to discomfort—an issue well explained by the Uncanny Valley Theory. The theory posits that as artificial agents become more human-like, people's affinity increases up to a point (Mori, 1970). People feel uncanny apprehension or disgust when an agent becomes almost human but still slightly strange (e.g., odd eyes, stiffness in movement) (Franke et al., 2023). From an anthropomorphism perspective, this discomfort occurs because the observer is ambivalently processing the VI: it looks nearly human (eliciting social expectations), but subtle mismatches in movement, gaze, or expression violate those expectations. Moderate anthropomorphism (stylized or cartoon-like) encourages social bonding without evoking uncanniness. In marketing and influencer contexts, this means VIs that are hyperrealistic but emotionally or behaviorally inconsistent may fall into the uncanny valley and negatively affect consumer trust, likability, and engagement (Yoo et al., 2025).

*Symbolic Interaction*

Symbolic interactionism posits that individuals create meaning through social interaction and interpret behavior based on shared symbols (Blumer, 1969). HIs engage in authentic symbolic exchanges—they present emotions, identities, and life narratives that followers can decode and relate to. VIs rely on simulated interaction and pre-scripted emotions, which can still foster parasocial relationships but often lack the complexity of human spontaneity. VIs are entirely curated entities, often designed by brands or agencies, lacking real lived experiences. This distinction is crucial. While HIs engage in reciprocal meaning-making with audiences through personal narratives, VIs present hyper-curated, unidirectional performances of lifestyle and identity. VIs may reinforce commodified identity ideals, leading to a "manufactured authenticity" that dilutes organic social representation (Moustakas et al., 2020). HIs are most effective in aesthetic, visual, and symbolic roles—such as fashion, tech, or luxury—where meaning can be projected through design rather than

experience. HIs remain more effective in experiential and emotionally intimate domains such as wellness, food, or activism (Thompson et al., 2025).

*Dramaturgical Theory (Presentation of Self)*

Goffman's dramaturgical theory states that social life is a stage on which people use "front-stage" and "back-stage" behaviors to control impressions in front of audiences (Goffman, 2002). Social actors curate what is publicly visible while concealing elements that may disrupt desired impressions. In digital environments, influencer marketing represents a highly institutionalized form of dramaturgical performance, where visibility, consistency, and audience perception are central to communication effectiveness. Human influencers engage in dramaturgical performance by selectively revealing aspects of their personal lives while maintaining boundaries between public and private selves. Their front-stage performances include curated posts, sponsored content, and controlled self-presentation, while their back-stage spaces allow for inconsistency, vulnerability, and withdrawal from public scrutiny. This tension between front-stage polish and occasional back-stage disclosure enables dynamic impression management, allowing HIs to adapt performances over time and respond to audience expectations (Merunková & Šlerka, 2019). Importantly, dramaturgical theory does not evaluate whether these performances are authentic or persuasive, but rather how impression coherence is maintained under conditions of social visibility. Virtual influencers operate under fundamentally different dramaturgical conditions. They exist exclusively in the front stage, as their identities, behaviors, and narratives are entirely constructed and managed by brands or creative teams. VIs have no back-stage space where unscripted behavior, contradiction, or withdrawal can occur (Sands et al., 2022). As a result, their performances are highly consistent, predictable, and immune to personal scandals or emotional fluctuations. From a dramaturgical perspective, this permanence of front-stage performance enables exceptional message control and brand safety but also limits flexibility in responding to unexpected social events or audience feedback (Cui, 2024).

*Bourdieu's Theory of Capital (Cultural, Social, Symbolic)*

In order to gain a deeper understanding of the ways in which VIs and HIs acquire and project influence in digital spaces, Pierre Bourdieu's (1984) framework of cultural, social, and symbolic capital is useful. HIs have historically accumulated cultural capital through social fluency, personal taste, and embodied knowledge, which are demonstrated by their knowledge, life experiences, and affiliation with particular subcultures. Additionally, they build social capital by establishing genuine, trustworthy connections with peers and followers, frequently based on similar ideals or related life experiences. HIs convert various types of capital into symbolic capital such as the status, credibility, and prestige required to influence consumers through persistent self-disclosure and emotional effort (Marwick, 2013). VIs, on the other hand, create symbolic capital through design as opposed to experience. Their designers create elite affiliations, high-status narratives, and

aspirational aesthetics that mimic human influence but are based on carefully constructed simulations rather than social embeddedness. For example, Lil Miquela's collaborations with high-end companies like Prada and Calvin Klein are designed to reflect high cultural capital and hence engineer symbolic worth rather than being acquired via community involvement (Sands et al., 2022). In fields like fashion, luxury, or technology, where aesthetic perfection and cultural elitism rule, these digitally created personas thrive because they are tailored for visual prestige, narrative coherence, and brand control (Mo & Wang, 2025) However, in fields that demand emotional authenticity and credibility, their lack of genuine social links and cultural depth may limit their efficacy. Table 3 depicts theory-driven comparison of HIs and VIs by aligning key psychological and sociological frameworks with each influencer type.

Table 3: Theory-based Effectiveness of HI vs. VI

| **Theoretical Lens** | **HIs** | **VIs** | **Key Influence Mechanisms** |
|---|---|---|---|
| **Parasocial Interaction Theory** | Strong emotional bonding, intimacy, trust-building, and long-term relational influence due to self-disclosure and perceived reciprocity | Limited and simulated parasocial interaction through scripted engagement and anthropomorphism | Relational Bonding and Perceived Social Closeness |
| **Source Credibility Theory** | Higher perceived trustworthiness and expertise grounded in lived experience, transparency, and personal narratives | Higher perceived consistency, visual professionalism, and brand-controlled expertise | Cognitive Evaluation of Persuasive Source Quality |
| **Source Attractiveness Model** | Relatability and similarity-based attractiveness that fosters identification | Aesthetic perfection, novelty, and aspirational appeal through design | Affective Appeal and Identification-Based Persuasion |
| **Uncanny Valley Theory** | Not applicable; human realism does not evoke discomfort | Risk of eeriness at high human-likeness; stylized designs perform better | Perceptual Acceptance and Human-Likeness |

| | | | |
|---|---|---|---|
| **Symbolic Interactionism** | Reciprocal meaning-making through authentic identity performance and lived social roles | Scripted and unidirectional identity construction without lived experience | Social Meaning Construction and Identity Interpretation |
| **Dramaturgical Theory (Self-Presentation)** | Balance of front-stage and back-stage behavior enhances perceived authenticity | Entirely front-stage, controlled, and performative identity | Impression Management and Performative Control |
| **Bourdieu's Theory of Capital** | Accumulation of social and cultural capital through real social embeddedness | Engineered symbolic capital through aesthetics, elite affiliations, and branding | Capital Accumulation, Power, and Social Structure Advantage |

(source: by the author)

## Sociological Dimensions of VI Adoption

According to the symbolic interactionist viewpoint, influencers, whether real or virtual, work as identity models that people utilize to create, act out, and navigate their online social identities. However, VIs lack real-life experiences and are completely curated creatures, frequently created by agencies or businesses. VIs give hyper-curated, unidirectional demonstrations of lifestyle and identity, whereas HIs use personal narratives to establish reciprocal meaning with audiences (Moustakas et al., 2020). Sociologically, the widespread use of virtual influencers may contribute to the homogenization of beauty and lifestyle ideals.

Research shows that human-like VIs are often modeled on Eurocentric, gendered beauty standards, perpetuating narrow ideals of attractiveness (Zhou et al., 2024). Whereas HIs could represent a range of ethnicities, body shapes, and subcultural styles, VIs frequently fall back on "perfected" templates designed to maximize engagement. This may worsen appearance anxiety, particularly among adolescents and marginalized groups and undermine efforts toward diversity and inclusion in media representation (Deng & Jiang, 2023).

Parasocial relationships are central to influencer marketing. HIs build these through perceived intimacy, relatability, and emotional vulnerability. VIs, by contrast, struggle to simulate genuine reciprocity. Although some VIs are designed to mimic human emotion (e.g., Lil Miquela), they lack lived affective histories, making their emotional engagement performative rather than authentic. An excessive dependence on VIs may degrade social capital and result in relationship

commodification, where genuine human connection is not valued but rather interactions are measured only by metrics like reach and engagement (Stein et al., 2024). According to labor sociology, the growth of VIs could replace creative labor, particularly that of micro-influencers and content producers, by giving brands scalable, low-risk substitutes. Although it increases brand control, influence is reduced to an automated asset and creativity and emotions are undervalued. This raises ethical concerns about digital labor replacement and poses new questions around the ownership of persona and identity in AI-driven marketing (Oshadi Karunanayaka et al., 2024). Table 4 depicts the societal disadvantages of VIs over HIs.

Table 4: Societal Disadvantages of VIs over HIs

| Dimension | VI | HI | Societal Disadvantage |
|---|---|---|---|
| **Authenticity & Empathy** | Simulated empathy, no real lived experiences | Based on personal experiences, emotional depth | VIs may reduce authenticity in role modeling |
| **Diversity Representation** | Often lack ethnic/gender/size diversity | Reflect a broader range of identities | VIs reinforce idealized, narrow standards in society |
| **Social Bonding** | Limited parasocial depth | Build real parasocial relationships | VIs weaken sense of social intimacy and community trust |
| **Labor & Employment** | Controlled by firms; low operational cost | Provide income/livelihood to real people | VIs cause potential job displacement and exploitation of creative labor |
| **Transparency & Ethics** | Often ambiguous creator identities and purpose | Influencers held accountable through public scrutiny | VIs cause risk of manipulative marketing without clear disclosure |

(source: by the author)

## Industry-Specific Effectiveness of HI vs. VI

The comparative synthesis of the reviewed studies demonstrates that the relative effectiveness of HIs and VIs differs significantly across industrial settings, particularly in sectors that value emotional connection, visual storytelling, and consumer trust. This scoping research finds four significant domains as fashion, food and beverage, tourism and healthcare where the dynamics of influence follow distinct patterns.

Fashion and Beauty

In the fashion and beauty domain, the rise of VIs has been rapid due to the heavy reliance on visual aesthetics, brand-controlled imagery, and novelty. A recent study found that VI's human-likeness level, emotional expression in posts, and

operator transparency significantly influenced consumer engagement (Ju et al., 2024). The fashion/beauty context places high premium on aesthetics, aspirational imagery, and social media visuality; domains where VIs hold a strong advantage with control over visual appearance and 24/7 presence. In contrast, for authenticity, lived experience, and relatable storytelling, HIs retain advantages. For example, virtual brand ambassadors, such as "Maxine, Chelsea, and Sissi," were recently established by the cosmetics company NARS to represent lip-shade appearances and promote metaverse-ready engagement. Even though the companion avatar appeared on a virtual runway, a high-end fashion brand like Gucci hired a HI to give behind-the-scenes thoughts on craftsmanship and legacy. Luxury fashion firms are using hybrid models (Schulz, 2022).

Food and Beverage

Influencer marketing in the food industry largely relies on visual appeal and credibility. Research shows that HIs are more persuasive in campaigns that emphasize taste, authenticity, or cultural tradition—their real sensory experiences convey trust and enjoyment (Barari, 2023). For example, Jamie Oliver's social media campaigns to promote healthy eating habits have been successful because they make use of real-life culinary experiences and moral authenticity. Global food brands have begun using VIs to attract consumers that are digitally native, for instance KFC China launched the virtual colonel “Sanders X” for youth-oriented product releases on TikTok, achieving millions of interactions within days (Griner, 2019). Research indicates that younger generations are increasingly influenced by short-form, visually creative content on platforms like TikTok, where food brands partner with influencers to create viral menu-items and trend-driven experiences. These illustrations demonstrate that while HIs maintain genuine customer trust and enduring brand loyalty, VIs are best for visual novelty and brief engagement (Khan et al., 2025), thus suggesting a hybrid strategy.

Healthcare and Well-Being

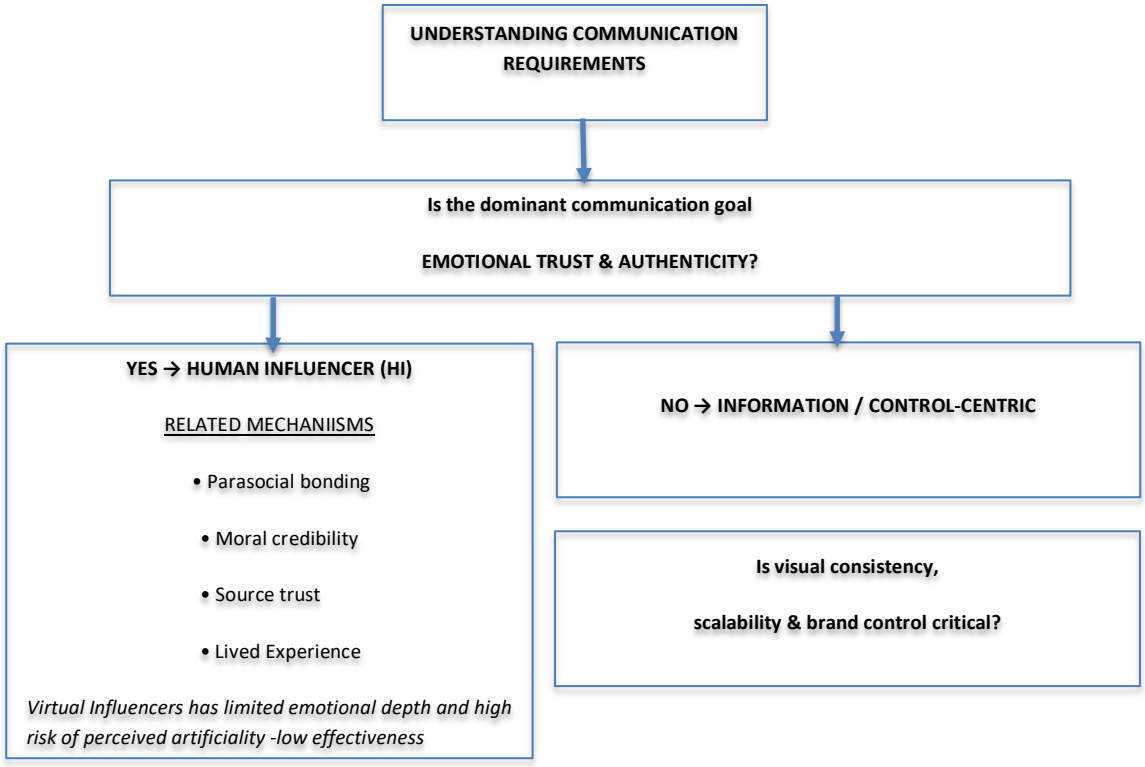
In health communication, trust and credibility are fundamental determinants of message effectiveness. Research suggests that while VIs can enhance awareness and engagement through gamified campaigns or AI-driven interactivity, HIs remain superior in generating empathy, credibility, and behavioral change due to their lived experience and emotional expressiveness (Buglyó-Nyakas & Gál, 2025). Studies consistently show that HIs outperform VIs when the campaign message involves personal health narratives or sensitive topics such as mental health or lifestyle change (De Cicco et al., 2024). VIs in healthcare are still in their infancy but are expanding quickly. The industry's move towards algorithmic personalization is exemplified by digital health avatars like WHO's "Florence," an AI-powered virtual health professional offering COVID-19 advice, or AI wellness coaches like Vi or Replika. These VIs are useful for standardizing content and cutting costs, especially when it comes to preventive health education or repetitious communication. However, if viewers are not aware that they are counterfeit, they run the risk of being seen as

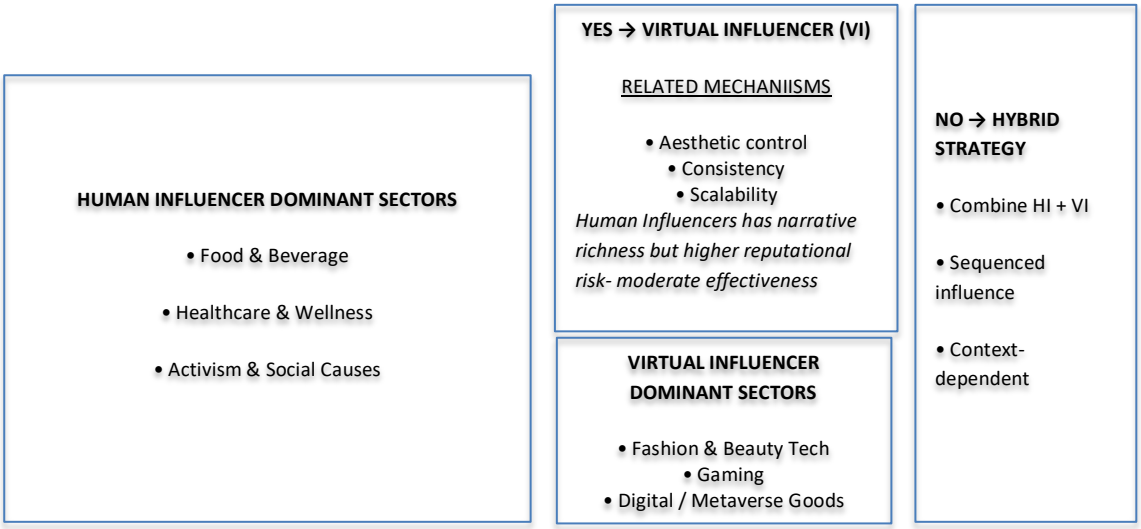
emotionally shallow or morally questionable. Therefore, VIs can supplement human influences in the healthcare industry but cannot take their place. They work best in positions that need constant direction and multilingual accessibility (Park et al., 2024).

Tourism and Hospitality

Tourism and hospitality marketing offers a vivid context for comparing HIs and VIs. Empirical research highlights that HIs are more effective for fostering destination trust, perceived authenticity, and emotional attachment, especially when promoting experience-based or heritage destinations (Meng et al., 2025). VIs, on the other hand, work better in technology-driven or digitally immersive campaigns when customer interest is generated by novelty and visual engagement (Ju et al., 2024). In contrast, VIs perform better in digitally immersive or technology-driven ads that rely on novelty and visual engagement to pique consumer interest (Ju et al., 2024). Recent research suggests that VIs are less effective than HIs when promoting cultural heritage destinations because tourists perceived VIs as "outsiders" lacking cultural authenticity (Zhang et al., 2025). In a study of destination marketing, VIs generated higher visit intention for cultural destinations, whereas HIs outperformed when promoting natural or heritage destinations (Belanche et al., 2024). In real life, Italy created a virtual influencer "Venus Anadyomene" as a 30-year-old Instagram travel blogger touring Italy's "most fantastic places and venues".These sectoral patterns reinforce the notion that the effectiveness of influencer type is contingent upon product category and communication context.

Figure 2: Strategic Decision Framework for Influencer Selection






(source: by the author)

Building on the cross-industry patterns identified above, Figure 2 presents an integrative decision framework that synthesizes dominant communication goals, influence mechanisms, and sectoral contingencies to guide the strategic selection of human, virtual, or hybrid influencer approaches. Consistent with Parasocial Interaction Theory and Source Credibility Theory, human influencers dominate in sectors where emotional authenticity, moral accountability, and lived experience are central to persuasion, such as food, wellness, and healthcare. In contrast, virtual influencers are more effective in sectors emphasizing visual aesthetics, informational clarity, and brand control, including fashion technology, gaming, and digital goods. Importantly, the framework also highlights the strategic relevance of hybrid influencer usage in contexts where campaigns simultaneously require emotional credibility and visual or operational control. According to Source Credibility and Symbolic Interactionist theory, such hybrid usage allows brands to balance relational trust and significance gained from human experience with the aesthetic coherence and scalability provided by virtual personas, thus aligning influence mechanisms with complex communication goals.

From a managerial perspective, framework-based decision models help reduce complexity in strategic environments characterized by technological uncertainty and rapidly evolving practices such as social media and influencer marketing In line with conceptual and review-based research, these frameworks are not intended to assist managerial sensemaking and strategic alignment (Audrezet et al., 2020; Kietzmann et al., 2011).While the proposed framework offers a conceptual explanation of when HIs vs VIs are most effective based on communication logic

across different industries, Table 5 translates this framework into industry-specific strategic guidance.

Table 5: Industry-Specific Strategic Fit of HIs and VIs

| Industry | HI Dominance | VI Dominance | Strategic Implication |
|---|---|---|---|
| Fashion & Beauty | Experiential authenticity and identity signaling | Aesthetic control and visual consistency | Hybrid influencer strategy |
| Food & Beverage | Sensory credibility and taste-based trust | Visual novelty and short-term engagement | HI-dominant strategy |
| Healthcare & Well-being | Empathy-driven credibility and perceived expertise | Information standardization and scalability | HI essential strategy |
| Tourism & Hospitality | Experiential trust and emotional storytelling | Immersive visualization and digital appeal | Context dependent strategy |

(source: by the author)

## DISCUSSION AND FUTURE RESEARCH AGENDA

Communication, one of the fundamental aspects of our everyday lives, has changed significantly. Social interaction and communication are dependent on technological advancements. (Ozbey, 2022). The emergence of VIs -computer-generated characters designed to act like social media personalities- has significantly altered communication and influenced the marketing landscape (Byun & Ahn, 2023).

After analyzing the results of this scoping review, a clear pattern emerges about the contextual effectiveness of HIs vs VIs. Human influencers are consistently more effective in situations requiring emotional involvement, trust, and experiential credibility, whereas virtual influencers perform better in highly visual, standardized, and brand-controlled communication environments. Such patterns can be explained by known theories such as parasocial interaction theory, source credibility theory, and dramatic perspectives on self-presentation. According to this study, HIs are more effective in emotionally intense situations, but VIs excel in visually controlled surroundings. For example, in healthcare and well-being communication, where persuasion is based on empathy and experiential credibility, parasocial interaction and source credibility theories explain why HIs consistently outperform since relational trust and perceived expertise can become key cues for health-related message acceptance. Also, human influencers frequently have an advantage in food and beverage marketing from a parasocial and source-credibility standpoint because persuasion based on taste and experience relies on perceived authenticity and trust cues, which are more easily supported by lived consumption narratives than by fully

synthetic personas. In contrast, in fashion, beauty, and gaming contexts, where persuasion relies on visual coherence and symbolic display, VIs gain from dramaturgical consistency and controlled self-presentation. Because brand meaning is communicated through controllable visual aesthetics and fake identity cues, virtual influencers can be especially effective in fashion and beauty contexts. On the other hand, human influencers typically elicit stronger identification when the content relies on experiential relatability and emotional resonance such as in tourism and hospitality industry.

Also, this study depicts marketing, psychology and sociology perspectives about usage and adoption of these influencers.

*Marketing Implications: Strategy, Control, and Regulation*

From a marketing perspective, the distinction between HIs and VIs primarily concerns strategic control, operational efficiency, brand risk management, and regulatory compliance. Understanding the relative effectiveness of HIs and VIs enables marketers to make informed decisions regarding brand alignment, campaign return on investment, risk reduction, and audience targeting (Ameen et al., 2024).

VIs offer distinct strategic advantages in terms of controllability and consistency. As fully programmable entities, they are resistant to scandals and behavioral unpredictability, allowing firms to maintain tightly managed brand narratives. This feature is particularly valuable in industries such as fashion, technology, and gaming, where image precision, futuristic aesthetics, and brand coherence are critical (Xin et al., 2024). Moreover, VIs can operate simultaneously across multiple markets without temporal or geographical constraints, making them highly scalable and cost-effective over time. High-profile cases such as Lil Miquela illustrate how global brands like Calvin Klein and Prada leverage VIs to produce consistent luxury narratives without the contractual and logistical limitations associated with human influencers (Goyal & Bhardwaj, 2025).

Despite these advantages, HIs remain strategically superior in product categories that require emotional connection, authenticity, and credibility, including food, wellness, and beauty (Casaló et al., 2020). These contexts rely heavily on lived experience and relational trust, which virtual personas cannot fully replicate. Consequently, marketers are encouraged to adopt context-sensitive influencer strategies, selecting influencer type based on product category, campaign objective, and consumer involvement level rather than assuming a one-size-fits-all approach (Jhawar et al., 2023).

In parallel, the expansion of AI-generated influencers has intensified concerns related to ethical transparency and regulatory accountability. Marketing practices involving VIs increasingly require clear disclosure of artificial origin to avoid misleading consumers. Regulatory frameworks such as the European Commission's AI Act, the FTC endorsement guidelines, and the EU Digital Services Act emphasize transparent sponsorship disclosure and algorithmic accountability

(Gunkel, 2023; Kim & Wang, 2023; Khalfallah & Keller, 2025). Accordingly, marketers should implement explicit visual or textual labels (e.g., "AI-generated content," "virtual influencer") and collaborate with policymakers, ethicists, and AI developers to ensure responsible deployment and prevent the dissemination of biased or deceptive information (Davlembayeva et al., 2025).

*Psychological Implications: Trust, Motivation, and Consumer Engagement*

From a psychological perspective, the effectiveness of HIs versus VIs is driven by differences in how consumers process authenticity, trust, emotional engagement, and motivational cues. Perceived authenticity plays a central role in persuasion and attitude formation. While HIs are generally viewed as more relatable and emotionally genuine, VIs may evoke skepticism or perceptions of manipulation if their artificial nature is not transparently disclosed, thereby influencing emotional bonding and purchase intentions of consumers (De Cicco et al., 2024).

Nevertheless, consumers, particularly younger cohorts, are increasingly receptive to VIs, motivated by several psychological factors. Novelty and curiosity attract attention, as interactions with CGI personas offer a futuristic and distinctive media experience (Kim et al., 2025). Escapism and entertainment further enhance engagement, as consumers project themselves into hyper-real or fictional environments, consistent with uses and gratifications theory, which emphasizes immersion and enjoyment as core media motivations (Katz et al., 1973; Muniz et al., 2024).

Additionally, visual aesthetics and design control play a significant role in shaping engagement. VIs' flawless appearance and curated styling appeal to consumers seeking polished and aspirational content, particularly on visually driven platforms such as Instagram and TikTok (Sands et al., 2022). In contrast, the imperfections of HIs may either enhance authenticity or reduce aspirational appeal depending on individual consumer goals. Finally, technological affinity strengthens positive responses to VIs among digitally native generations. VIs symbolize innovation and digital fluency, reinforcing brand perceptions of modernity and competence (Liu et al., 2023).

These motivational mechanisms align with the CASA paradigm (Computers Are Social Actors), which suggests that individuals respond socially to digital agents even when they are aware of their non-human nature (Nass & Moon, 2000). As a result, HIs and VIs can trigger similar cognitive and emotional processes, despite their fundamentally different ontological status.

*Sociological Implications: Identity, Labor, and Social Trust*

Beyond individual consumer responses, the growing adoption of virtual influencers raises significant sociological concerns related to identity construction, social trust, cultural representation, and labor relations. While VIs provide scalable

and controllable marketing tools, their broader societal implications warrant critical attention (Audrezet & Koles, 2023).

From the standpoint of social trust and social capital, authenticity functions as a collective social value rather than merely a marketing asset. HIs contribute to community cohesion and trust-building by sharing real experiences, struggles, and socio-cultural identities. In contrast, VIs simulate authenticity through algorithmically scripted narratives that lack lived experience, potentially blurring the boundary between reality and simulation (Moustakas et al., 2020; Sorosrungruang et al., 2024).

Issues of cultural representation and diversity further complicate the sociological impact of VIs. HIs often reflect societal pluralism across race, gender, class, and body type, contributing to visibility and inclusion of marginalized groups (Duffy, 2020). Conversely, many VIs reproduce standardized and idealized—often Eurocentric—beauty norms, reinforcing hegemonic aesthetics and limiting authentic representation of intersectional identities (Deng & Jiang, 2023; Ferraro et al., 2024).

The rise of VIs also raises concerns related to labor displacement and economic ethics. Influencer marketing has historically offered pathways for economic empowerment and creative labor monetization (Abidin, 2016). However, from a platform capitalism perspective, VIs replace human creativity with programmable assets controlled by technology firms, centralizing power and reducing opportunities for freelance and micro-influencers (Srnicek, 2017; Duffy, 2017). This shift risks monopolizing cultural production while commodifying authenticity itself.

Finally, in terms of emotional engagement and social relationships, HIs function as relational anchors, facilitating parasocial bonds that can foster belonging and emotional support (Hoffner & Bond, 2022). Although VIs can mimic empathy and interaction, their inability to reciprocate genuine emotional support may promote shallow, metric-driven relationships and emotional disillusionment (Stein et al., 2024). From a sociological lens, the proliferation of emotionally hollow agents may signal increasing alienation in digital culture (Kaun, 2021; Illouz, 2019). This trend reinforces platform-driven and highly controlled forms of sociality that prioritize visibility and commodified engagement over authentic human connection.

However, despite growing academic attention, several theoretical, methodological, and practical gaps remain that merit future research. The field of VI marketing remains under-theorized, fragmented, and rapidly evolving, highlighting the need for interdisciplinary and comparative studies. Thus, this study proposes a future research framework. Future studies should empirically test how consumer responses vary across different contexts, product types, cultures under different influencer strategies. Marketers should adopt hybrid influencer strategies, strategically combining HIs and VIs based on campaign objectives and audience context. As this review suggests, HIs are most effective in driving emotional

engagement and authenticity, while VIs provide aesthetic control, consistency, and global scalability. Practitioners should therefore design influencer portfolios that balance human relatability with digital novelty, rather than fully replacing humans with virtual entities.

**Future Research Agenda**

As the influencer marketing landscape evolves, a structured and forward-looking research agenda is vital to guide both academic inquiry and marketing strategy. This study proposes future research directions to deepen understanding of the effectiveness of HIs vs. VIs, drawing on ethical considerations and consumer perceptions, mixed usage (hybrid) comparisons of HIs and VIs and cross-cultural perspectives that are not explored enough.

*Ethical Considerations and Consumer Perceptions in VI Marketing*

As VIs become increasingly integrated into brand strategies, questions surrounding deception, disclosure transparency, authenticity, and consumer manipulation have come to the forefront. The blurred line between fiction and reality raises ethical concerns, especially when audiences are unaware that they are interacting with AI-generated personas (Park et al., 2024). Transparency in disclosure plays a critical role in shaping perceptions of ethicality and trust. Studies show that clear labeling of VIs as non-human agents can mitigate ethical concerns and foster more honest parasocial interactions. However, disclosure can also reduce engagement, as it may interrupt the illusion of intimacy or realism (Kim & Wang, 2023). This ethical trade-off remains underexplored in VI literature. Thus, in further studies, research questions below should be explored in detail:

RQ1: *How does the level of disclosure (e.g., explicit vs. ambiguous) about a VI's artificial nature affect consumer trust, engagement, and perceived authenticity?*

RQ2: *To what extent do consumers feel manipulated versus entertained when engaging with VIs in commercial campaigns?*

RQ3: *How do perceptions of ethicality differ between VIs created by independent artists versus those developed by large corporations?*

*RQ4: How does the replacement of HIs with VIs reshape the ethics of digital labor, and what implications does this have for fairness and creative agency in platform capitalism?*

*Mixed Usage Comparison: Hybrid Influencer Strategies*

Many brands are beginning to adopt hybrid strategies, using VIs for reach, novelty, and aesthetics, while relying on HIs for emotional engagement and credibility (Goyal & Bhardwaj, 2025). This hybrid approach reflects a strategic segmentation of influence roles—with VIs acting as attention-grabbing aesthetic anchors and HIs driving deeper emotional and behavioral engagement. However, empirical and conceptual work on the synergistic dynamics between these two

influencer types remains scarce. However, limited research has systematically examined the synergistic or conflicting effects of combining both influencer types within the same campaign (Looi & Kahlor, 2024). Critical questions arise around the message coherence, trust calibration, and engagement sequencing within such campaigns. Thus, in further studies, the research questions below should be explored in detail:

RQ5: *What is the optimal sequencing of VIs and HIs in an integrated campaign to maximize engagement and persuasion?*

RQ6: *Do hybrid campaigns enhance or dilute message clarity and brand trust compared to single-influencer approaches?*

*Cross-Cultural Perspectives on Influencer Adoption and Effectiveness*

While literature has predominantly focused on Western markets, consumer attitudes toward HIs and VIs may differ significantly across cultural contexts due to variations in technological acceptance, collectivism vs. individualism, and uncertainty avoidance (Du et al., 2025, Rizzo et al., 2025). However, tech-forward cultures such as Japan or China, where digital anthropomorphism is more normalized (e.g., in gaming or anime), may exhibit greater openness toward VIs. In contrast, traditional or religious societies might find virtual representations controversial, especially when they challenge cultural dress codes, gender norms, or religious expectations (Deng & Jiang, 2023). Moreover, uncertainty-avoidant cultures may resist algorithmically controlled agents due to perceived unpredictability in their creation, thus posing barriers to VI adoption. This cultural variability underscores the need for context-specific influencer strategies in global campaigns. Despite these early insights, cross-cultural comparative research remains underdeveloped. Future studies must explore intercultural variations in influencer adoption to inform global marketing strategies and ensure cultural sensitivity. Thus, pointing out these findings, in future research questions regarding cross-cultural differences can be set as:

RQ7: *How do cultural dimensions (e.g., individualism, uncertainty avoidance) influence consumer attitudes toward HIs versus VIs?*

RQ8: *Are VIs more accepted in tech-forward or collectivist societies compared to traditional ones?*

RQ9: *How do religious or cultural norms shape perceptions of anthropomorphized VIs in conservative societies?*

*Virtual Personas and Their Sociological Impact*

As influencer ecosystems blur the line between the real and the rendered, sociologically grounded questions arise about how identities are performed, trust is built, and norms are enforced in algorithmically mediated spaces (Kim & Wang, 2023). A sociological approach expands the focus to include the collective

implications of VI adoption for identity formation, social cohesion, and institutional accountability, whereas psychological and marketing studies typically focus on individual-level effects, such as persuasion, engagement, and purchase intentions (Ameen et al., 2024).

Prior research note that while simulated anthropomorphism can foster parasocial bonds, these manufactured identities lack the cultural depth and lived vulnerability that strengthen authenticity perceptions in human influencers (Rizzo et al., 2025). Also, influencer content regulation, especially when it comes to children or other vulnerable audiences, is still fragmented and frequently falls behind platform innovation. Thus, pointing out these findings, research questions regarding sociological impact of virtual influencers can be set as:

Research Questions

RQ10: *How do virtual influencers reshape societal perceptions of authenticity and identity performance compared to human influencers?*

RQ11: *To what extent does the growing use of virtual influencers contribute to the erosion or reconstruction of social trust in digital media environments?*

RQ12: *How do institutional and regulatory frameworks adapt to address the ethical and accountability challenges posed by algorithmically controlled influencers?*

## CONCLUSION

This conceptual scoping review offers a comprehensive comparison between HIs and VIs, emphasizing not only their psychological and marketing effectiveness but also their broader sociological implications. Drawing on key theories such as Source Credibility Theory, Parasocial Interaction Theory, Symbolic Interactionism, and Bourdieu's Theory of Capital, the study proposes that the effectiveness of HIs is grounded in their embodied authenticity, lived experience, and cultural resonance, whereas VIs excel in contexts requiring aesthetic perfection, brand control, and technological novelty.

This study has four key contributions by:

- Advancing influencer marketing research by showing that virtual influencers can generate trust through technological sophistication and visual perfection, while human influencers remain more effective in fostering parasocial intimacy and emotional engagement.
- Revealing contextual contingencies in influencer effectiveness, showing that virtual influencers are more persuasive for utilitarian and function-oriented products, whereas human influencers dominate in hedonic, experiential, and emotionally sensitive domains such as food and wellness.

- Separating marketing, psychological, and sociological implications to demonstrate that the HI–VI distinction is not merely a tactical branding decision, but a multi-level phenomenon with individual, organizational, and societal consequences.
- Reframing influencer effectiveness not only as a persuasive communication mechanism but also as a reflection of broader transformations in digital capitalism, thereby providing critical insights for scholars, marketers, and policymakers navigating the ethical and structural implications of AI-driven influence.

Despite its integrative insights, this study has several limitations. First, a primary limitation of this study is the absence of empirical testing, as the proposed framework and sectoral distinctions are derived from theoretical synthesis rather than primary data analysis. This limitation, however, is in line with the goal of scoping reviews, which are not intended to test hypotheses or determine effect sizes but rather to map, integrate, and organize diverse bodies of knowledge in developing research fields. As a conceptual scoping review, this study does not empirically test the proposed relationships between influencer type and consumer outcomes. Accordingly, the findings should be interpreted as theory-driven syntheses rather than causal or predictive claims. In order to empirically assess how consumers react to HIs vs VIs across industries, cultures, and disclosure settings, future research should build on this conceptual foundation using experimental, survey-based, or longitudinal designs. Second, the sociological impact of VIs such as their role in identity construction, digital inequality, and emotional commodification remains underexplored empirically. While this paper suggests sociological theories and advances sociological discussions on identity norms, cultural representation, and symbolic power associated with VIs, empirical evidence in this domain remains limited. Most existing studies rely on experimental or conceptual approaches, offering insufficient insight into how virtual influencers shape identity formation, social norms, and cultural expectations over time (Dong et al., 2025). This lack of longitudinal and qualitative empirical research represents a key limitation and underscores the need for sociologically grounded field studies for further. Finally, this study only examines peer-reviewed academic publications. While this approach is consistent with the purpose of assuring theoretical rigor and conceptual consistency, it naturally excludes grey literature like as industry studies, practitioner white papers, and influencer agency benchmarks. As a result, the review may underrepresent real-time market dynamics, platform-specific innovations, and emerging hybrid influencer strategies that are actively shaping practice. Future scoping and integrative reviews could extend the conceptual foundation offered by this study by systematically incorporating grey literature. Integrating such sources alongside academic research would allow for triangulation between theory-driven insights and practice-oriented developments, offering a more temporally sensitive understanding of how influencer technologies, strategies, and norms evolve.

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