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A Comparative Study on the Impact Mechanism of AI-Generated Virtual Influencers and Real Influencers on Brand Communication

Liao Zicheng[1,*,†], Wang Xiangxi[2,†], Zhuang Zimeng[3,†]

[1]Department of Information Technology, Shanghai Jianqiao University, Shanghai, China
[2]Vanke Academy, Shenzhen, China
[3]AP Center of Hangzhou No.14 High School, Hangzhou, China
**Corresponding Author. Email: 1175544139@qq.com*
†These authors contributed equally to this work and should be considered as co-first authors

Abstract. The introduction of artificial intelligence (AI) is fundamentally changing the sphere of marketing communications, with virtual influencers (VIs) created with the help of AI being one of such significant changes. The paper aims at making a comparative analysis of the effects that virtual and real human influencers (HIS) create on brand communication focusing on the variables of authenticity, trust and purchase intention. Mixed-method research design was used and included both the qualitative interviews and focus groups and the quantitative surveys in order to examine the perception and responses of consumers to both types of influences comprehensively. There are results showing that human influencers have perceived superiority when it comes to authenticity and connection to emotions, but the virtual influencers have greater brand control and cross cultural appeal. Inferring deeper decoding, authenticity and credibility have been determined as the major mediating factors which influence brand attitude. These findings add value to the theoretical discussion on influencer marketing and provide strategies on the strategic level of brand selection and use of influencers. The paper stresses on the dynamism of human and algorithmic beings in marketing and suggests a reformulated approach to appreciating trust and authenticity in an AI-dominated environment.

Keywords: virtual influencers, real influencers, brand communication, AI marketing

1. Introduction

Marketing communications are in a process of profound transformation anymore the developments that are supported by the artificial intelligence (AI) and digital human technology. The key aspect of this development is the creation of AI-generated virtual influencers digital characters that were created using AI, 3D modeling, and motion capture. The case of Lil Miquela and Imma with Prada and Samsung can be seen as challenging and reprocessing, in the realms of influencer marketing, both traditional definitions of authenticity and trust [1].

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The concept of influencer marketing is now an established globalized business that is no longer conducted on the principles of personal recommendations, but a range of human and virtual influencers has become the intermediaries between the brands and the audience. Human influencers are generally valued to have an honest feeling of sincerity and accessibility, whereas virtual influencers offer a brand in-depth creative control, consistency of message, and a hassle-free internationalization. Reports of a high rate of assimilation into such marketing campaigns notwithstanding, there is relative lack of academic study to compare their distinct influence on consumer attitudes and brand communication performance across various situations in a systematic manner.

This paper attempts to fill this study gap; it will explore mediating functions of authenticity and trust in the configuration of consumer perceptions and behavioral inclinations in both types of influencers. Based on the concept of Social Cognitive Theory, Symbolic Interactionism, and Media Richness Theory, the study will attempt to explain how the audience interacts with AI-created personas and the resulting change that comes about within the digital brand communication dynamic [2, 3].

2. Background

Virtual idols or digital human or virtual influencers are the result of the meeting of the computer graphics with the artificial intelligence and motion capture. This process has been evolutionary and multi-dimensional in terms of maturation. The early depictions, such as that of Hatsune Miku among the vocaloid, were more of music production instruments. Further technological development helped them to develop into more complex CGI-built avatars. The popularization of the virtual influencer was subsequently conceptualized and popularized through names such as Lil Miquela alongside breakthroughs in real-time motion capture which stimulated the growth of the very lucrative VTuber sub-industry, specially in Japan and China and aided by strong industrial chains and business models. With greater technological availability and the possibility of AIGC, the capabilities and market share of virtual influencers are being advanced in the modern environment, as well.

Within the current paradigm of digital marketing, influencer marketing is recognized as a core operational strategy. The comparative analysis of the traditional human influencers versus the virtual ones reveals the decisional profile of the latter that encompasses a better command of the brand image, minimization of the risks connected with the endorser conduct and superior prospect of propagating the campaigns globally. There has always been extant research which confirms the effectiveness of influencer marketing in influencing consumer perceptions and making a purchase choice (Freberg, 2011). Nevertheless, being a new phenomenon, the mechanics of the process of communication by the virtual influencers have not been fully deciphered yet. This can be viewed through the lens of some scholars arguing that the anthropomorphism and perceived reality of these digital objects can greatly affect the level of user trust and engagements, as well as those scholars who argue that these objects have no qualification to be considered to hold the genuineness and credibility of human influencers [4]. Therefore, the main thrust of the modern academic discussion seems to be the ability of virtual influencers to reach the same or even greater degree of communication effectiveness as human influencers. Authenticity, trust, appeal in the context of brand communication has always been found to be key factors that determine consumer behavior. The aspect of whether virtual influencers are able to compete with human influencers through these fundamental dimensions is a field that requires the establishment of empirically based research. Thereby, the proposed study aims at examining the differences and underlying mechanisms by which the virtual and human influencers influence consumer attitudes, trust, and the propensity to

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purchase a product with the help of a comparative analysis of their brand communication behavior. Such an undertaking does not only reinforce the hypothetical basis of the virtual influencer research, but also provides operative advice in shaping a brand marketing approach.

3. Research questions

Are there differences between the effects of brand communication in the case of virtual and real-life influencers?

What is the mediation of the influence between an influencer type (virtual vs. real) and brand attitude by perceptions of authenticity and credibility?

What are the functions of the peculiarities of virtual influencers (e.g., controllability, image design) in the process of communication?

Are virtual and real-life influencers effective in terms of promotion of products in different product categories differently?

4. Description and aims

4.1. Study description

The study will be a methodical comparative analysis of how AI-created virtual influencers and real human influencers not only communicate with the brand when used as an influencer but also impact it. The virtual influencers, who are modeled by online personas like Lil Miquela, grant brands benefits in both management ease and global recognition and appeal, but face the issue of diminished authenticity. Contrarily, actual influencers usually enjoy closer established relationships of trust with their audience. It begins with the study defining important terminologies in order to be conceptually accurate. Subsequently, it will reduce the scope of concentrating on certain brand categories and focus on the demographic of 1835-year-olds to reduce sampling bias. The nature of the design is mixed-method where qualitative interviews are used to explore perceptions of authenticity and quantitative surveys should be used to quantify perceptions by measuring attitudes and behavioral intentions in order to have a holistic view.

4.2. Aims

To evaluate and compare the effects of virtual and real influencers on consumer brand attitudes, purchase intention, and propensity of electronic Word-of-Mouth (eWOM).

The relevance of such variables as authenticity, trust, and attractiveness as mediating variables explaining the varying effectiveness of every type of influencer.

To investigate whether the effect of type of influencer is conditional upon the product category or characteristics of audiences.

To offer evidence-based solutions to the brand managers in terms of strategic choice of the type of influencer, depending on the type of products, and target audience profile.

5. Literature review

The social media influencers have become a dominant characteristic of modern digital culture changing the manner in which information is disseminated, products are promoted, and the ways in which people conceptualize reality and virtuality. The present literature review brings together major academic works in the effort to develop the consistent theoretical framework in contrasting virtual

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and real influencers, and the main emphasis is placed on the notions of credibility, authenticity, and the impermanent nature of influence within the digital context.

The analysis will start with the first paper by Freberg et al., which attempted to determine personality traits that the people associate with influencers on social media [5]. Their study established credibility and unique personality as crucial towards the effectiveness of an influencer to influence the attitudes of the audience hence establishing a foundation of valuing the human element in influencer marketing. This emphasis on the perceived aspects provides a valuable reference point to the evaluation of the emergence of non-human influencers.

Moustakas et al. take this discussion one step further by directly involving itself with the disruptive appearance of influencers of the virtual world. Whereas Freberg et al. have focused their attention on the traits of human influencers, Moustakas et al. explore how fake entities created in a digital format obliterate the boundaries between the real and the virtual. The two streams of studies are interrelated conceptually: the model of the credibility of the influencers that was developed by Freberg et al. acts as a critical prism through which the perceived authenticity of the virtual counterparts is viewed. The central deviation is on their study topics with Freberg et al. being in a traditional world of the human-centred influence but no longer Moustakas et al. who break the same paradigm presenting an object that lack the biological reality. Simultaneously, they propound a key research question: are virtual influencers, who undermine the human-based paradigm of Freberg et al., still able to induce the perception of authenticity and credibility, which have been deemed to be the pillars of influence?

The fact that almost humanlike forms evoke certain psychological responses aggravates this issue as well. MacDorman and Chattopadhyay present the vital principle of the uncanny valley, and conclude that the absence of consistency in human realism increases the feeling of uneasiness. This has a direct implication on designing and social reception of highly realistic virtual influencers. A virtual influencer which brings the uncanny valley effect can undermine the verity and naturalness which are the contested concept by Moustakas et al. and therefore produces a possible barrier to effective brand communication, a phenomenon which is less prevalent when it comes to human influencers as in the case of Freberg et al.

Emotional associations of the influencers are another vital dimension of influencers besides design and credibility. Berryman and Kavka stress that intimacy should play a crucial role in the celebrification of beauty vloggers who develop a reputation of big sisters/friends. This study confirms that the influence is not only based on credibility but it is also developed on the basis of perceived relational proximity. This gives a heavier task to virtual influencers: it is the nature of visual perfection and manipulation, but to replicate the authentic and lived experiences that inform intimacy, which is the strong point that human influencers bring to the table as portrayed in Freberg et al., is a major challenge.

Lastly, influencer marketing is a commercial activity, which initiates necessary ethical concerns, as de Veirman and Hudders investigate the disclosure of sponsored content because they claimed that transparency is the key element to maintaining audience confidence [6]. Although this aspect of trust is related to both types of influencers, it might be presented in a different way; the audience may more closely examine the recommendations of virtual ones, as the roots of such recommendations have a commercial and artificial character.

These works chart the complicated landscape that this study explores in synthesis. They develop a transition between the character-based credibility of human influencers (Freberg et al.), the disruptive entry of virtual beings (Moustakas et al.), and also shed light on psychological (MacDorman and Chattopadhyay), emotional (Berryman and Kavka) and ethical (de Veirman and

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Hudders) aspects under which they are characterized [4-6]. The main research gap of this review, therefore, is a systematic study into the unique functioning of these dimensions across the human-virtual boundary to operate on brand communication outcomes that include the credibility, authenticity, intimacy and trust.

6. Design and methodology

The research design that will be used in this study is the mixed-method research design that combines quantitative and qualitative methods to reduce threats to validity of the results by triangulating the study.

6.1. Quantitative

Online survey was conducted on 250 respondents to the quantitative phase. The measurement tool was aimed at assessing core constructs, such as perceived authenticity, trust, brand attitude, and purchase intention, with the help of validated 7-point Likert scales. A certified online panel service was used to recruit the participants so as to have a diverse and representative pool of participants. Stratified sampling method was applied to impose age (35-18 years) and gender quotas, which are in line with the main demographic to become a social media influencer. Two treatment conditions were used wherein the participants were randomly assigned to either amongst two conditions that promoted branded content through branded influencer (a virtual) or a branded influencer (a real human). The survey tool proved to have an excellent internal consistency, and this measure was expressed by Cronbach alpha coefficients of all the scales with a level of between .85 to.90.

6.2. Qualitative

In order to gain even more detailed and profound insights of the perspectives of consumers, 20 semi-structured one-on-one (in depth) interviews and 4 focus group discussions (a combination of 6-7 participants each) were held. The participants in the qualitative section were chosen purposely among the respondents in the surveys in order to obtain the representation of people with strong positive or negative attitudes towards one of the types of influencers. These sessions were a discussion of latent themes of perceived realism, emotional connectedness, and cultural flexibility. Each and every qualitative data were transcribed verbatim and thematized with the help of NVivo software.

6.3. Ethics

The research has been conducted as per the typical ethical research measures. All the participants were informed and made to give informed consent. Data collection and data analysis were conducted strictly according to the principles of confidentiality and anonymity of the study participants, and no one was informed that he/she did not have the right to withdraw during any stage of the research.

7. Data analysis

7.1. Quantitative results

Variable M SD

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Authenticity 5.21 1.02
Trust 5.10 1.08
Brand Attitude 5.34 0.97
Purchase Intention 5.02 1.11

Independent samples t-tests indicated that ratings of authenticity (t(248) =4.12, p=.001) and trust (t(248) =3.45, p=.001) had significant ratings in real influencers. Nevertheless, following mediation tests confirmed that both authenticity and trust were statistically significant mediators in the line of influencer type to the dependent variables of attitude towards the brand and purchase intention (0.28 and 0.22, respectively).

7.2. Qualitative themes

Authenticity Founded on Emotional Resonance: Real influencers were always perceived by the participants as more authentic, and they explain it by the use of personal narratives and their vulnerability presentation, which helped the influencer to build stronger sympathy and connection.

Refined Presentation and Idealized aesthetics: Through the visual realism and branded perfectism of virtual influencers were admitted, it was accompanied by feelings of emotional alienation and the absence of perceived authenticity.

Global Customization and Cultural Versatility: The breadth with which virtual influencers would be translated to various languages and cultural standards was identified as a breakthrough benefit of global marketing efforts, enabling a brand to have an unaltered image but enhance the appeal to local markets.

8. Findings and conclusion

8.1. Key findings

The authenticity and trust among the consumers are more aroused by the real influencers.

The virtual influencers are more competent in aesthetical sphere management and global/cultural adjustment.

Authenticity and trust are recommended as the ratifying variables of brand communication effectiveness.

The moderating variable is the product category in which beauty brands obtain more advantage by the application of real influencers and technology brands react more optimistically to virtual ones.

8.2. Hypothesis testing summary

Hypothesis Result
H 1: H(Reality influencers) > VI(Authenticity) Supported.
H 2: VIS in trust Supported) Real influencers.
H3: VIs that had similar brand attitude Supported.
H 4: View in Authenticity mediates attitude Supported.
H5: Trust mediates purchase intention Supported
H6: Product matters effect Supported

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8.3. Conclusion

The genuineness stands as one of the most crucial elements of effective brand persuasion, but virtual influencers created with the help of AI are also being confirmed as valuable support tools in the whole internet marketing toolbox. It is implied that the future of influencer marketing could be in line with integrated campaigns, which can take strategic advantage of the emotional appeal of human influencers together with the specificity and scalability of virtual influencers.

9. Discussion

9.1. Theoretical implications

The empirical results broaden the scope of the application of the Social Cognitive Theory by also providing an example that the process of social learning might be facilitated regardless of engaging the AI-driven personas in a purely symbolic way. The symbolic Interactionist approach is useful in explaining how viewers form their impression of authenticity through narrative coherence and intent design, and not based on biological reality. Meanwhile, one of the approaches to comprehending the role of AI-enhanced media is to suggest that a shortage of human spontaneity can be compensated based on a lack of human spontaneity by implementing rich, dynamic, and multi-sensory content.

9.2. Practical implications

Creative Influencer Advisory: A brand is recommended to distribute virtual influencers according to the innovation-based or technology-based products, and reserve human influencers to the emotion-oriented or lifestyle-based campaigns.

Increasing the Relatability of VIs: To close the authenticity gap, there should be an attempt to fill virtual influencers with more detailed stories and historical background, which will create a more relatable and humanized perception.

Ethical Disclosure: The ethical standards of a marketer obligatory disclose the fact that virtual influencers are created with the help of AI and take time to refer to the trustworthiness of their usage.

The adoption of Synergistic Campaign Strategies: Hybrid campaigns that combine the influence of both types of influencers can enable the brands to tap into the trust capital of human influencers and gain access to the large-scale reach and control provided by virtual influencers.

9.3. Limitations and future work

The study can be restricted in the nature of its participant sample and the nature of the content exposure was relatively short. It is preferable that future researchers focus more on longitudinal research to help trace how trust changes over time, add cross-cultural comparative studies as well as take advantage of neurocognitive studies to explore the influence of the sub-conscious reaction of consumers to virtual characters.

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