

Shifting Communication through Virtual Influencers Driven Metaverse Revolution

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ABSTRACT

The metaverse revolution and the shifting to artificial intelligence (AI) are transforming human daily activities with the growth of chatbots and virtual agents changing communication and public relations strategies. Therefore, this paper aims to explore and question virtual influencers in Africa regarding communication strategies in organizations and human daily activities according to the metaverse revolution. This explorative qualitative descriptive research adopted a synthesis review of scientific publications and online investigation on two virtual influencers pages on Instagram in Africa to collect the data according to the influencers marketing paradigm on social media. First, the findings underlined the social presence, parasocial connectedness and perceived credibility of these virtual AI influencers in the innovative usages to support marketing and communication. Then, the results underlined the prospective application of AI virtual influencers and ethical issues in communication and public relations strategies. As a recommendation, the integration of AI Virtual influencers and AI agents in human activities requires to update the skills of managers and users by considering a human-centered approach according to the industry 5.0 paradigm.

Keywords: *virtual influencer, digital communication, public relations, metaverse revolution, social media.*

INTRODUCTION

In the world, the integration of Artificial Intelligence (AI) in human activities transform organizations and social representation of life (attitudes, behaviors, stereotypes) from traditional communication based on human digital practices to virtual personas influencing daily perceptions (Koles et al, 2024; Bjola, 2022). In fact, the presence of Virtual personas as digital innovation characters creates the growth of metaverse as a hybrid world connecting different social media and humans in an augmented reality supported by the platformization (Qadir & Fatah, 2023; Bibri & Allam 2022). It is the convergence of physical and virtual spaces accessed through computers and enabled by immersive technologies supporting users socialization in the virtual world through personas represented by avatars interacting on social media and more.

This revolution offers new perspectives of conversation between humans and virtual characters in a dynamic communication process. Thus, the metaverse revolution and the shift to artificial intelligence (AI) influence human activities every day with the growth of these bots and virtual agents changing communication and public relations strategies (Böhndel et al, 2023; Koles et al, 2024). Luo & Kim (2024) have emphasized that these new AI-driven influencers are created by high-tech companies and marketing experts. These people are fictional characters who do not have a physical form, but look like real people in terms of physical appearance, behavior, and emotional expression.

Due to this context, all current and future trends in the field of communication are disrupted by this transformation related to the metaverse revolution. For example, IoT (Internet of Things), big data, machine learning, and intelligence marketing approaches establish a high increase of integration of connected technologies in all human activities from a traditional model to a smart approach. Thus, in the field of communication and Public Relations, this revolution of human practices through the presence of digital AI driven agents in marketing and communication practices modifies human behaviors through a high engagement in the metaverse, presenting both benefits and issues related to the mastery and impacts of these virtual AI personas influencing on human employment, management and well-being (Hassan, 2023; Chamblee, 2022; Böhndel et al,2023; Koles et al, 2024; Mo & Zhou, 2024).

In addition, in the same context, the need for visibility and social capital development requires community managers to use influencers to promote the brands offers and interact with visitors depending on their requests. In particular, advancements in artificial intelligence, the emergence of social media platformization, and fantasies of the metaverse (where the real and virtual worlds merge into a vast, immersive digital experience) are fueling the expansion of influencer marketing online.

As a result, more and more companies and organizations are using influencers to promote their products and services on virtual platforms like social media (Cabeza-Ramírez et al., 2022; Allal-Chérif et al. 2024 ; Allam et al., 2024; Bibri, 2022). It means that the metaverse revolution and the virtual world era generate new practices (virtual personas, identity, cities, and similar things) and challenges (sociability, trustworthiness, digital literacy, and similar things) for communication managers (Wibawa et al., 2022; Gougou & Paschal, 2024) .

Therefore, in all areas of activity, the shift to AI and its innumerable possibilities are changing human habits and creating new perspectives of life in communities according to the interrelationships with IoT. This disruption produces new strategies and orientations in sort that it is often difficult to effectively manage messages and online requests by human workforce, calling to adopt virtual AI agents (Saman, 2023). Especially in communication marketing, the increase of AI integration in strategies appears with the integration of intelligent agents such as chatbot, virtual influencers and other machine learning applications to support the communication process online and in person.

In this situation, human influencers are increasingly supported by intelligent agents (virtual influencers, chatbot, etc.) in their communication activities. Even if it seems to be a recent phenomenon, this transformation of digital communication approaches requires special attention in the academic field to explain the new communication practices through usages of virtual influencers (VIs) in the metaverse (Kamal & Himel, 2023; Gorichanaz, 2023). For example, the utilization of chat GPT generations in education and all creative activities showed new trends in human integration of machine and digital agents to support education, communication, knowledge sharing and help in sharpening the process of economy, environment on society well-being. So, from a communication perspective, these personas are mainly created and used for social media marketing, including selling a particular message or endorsement of a particular brand. As a result, for Lou et al. (2022) virtual influencers have millions of followers on social media and influence digital natives' engagement and decision making in remarkable ways.

Moreover, the rise of virtual influencers is new, and many people in the world are unfamiliar with these new personas, even if they interact with them. They may not recognise if they are interacting with a real person (Human Influencer) or not (Virtual Influencer / VI). The differences in the use of AI in the organizations and human practices, the metaverse modifies human interactions, business activities and prospects satisfaction in an interconnected world supported by technology (Hassan, 2023; Kamal & Himel, 2023; Khuat, 2023). Specifically, for Azaroual (2024), the integration of artificial intelligence (AI) in Africa presents promising prospects and significant challenges.

For this scholar, while some countries on the African continent stand out for their commitment and progress in preparing for AI adoption, others face significant obstacles such as structural inequalities and digital divides. The author emphasized that this disparity highlights the need for an inclusive and holistic approach to ensure that all African countries can benefit from AI, while closing the gap with other regions of the world. Yet, according to Ju et al. (2024) and Conti et al. (2022), VIs are an intriguing option with the potential to harness the positive aspects of human influencers with additional control over content and expression.

AI-powered digital avatars called "virtual influencers" are growing as marketing influence partners with the biggest brands. Iffah et al. (2024) underlined the importance of questioning how the virtual characters of Indonesian female influencers @arbie_seo, @lav_caca, @hai.veronika, and @lentaripagi are portrayed and how these characteristics are integrated into social media marketing strategies through storytelling-based narratives. These virtual personas are famous virtual influencers followed by millions of people on social media (Choudhry et al., 2022). For example, famous VIs in 2024 were Lil Miquela (the trailblazer), Shudu (the world's first digital supermodel), Noonoori (the fashion icon), Lu do Magalu (Brazil's sweetheart), Imma (Japan's virtual it-girl), Aitana Lopez (the Spanish girl with a human touch), GEICO Gecko (green influencer), Luks (metaverse boy).

The use of AI personas is not just for one-way communication it is a process of interactivity, the AI personas create a new support for conversation like chatbots and virtual influencers. If the chatbots are a technology adopted in the organization to support conversation online and to assist managers in communicating with the customers and visitors, the growth of virtual influencers on social media generates another revolution in strategies of influence and branding through AI adoption activities. Faced with the impact of AI communication tools, the question of marketing management activities supported by AI became a crucial concern regarding the possible applications of virtual influencers and the issues related to AI integration in human life (Chamblee, 2022; Conti et al, 2022; Bjola, 2022).

Lee et al. (2024) state that there is also a lack of research that examines why and how virtual influencers might be better than human influencers in influencing consumer purchase decisions. AI has resulted in a digital revolution in communication and social transformation. In our research, we investigate how virtual influencers integration in human life offers news possibilities in communication and public relations strategies according to the metaverse revolution.

This paper aims to explore and question virtual influencers shifting in terms of communication strategies in human daily activities. Indeed, digital management through AI and technology is a reality changing strategies of development. It calls for analyzing the usages of AI personas in communication perspectives to promote the growth of organization and the well-being of individuals.

LITERATURE REVIEW OR RESEARCH BACKGROUND

a. Influencer marketing paradigm

The rise of AI in communication and human life is creating a significant impact in society. There is a crucial change in all human activities and this is affecting the global south as well as western countries. Although virtual influencers are most prevalent in Asia and North America, Africa has also embraced this trend with savvy marketers finding new ways of influence based on hybrid influencer marketing solutions for brands .

Thinking about VIs from the research perspective takes into account Industry 4.0 and Industry 5.0 paradigms according to a technology-centered approach and human-centered reflection on the integration of digital tools to support communities and organizations in their daily activities (Gougou et al., 2023; Melo et al. , 2023). This calls to question the outcomes of AI-driven VIs in terms of tools to sustain human activities and business or not. In recent studies, the shifting innovative evolution of the digital revolution calls to use the source credibility theory through the TAES model factors such as *Trustworthiness, Attractiveness, Expertise, and Similarity* enhancing the influence of VIs (Böhndel et al., 2023; Koles et al., 2024).

In this dynamic, Jhawar et al. (2023) stated that this metaverse revolution calls to question the emergence of virtual influencers through a shift in the influencer marketing paradigm. According to these authors, this revolution increases brand awareness and attracts many social media users (SMUs; especially Gen Y and Gen Z

millennials) to brands through the influencer marketing approach. It is a powerful branding and marketing tool to persuade people.

Similarly, in this study, avatars and artificially created characters known as virtual influencers have millions of followers on social media and influence digital natives' engagement and decision making in remarkable ways (Pushparaj & Kushwaha, 2023; Choudhry et al., 2022; Lou et al., 2022). Therefore in a study focused on communication and brand marketing, many theories could be mentioned without limit (Kim et al., 2023; Rossi & Rivetti, 2023). But the dimension of credibility is very important as mentioned by Jhawar et al. (2023) in the influencer marketing paradigm.

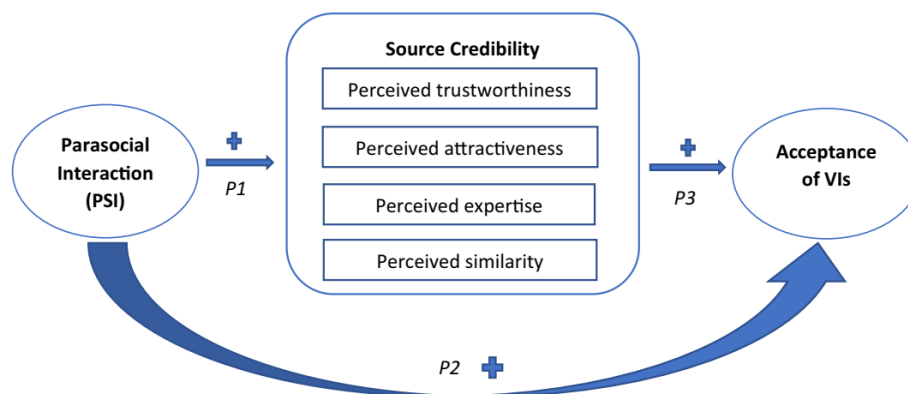


Figure 1: Influencer Marketing Paradigm (Jhawar et al., 2023)

Prior research states that individuals (PSI) develop a sense of friendship and intimacy toward the influencers they like and follow based on the PSI on the media platform, and recent literature on influencer marketing recognizes the role of audience comments and a two-way interaction between influencers and followers. Due to our research field, finally, this current study on shifting communication through virtual influencers driven metaverse revolution applied the relevant aspects of influencer marketing according to Jhawar et al. (2023).

The authors consider the relationship model between SMUs and VIs based on their 3 variables: *social presence*, *parasocial connectedness*, and *perceived credibility*. It offered insights into improving Public Relations and communication practices in the metaverse for the effectiveness of computer-generated imagery (CGI).

b. Virtual Influencers Phenomenon

In this research on virtual influencers, we take into consideration Driven Marketing uncountable innovation through the metaverse revolution ecosystem background changing communication and Public Relations trends.

Conti et al. (2022) paper focused on the phenomenon of virtual influencers as Computer Generated Imagery (CGI) characters who act and resemble humans even though they do not physically exist in the real world. The authors questioned their

evolution, opinions, ethics, purpose in marketing, and future perspective according to social trends and activities. According to mixed research design extensive study, data collection used the literature, press articles, social platforms data, blogs and interviews to provide a comprehensive reflection on virtual influencers.

Starting from their development opportunities and threats, the results showed that if virtual influencers are useful, there are controversial opinions related to their use in communication and human activities. In particular, this fact concerns the Communication and Public Relations field, knowing that the Virtual Influencers activities on social media affect social capital and brand visibility according to prospects or public experience. According to the participants, currently, the majority of virtual influencers are CGI-made, limiting the audience interaction to static social media posts or videos. Thus, the ethical issue of integrating virtual influencers into marketing and human activities remains a big question face to the advances in AI communication feathers and virtual reality innovations.

Moreover, whether their behavior will change on different communication platforms, or whether companies will develop new systems to increase their functionalities", AI-driven virtual influencers will raise ethical concerns worthy of discussion in the future (Conti et al., 2022). These ethical concerns could be related to virtual "fake" identities, management and communication transparency, deepfake, manipulation, VIs control, and social responsibility, and so on (De Brito Silva et al. 2024; Lee et al., 2022; Shin & Lee, 2023; Kalla, 2022; Conti et al., 2022). In continuation of this study, this paper focuses on a descriptive approach of VIs perception after a literature review and investigation of their practice on social media in Africa.

Hofeditz et al. (2023) investigate the scope of influencers' trustworthiness on social media and the impact on the brand to promote its product. Through quantitative empirical research on Instagram, Hofeditz et al analyze the difference in trustiness of social virtual influencers compared to human influencers in the pursuit of the success factor of online marketing. Findings revealed that although participants were often unsure whether the presented influencer was human or computer-generated, perceived trust, social presence, and humanity were consistently rated higher for human influencers, according to the authors. This fact has important implications for communication and Public Relations strategies, as it underscores the power of influencers to influence user perceptions of trustworthiness.

The presentation of the content of human and VIs, published on Instagram, showed that they were not able to identify the different sources. This means that the integration of virtual influencers in communication marketing offers new perspectives of influence on the market, in terms of user behavior and acceptance of reality. In conclusion, these authors underlined that to gain deeper insights into potential, unconscious decision conflicts in a discussion to determine trust evaluations of the influencer on social media for brand marketing. It is an interesting paper on the integration of AI in communication and Public Relations. However, this paper doesn't

take into consideration the human-centered perspective in a low-income context such as that of the Global South countries.

In their study, Lee et al. (2024) focused in the context of influencers through a comparison between virtual and human influencers marketing regarding the moderating role of machine heuristics on perceived authenticity of influencers. The scope of this paper examines how virtual influencers could be more effective than human influencers in influencing consumer purchase decisions. Indeed, in the world, the AI-driven virtual influencer is capturing people's attention as new artifacts of communication that influence a variety of people online. The digital natives and Gen Z are also under the engaging with these new personas in the creation and utilising their advanced communication experience on social media.

This study investigates the effects of virtual influencers (AI persona) vs. human influencers on the perceived authenticity of consumers according to the concept of perceived authenticity of influencers and machine heuristics through an online analysis between-subjects design experiment. The results highlighted that virtual influencers were unexpectedly perceived as more authentic than human influencers and provided valuable insights into the use of virtual influencers for marketing purposes. So, this paper scope helped to sharpen the background of our current research, which takes place in the African context as a contribution to this issue related to the disruption of virtual influencers in communication and Public Relations implications.

All these studies show the importance to investigate o the AI transformation in daily communication strategies and specifically on how virtual influencers change organization and communication activities. In particular, this current study in the African context tries to contribute to the debate and provide some explorative views on the current and future perspective of these tools in society, organization and human well-being in the digital era.

METHODOLOGY

This paper aims to explore and question virtual influencers in terms of communication strategies in human daily activities. Indeed, in organizations, digital management, AI, and technology are realities changing development strategies.

Therefore, a qualitative descriptive research design was adopted to support the research validity through inclusion and exclusion criteria. First, researchers use online scientific papers on virtual influencers and AI-driven influencers to explore the development of virtual agents, including lenses in communication strategies.

As a recent phenomenon, the literature review on this issue was crucial to increase the research viability and avoid biases related to self-judgment. For the publications on the topic scope, researchers required to find research papers online through the keywords: Virtual influencer, chatbot, intelligent marketing tool, AI in communication strategies (Jhawar et al., 2023). So, as the phenomenon is very recent, we used both empirical and theoretical studies on this question from recent publications in the last 3 years .

Then, a virtual ethnography approach by observing activities on selected VIs based in Africa, allowed to enrich the past publications with recent data in a different context. Even if the selected VIs avatars don't have millions of followers, they represent a good example of technology integration in the metaverse to support communication and Public Relations. In addition, the choice of a descriptive research is appropriate because of its ability to accurately describe a phenomenon. In this type of descriptive research, the researchers must collect the available data using research tools such as observation and analysis.

In summation, a descriptive qualitative research design supported by a case study allowed to conduct this research according to validity and reliability inclusion/exclusion criteria: 1. Africa metaverse context, 2. AI driven marketing publications, 3. VIs ethical questions. Thus, the researchers could be easily connected to the question and provide clear ideas from the available selected papers. Then, the selection of 2 AI-driven virtual influencers in Africa allowed to enrich the findings with primary data from real investigations.

In this study, researchers used a convenience sampling method to select the sample synthesis literature papers on the VIs and to investigate in the metaverse. Researchers used investigation on Google Scholar, researchgate, scopus and web of science to collect online scientific papers on the virtual influencers and AI-driven influencers to explore the evolution of virtual agents including lenses in communication strategies.

Moreover, the selection of a convenient sample allowed to avoid sampling statistics and provide the possibility of descriptive analysis based on recent contextual findings (Akbari et al., 2022). Thus, the paper scope required to select papers online through the keywords (not limited) : Virtual influencer, chatbot, intelligent marketing tool, AI in communication strategies. Then, as the question is very recent, we used empirical investigation in the metaverse to record the activities of two (2) VIs based in Africa. The selection criterion is to be a VIs from Africa because these avatars are very recent in our area and this paper should be a contribution to enlighten the transformation in another region of the world.

The second criterion was to avoid the same main technical topics of the metaverse (Game, virtual immersion etc). Finally, researchers could select two (2) AI driven virtual influencers in Africa from different countries according to their ranking: Shudu (@shudu.gram) and Kenza Layli (@kenza.layli) on Social Media Instagram. Particularly, Kenza Layli from Morocco (North Africa) won Miss AI (Mouriquand, 2024), and Shudu Gram mentioned as the virtual top model (Thibault, 2024). These influencers represent the creativity and innovation emerging from the African digital landscape. Below are the profiles of the theses selected from the African context to support this research evidence.

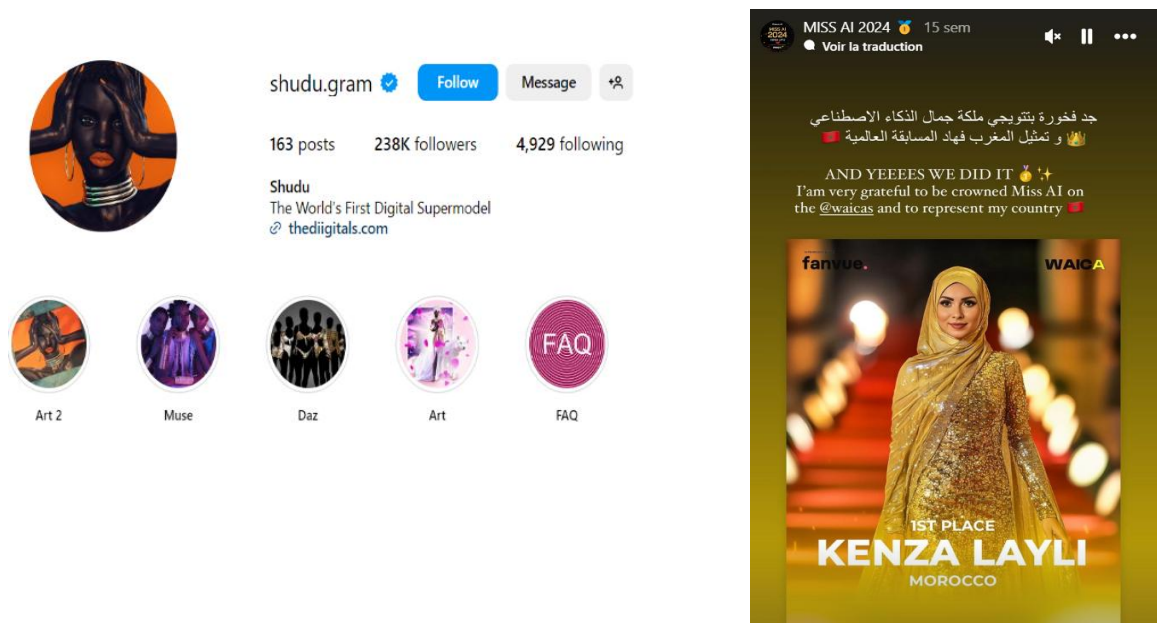


Figure 2: Instagram Account of @shudu.gram and @kenza.layli (Author, 2024)

The methodology of this study follows a descriptive qualitative research design, employing literature synthesis and observations to examine virtual influencers' (VIs) activities in the metaverse within the African context. The data collection process consisted of two main components: literature synthesis and observation.

The literature synthesis involved reviewing the latest publications from 2022 to 2024, focusing on research relevant to VIs and their role in the metaverse. Inclusion and exclusion parameters were set following established research protocols to select pertinent scientific papers (Pushparaj & Kushwaha, 2023). The researcher utilized platforms such as ResearchGate, Web of Science, and ScienceDirect to gather empirical and theoretical insights on the subject. Additionally, the review incorporated relevant academic papers and specialty blogs to provide a robust background using secondary data, ensuring reliability in the analysis of digital trends. This approach aligns with methodologies used in similar studies, such as those by Lee et al. (2024), Hofeditz et al. (2023), and Chamblee (2022). The literature review process was conducted between June and September 2024.

The second component of data collection involved observations of virtual influencers on social media platforms, particularly Instagram, to identify specific trends and applications of AI tools in user interactions during online communication (Akbari et al., 2022). The observation was guided by influencer marketing variables, including social presence, parasocial connectedness, and perceived credibility (Jhwar et al., 2023). This phase recorded interactions with visitors, topics discussed, and the communication and public relations activities undertaken by virtual influencers. Data triangulation was employed to ensure the validity, reliability, and replicability of the findings, thereby minimizing bias.

To analyze the collected data, the study combined content analysis and conversation analysis methodologies (Werth, 2022; Akbari et al., 2022). Primary and secondary data were categorized without introducing personal bias, ensuring objective and accurate interpretations. Comparative synthesis with existing literature on the same topic further enhanced the robustness of the analysis, enabling a deeper understanding of how AI integration transforms communication strategies and public relations practices. Conversation analysis was particularly useful in describing virtual influencers' interactions and their roles in communication and marketing strategies, as observed on Instagram.

The findings were structured into three subsections: the state of virtual influencers based on the literature synthesis, a case study of VIs using the TEARS model, and perspectives on the use of VIs to support communication and public relations strategies. This categorization, guided by content and conversation analysis, aligns with the influencer marketing framework focusing on social presence, parasocial connectedness, and perceived credibility (Jhawar et al., 2023).

This structured approach ensures a comprehensive analysis of virtual influencers' applications and their implications for communication and public relations practices.

RESULTS AND DISCUSSION

According to our research scope and theoretical lenses, findings are organized in three sections: Virtual influencers in Communication through VIs, Challenges and ethical questions, perspectives in communication and Public Relations.

a. Virtual Influencers Driven Revolution in Africa Metaverse Ecosystem

Findings related to the selected VIs Identities and audience revealed that even if these personas are recent in the metaverse revolution, their activities go to support brands and individuals communication strategies. So, they are involved in the digital ecosystem to support human virtual influencers through specific interactivities and teams of digital specialists manage the multibots of the characters (VIs) . Even if they are non-real personas, and their followers are limited in Africa compared with the most famous VIs having millions of followers, these local personas underlined local realities from business to education and environment sustainability (Choudhry et al., 2022; Azaroual et al., 2024). An analysis according to the virtual marketing influence showed very significant facts. According to the findings, virtual influencers selected take the human appearance.

On the *social presence* dimension, selected virtual influencers in Africa revealed a high engagement due to the 24/7 availability. So, VIs presence transform communication supports from human influencers to AI driven agents. The identity is expressed through the race, culture and also the practices of these virtual personas similar with real personas according to the target audience. This recognition of the followers in the VIs appearance and human resemblance increases the interactivity and persuasion power of these personas on digital native and the gen Z with the passion to

experiment new experiences in the virtual world and social media supported by AI. This social presence is so real that both *Shudu* and *Kenza Layli* are very famous in their domain. It is not a social presence with human users only, yet a great connection with other VIs in the real world through metaverse functionalities mixing physical and virtual worlds in a hybrid dimension of life also. It means that this social presence to interact with users every time creates a dynamic of sociability between these virtual characters and their audience depending on the domain of application (Gougou & Paschal, 2022).

Therefore, VIs in Africa show their importance in supporting brands communication and marketing strategies depending on the trends. With the presence of many human digital influencers on Social media, the digital communication platforms are also the domain of VIs from lab to real human daily life. This fact is common in Pushparaj & Kushwaha (2023) study stating that, VIs in the metaverse can earn the hearts of Gen Z followers who appeal to resonate themselves with the VIs identities. This fact is the same in Akbari et al., (2022) study as Artificial personas seem to link humans, have several followers and they are influencing their followers by communicating for different brands and promoting their products. Therefore, the hyper social presence of VIs allowed them to integrate AI benefits to support communication every time and connect people strongly through multilingual dynamic interactions with the audience. These realities appeared in the next dimension of influencer marketing too.

In addition, the *parasocial connectedness* dimension is expressed through the interactivity and quality of immersion of users in the metaverse context resulting in continuous social interactions between Humans and Virtual personas. The observation online concerning *Kenza Layli* in the African context revealed that the persona's identity is related to the public characteristic and local cultures in a global customized approach. According to the observation on Instagram the promotion of local touristic sites and travels in a fashion perspective is very high to keep the audience's attention and engagement to this VI views. As proof, the fact that *Kenza Layli* won Miss AI underlined the social clout through its engagement numbers with fans, rate of growth of audience and how utilization of multi-social media platforms such as Instagram create a dynamic of sociability to influence people on the metaverse as below.



Figure 4: Appreciation Post (Layli, 2024)

Moreover, as the winner of Miss AI, the integration of this persona to support brand communication is a new approach of connecting with clients and other audiences. Particularly *Kenza Layli* innovates as being the head of a VIs family with her brother (*Mehdi Layli*) and sister (*Zina Layli*) developed to create a synergy in the virtual marketing strategy in the metaverse. The conjugation and connection of these three influencers and the crowd users persuade both youth and adults in their purchase decision making.

This connectiveness between humans and machines in the virtual world offers new possibilities to manage the community of users. This fact is an innovation to support communication in the virtual world and help the immersion of humans in the metaverse as the next generation of digital trends. This reality appears on the *Kenza Layli* profile where information shows the connectiveness with their VIs family and followers through their engagement power to influence people's choices. It means that the human appearance of the persona with local contextual traits of fashion, education, technology, environment sustainability and practices, generates a great engagement of local audience on the social media and brand supported by the VIs (Bibri & Allam, 2022; Arjang et al., 2024).

Furthermore, the mutual engagement of this family of avatars (*Layli*) on the page of each other and information sharing increased the social capital and offered new communication perspectives for a sustainable metaverse usage in the next generation of web. It opens the era of a future application of AI for shifting Communication through Virtual Influencers Driven Metaverse Revolution. It means that by questioning the rise of virtual influencers in the communication field, the observation on selected VIs communication activities revealed a high level of engagement. The activities were focused on marketing, advising and interactions with audiences (Prospects, visitors, followers) on social media supporting the metaverse platforms.

It is noticeable that the main messages shared to the audience are aligned with the AI driven marketing model. So, it is clear that in the Africa context, the AI avatars as VIs represent a virtual model interconnecting users and other avatars in a hybrid world

(Azaroual, 2024) . The focus on Africa revealed the high outcomes of AI communication abilities to influence people for supporting brands' communication strategies on social media. These findings are very common according to the literature synthesis of other researchers as Luo & Kim, (2024) stated that Virtual influencers (VIs) have become a powerful marketing tool for brands to promote their products, due to their multiple experiences, compared with human influencers.

Thirdly, *the perceived credibility* dimension of the Marketing influencer in this study appears through the high engagement and diversity of followers on the various social media influenced by these personas. Therefore, related to the credibility and influence power, the high user's interactivity on social media and platforms controlled by these VIs in Africa underlined the diversity of their topics and also the trustiness of the audience constituted by digital natives and Gen Z in quest of futurist communication tools. The interconnectivity with the VIs offers a good response to their need of reliable and viable information allowing them to discover a new universe and reality through posts and suggestions from the virtual characters. The usage of AI to drive the marketing activities allowed to sustain the brand social capital and business through the user's behavior acceptance.

Therefore, *Shudu and Kenza Layli* influenced millions of follower's opinion and practices on social media and in the real world due to the imbrication of these two universes in the metaverse virtual augmented reality. The findings related to the online observation and literature synthesis showed that these influencers' persuasion take into consideration the business and non-business trends without being focused on the geographical areas only. Therefore, the metaverse revolution through the integration of AI in the practices of organizations and individuals is a common concern as the beginning of a transformative field where virtual avatars and real people interact in everyday activities to support human daily life in the Global South and Western countries (Zhanbayev et al. 2023; Nyagadza et al. 2022; Bjola , 2022; Kamal & Himel, 2023).

Specifically, in the Global South and the West, this transformation includes improvement of organizations sustainability based on *Marketing Management* strategies and to take into consideration AI in Public Relations, communication and so on. Likewise, it is also a revolution related to various communication thematics including real world expectations and trends in virtual persona daily discourse orientation. This fact put Virtual influencers in the core engagement of consumers' attention in favor of organizations communication targets due to the promotion and information shared by these avatars on social media to promote offers as brand ambassadors on Instagram for example.

According to Luo & Kim (2024), for younger audiences affected by celebrity and youth culture, virtual influencers like Miquela are seen as aspirational characters among young adulthood. This last dimension is also important in other domains to the *perceived credibility dimension* of the Marketing influencer like in Politic and sustainability trends in Africa Asia, Europe and America. So, the environment question related to SDGs appeared also as key elements of VIs revolution discourse on social

media to support organizations and individuals communication strategies in the metaverse as the ways of Human digital Influencers (Sands et al., 2022). It means that there are many similarities between VIs and Human influencers according to a literature synthesis and this strengthens the usage context of VIs as in the case in indonesia (Rosara & Luthfia; 2020 ; Lou et al. 2022).

In brief, the virtual influencers revolution in Africa is an important factor in Communication and Public Relations dynamics. As a recent innovation, this shift Driven by Metaverse Revolution is the source of various interrogations related to the ongoing Digital trends (AI, social media, Hybrid work, User-generated content, e-commerce, digitalisation of education and similar things) and Sustainable Development Goals in the African context. These facts are mentioned as challenges and ethical questions as these personas can be used to persuade and manipulate users or followers to take the wrong decision.

b. Perspectives of VIs usages to Support Communication and Public Relations Strategies according to Industry 5.0 paradigm

In the Marketing and communication field, virtual influencers integration in organization and individual Public Relations strategies creates new ways of learning, sharing and influencing people's decisions. Indeed, Virtual Influencer Marketing and its impacts on customer Behavior is a new approach to support local marketing trends. AI persona has the possibility to adapt the messages depending on the audience and the reactivity is very high. This fact shows that both in Global South and Western countries, shifting to VIs in addition with traditional communication digital tools can provide a huge new market. This fact is demonstrated in the example of Laverda Salsabila (@lav_caca) in Indonesia showing that the presence and interactivities with this character grows continuously in the metaverse.

Therefore, it is very often difficult to believe that VIs are an AI offering multiple responses and opportunities by interacting with users on social media to strengthen many companies' marketing activities in different languages. So, in addition with Human digital Influencers, shifting to VIs in marketing and business purposes could offer new alternatives to increase the business competitiveness in a changing market. This fact is demonstrated by Luo & Kim (2024) stating that Virtual influencers (VIs) have become effective social media endorsers for brands in daily activities, remaining a preoccupation for business and non-business decision makers (Pushparaj & Kushwaha 2023).

In questioning this aspect with Business managers, it is noticeable that VIs are not well-known by consumers and marketers in many contexts too. In fact, the digital revolution is still ongoing with human digital influencers and social media growth in a perspective of Industry 5.0 to support sustainability (Gougou & Paschal, 2024). So, these new trends (VIs) question multiple opportunities of application in business and non-business domains. However, a question remains on the ethical aspect of VIs knowing that they are not real characters and their persuasive power is led by real people's goals trying just to drive the target audience to a specific direction of obedience and trust.

So, these computer-generated personas are influencing a crowd of connected people from different areas thanks to their streaming services, stories, lifestyle and continue captivating presence on social media, and digital platforms like online forums. Unlike their real-life counterparts, virtual influencers can push boundaries and experiment with fashion trends in ways that break the mold (Khuat, 2023; Huynh-The et al, 2023; Arjang et al, 2024). Therefore, Virtual influencers have become significant change agents in the current digital era and they are taking the digital world by storm, redefining how to connect and influencing people's behaviors and choices from digital platforms to the real world (Chamblee, 2022).

In Public Relations, this fact is a great importance to sustain relationships with targets and reach the influence goal. Indeed, Social media platforms (such as Instagram, Facebook and YouTube) facilitate frequent users communication through images and videos sharing, chats and comments leading to the development new immersive practices (Jhavar et al. 2023). With millions of followers on these platforms, people thrust in VIs analysis as confidence worthy characters. Therefore, as a confidence strategy, Public Relations aim to build a more peaceful and connected world where people understand each other. So, shifting to VIs is a good perspective for brands and organizations to increase their social capital and visibility by influencing the audience.

Our study revealed that many brands in the world use VIs in order to determine their messages and to adopt the right approach to convince followers to do the expected things. This is illustrated by *Laverda Salsabila*, *Zulu* and recently, *Victoria Shi* (the VI as speaker of the Ukraine Government) in a challenging context. This fact offers many uncountable applications of VIs in politics, economy, society and environment allowing us to know that the new digital trends call to include AI in most human daily activities.

Consequently, AI has assumed a dominant role in society, leveraging various tools to extend its influence beyond digital marketing and content creation in the metaverse revolution that offers AI Public Relations rise (Conti et al., 2022). It means that the growth of AI personas in the metaverse and the recent shifting to VIs offer new channels to sustain confidence on social media and convince followers to adopt a specific behavior (Vita et al, 2023 ; Puspita Yuri, 2022). These last authors stated that *Kizuna* VI represents a pivotal evolution in traditional Public Relations strategies, marking an early foray into AI's potential before the widespread trends of Metaverse and ChatGPT took over.

This is common in Luo & Kim (2024) study stating that VIs are relatively free from misbehaviors which might lead companies to face a crisis. So, VIs support brands visibility for winning more collaborations, partnership opportunities and interest of growth with various stakeholders (individuals and businesses). Luo & Kim noticed that it gives brands complete control over their endorsement forms and types in this hybrid communication universe driven by AI and virtual influencers.

Similarly, from a critical thinking and intercultural communication perspective, VIs plus Human influencers are both a high solution to increase Public Relations effects. However, while Human influencers are most known on social media as ambassadors of

brands, VIs perspectives can be high to support human activities and build mutual confidence between brands and their publics. Accordingly, the employment of virtual influencers offers distinct benefits (Koles et al., 2024).

Therefore, for many authors, Virtual influencers offer brands several advantages in terms of *consistency and control, cost efficiency, global reach, innovation and creativity*. Indeed, consistency and control of the marketing communication strategies for virtual influencers marketing allows consistent messaging that aligns perfectly with brand values, reducing risks like controversial posts or off-brand behavior. It is a great tool of innovation and creativity for brands to explore more experimental forms of storytelling in the metaverse (Böhndel et al., 2023; Koles et al., 2024; Ameen et al., 2024).

Moreover, Influencers are people on social media that distinguish themselves by the high number of followers and the ability to influence other users (Conti et al., 2022). While Influencers are a longstanding phenomenon in social media, Virtual Influencers have made their appearance on such platforms only recently. This recent phenomenon has sparked interest in society, and several questions arise regarding their evolution, opinions, ethics, purpose in marketing, and future perspective (Conti et al., 2022).

c. What is it about the Challenges and Ethical Concerns related to VIs integration in Communication Strategies?

While virtual influencers represent new opportunities for brands communication strategy, they also raise important questions about *authenticity, transparency, trustworthiness* (Wibawa et al., 2022; Böhndel et al., 2023; Koles et al., 2024) and *ethical challenges as deepfake, manipulation, facts analysis mistakes and so on* (De Brito Silva et al. 2024; Lee et al., 2022; Shin & Lee, 2023; Kalla, 2022). There are concerns about transparency on how VIs should inform explicitly followers on what is true or not. In addition, in a perspective of persuasion techniques, the raise of VIs is a challenge based on the *ethical aspects* of AI usages for crowd manipulation knowing the high influence power of digital platforms information flow on people decisions and choices. This fact leads some experts in the field to believe that shifting communication to VIs represents a strategic move to request a bigger audience of followers to manipulate in a specific direction.

Moreover, it concerns *cultural Sensitivity* depending on the context, these non-human Virtual influencers often have racially ambiguous features that can lead audience to misunderstands due to the chock of cultures. However, all these criticism related to potential issues don't prevent the appropriation of VIs for new users experience and to sustain diversity in the influencer industry (Wibawa et al., 2022; Gougou & Paschal, 2024).

In conclusion, this dynamic revealed key findings on the topic scope and how Shifting Communication Through Virtual Influencers Driven Metaverse Revolution modifies the whole society. Therefore, it is crucial to question the implication of this transformation in the field of Communication and Public Relations due to new practices

in supported by AI in management tasks, challenges, issues and perspectives in organizations and the whole of society sustainability.

CONCLUSION

This paper aims to explore and question virtual influencers in Africa regarding communication strategies and daily activities according to the metaverse revolution. Indeed, in the digital era, Communication and Public Relations strategies are disrupted by AI-driven virtual influencers growth, according to Internet generations. This paper analyzed how communication trends are changing by the adoption of new AI tools (personas) in activities.

This qualitative research, supported by contextual examples, revealed that Virtual Influencers offer new opportunities of growth to the communication ecosystem according to VIs customized messages and offers, omnipresence online interaction with users and autoregulation through machine learning and intelligent marketing. However, many challenges and issues related to these influencers remain a source of concern in communication due to the presence of virtual bots to replace human practices and the lack of human control on this technology's growth.

As a recommendation, thinking about AI adoption in organization and communication strategies calls to explore a human-centered perspective supported by Industry 5.0 approach and a transition from human to AI in some domains of activities. As an explorative reflection, this paper is limited due to the need of deep empirical data from AI VIs exploration with a mixed research design in different countries and organization communication activities.

BIODATA

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