

Representation of Socially Significant Issues in the Communication of Virtual Influencers on Social Medium *Instagram*

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Abstract: The aim of the current study is to analyse the representation of socially important issues in the publications of virtual influencers on the social medium *Instagram*, using qualitative content analysis, focus group discussion and expert interviews. The theoretical basis of the work consists of a review of the concepts of representation and social media, social media influencers and social agency, as well as six theoretical and thematic frames – simulation, artificial intelligence, virtual reality, melancholic media and virtual influencers, which act as perspectives through which to look and explain virtuality in communication. The rapid development of computer technology has contributed to the spread of virtual characters, more commonly known as virtual influencers, in social media, who are able to interact with social media users. The concept of virtual influencers is an interdisciplinary phenomenon that combines technological, social and communicative aspects and can be used as a meaningful and effective tool for the representation of socially important topics. Although communication with a virtual character can be classified as a simulation, according to social agency theory, people naturally perceive virtual characters as social actors with certain anthropomorphic characteristics. This perception forces people to behave socially towards virtual agents, applying social rules to them, such as politeness and ethical norms.

Keywords: virtual influencers, virtual reality, representation, socially significant issues, social media, *Instagram*

Introduction

Virtual agents are becoming common in many fields – virtual assistants, chatbots, holograms, including virtual influencers that have started to operate on social media platforms by integrating communication networks and interacting with users of these networks. Based on research on human-computer interaction, Uncanny Valley hypothesis and paradigm of computers as social agents, it

can be concluded that we currently live in the so-called era of “hyper-connectivity”, which reflects the convergence of technology with people’s daily lives and embeds computer-mediated agents in environments that were previously human-only domains (Arsenyan, Mirowska 2021).

These days, it seems that internet users no longer care if the partner of social interaction is a living person or an authentic human simulation, as long as its appearance is quite likeable and attractive. A modern and trendy appearance, chosen for communication processes on social media, is a very important aspect among digital users. It is considered one of the main features of the identity presented in social networks, and it is not essential whether these identities are actual or only virtual (Scorzin 2021).

Advances in computer technology have given rise to virtual characters, more commonly known as virtual proliferation of influencers, which can be defined as digital entities with an anthropomorphic appearance that are controlled by human or software and are able to interact with social media users. Companies are investing resources to develop virtual agents to engage in customer service. The use of virtual agents in the travel and hospitality industry is predicted to increase by 241%, while in the goods consumption sector by 187%. In the banking sector, 87% of companies already use digitally generated agents or plan to introduce them within two years (Miao *et al.* 2022).

Virtual influencer is a character who can be found online and in different social networks, without the attachment and physical presence in the real offline world. They range in appearance from an uncanny humanoid to a completely fantastic creature. These characters are created using computer technologies of varying degrees of complexity, which enable attaining a high image quality and photorealism. Virtual influencers are most often created to attract wide audiences and promote products, brands or certain messages (Berryman *et al.* 2021). In the past couple of years, more and more new virtual influencers have appeared with a numerically quite impressive following regiment. It is a comparatively new phenomenon, so far quite seldom studied in the academic environment, so it is important to adapt and transform the existing communication theories or, in some cases, come up with new theories to study the use of innovative technological solutions in communication science.

Virtual influencers’ popularity grew during the pandemic, because they were not influenced by the restrictions which had to be introduced by the authorities and institutions, that were influencing people (Gross 2022). Although in the context of Latvia virtual influencers are a novel phenomenon, as a result of the pandemic, the first cases of using virtual influencers appeared in the media. The first such case in Latvia can be considered the cover of the May/June 2020 issue of “*Pastaiga*” magazine, where a cover model was created with the help of a 3D program to protect real models, makeup artists and other people involved in the creation of the photo shoot against the threat of contracting illness during the COVID-19 restrictions.

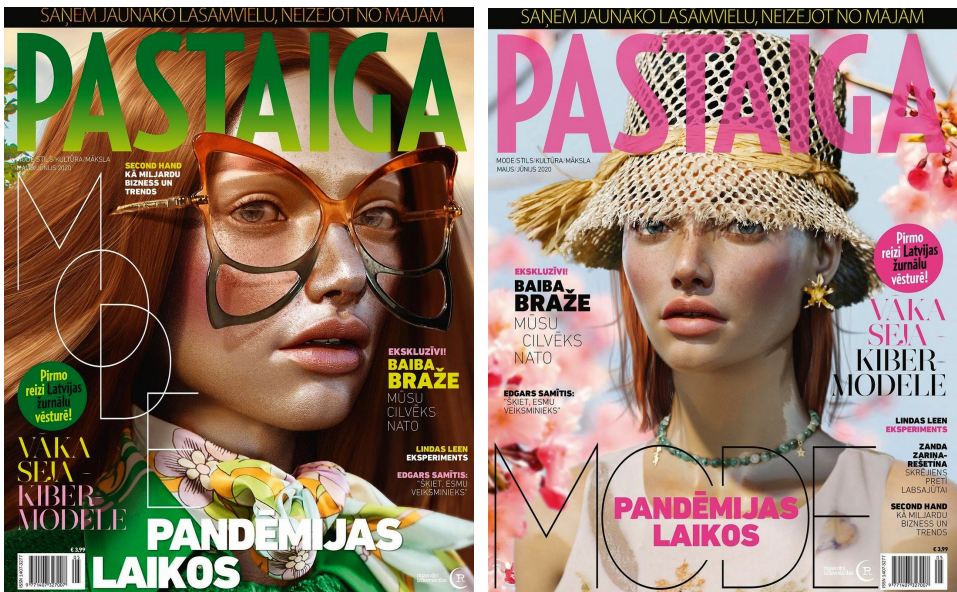


Figure 1. Cybermodel or virtual model on the covers of May/June 2020 issue of “Pastaiga” magazine

Theoretical framework

Representation means an action in which a fact is assigned a greater importance than another fact or other means of discourse that are adopted in the concept of individualistic psychology – representation is the act of presentation to the mind or imagination. Representation too clearly pertains to the circumstance that an image, a concept or an idea is presented in a particular way (Harre 1984, 928). Representation also denotes a shared system of values, ideas and practices that enable people to understand each other and communicate about specific issues and topics (Howarth 2011). Overall, a representation can be said to refer to an aspect of “reality” such as a person, place, object, the construction of events, cultural identity and other abstract concepts in any medium, especially in the mass media (Monti, Rozzonelli 2015, 93).

As information technology researcher and professor emeritus Ron Weber writes, “representation” is the essence of all information systems. The purpose of information systems is to track states and state changes in other systems. Observing the information system’s behaviour, we eliminate the need to observe the behaviour of the systems that this information represents. For example, in a simulation, the represented system may not exist in reality except for our minds. Simulation is an information system that enables gaining an insight into the behaviour of the represented system (Weber 2003).

There is currently a shift from “representation” to “simulation” as the dominant mode for the organization of cultural objects and assigning meanings to these cultural objects in relation to the contemporary world. The spread of television screens, computers and social networks, the saturation of everyday life with impressive images and other types of visual materials that are carefully mediated and processed, as a result of which any connection with the “real world” seems to be lost, and a simulated world is created in its place: a hyperreality where the artificial is experienced as real (Hegarty 2008).

Representation and relationship (no matter how mediated) between the real world and its referents in the images and narratives of popular media and art are gradually disappearing. For a French sociologist Jean Baudrillard, simulacra are signs that can no longer be exchanged for the “real” elements, but the exchange takes place only with other signs of the system. This loss of the “real” is attributable to the modern world as a whole, because reality has become hyperreality (Giddings 2007). Hence, it can be concluded that Baudrillard’s concept of simulation does not claim to be a false view of the world, but it constructs a “real” world which he identifies as hyperreal (Hegarty 2008).

In the community of human–robot interaction, several theories of social agency have been distinguished and defined, which address the field’s unique perspective. Many of these theories are based on social actor or agent theory, proposing that people naturally perceive computers with certain characteristics (e.g., linguistic output) as social actors despite the fact that computers have no feelings, egos or human motivations. This perception makes people behave socially towards machines, for example, by applying social rules to them, such as empathy and ethical norms. Basically, social agency theory states that the use of verbal communication and visual cues, such as a more human rather than an overtly artificial voice in computer-generated messages can lead people to believe that their interaction with the computer is similar to what they would expect a human–human conversation to be (Jackson, Williams 2021). Social agency theory also postulates that the life-like characteristics of animate agent behaviour promotes the learner’s social engagement, thereby allowing the learner to create a simulated human connection with the virtual agent (Atkinsona *et al.* 2005).

In the context of the study, it is worth to mention a theory about the “uncanny valley”, the author of which is robotics professor Masahiro Mori and his colleagues. The theory contends that a greater human sympathy and empathy is acquired by robots that do not look too much like human beings, but rather resemble mechanical robots. An overly human appearance in robots is frightening and engenders a feeling of uneasiness. Mori in his 1970 essay states that a smile is a dynamic deformation of the face, where the sequence and rate of deformation are crucial. When the speed is halved trying to make the robot smile slowly, instead of looking happy, the robot’s expression becomes scary and unsettling (Mori 2012).

It shows that, given certain deviations in movements, something that has visually achieved a close resemblance to a person – for example, a robot, doll or virtual character – can easily fall into the uncanny valley.

Methodology

Triangulation is a pluralistic approach that uses different methods to look at the research topic from different points of view and would create a diverse set of data. Namely, methodical triangulation leads to an in-depth study of a phenomenon (Donkoh, Mensah 2023). Triangulation is a concept that often is used in qualitative research when quality issues are discussed. The main link between triangulation and the quality of qualitative research is that triangulation means the researcher expands the activities in the process beyond what is “normally” done, for example, by using more than one method. However, triangulation is not limited to promoting qualitative research or quality assurance but is also used to extend the insights gained in qualitative research (Flick 2018, 2–3).

Since virtual influencers are a multidisciplinary phenomenon that, in addition to technological and communication science aspects, also combines psychology, sociology, etc., accordingly, it seems reasonable to study this phenomenon with several methods, thus obtaining a general understanding of the research subject.

One of the strategies and methods of qualitative research data collection is semi-structured interview. During the semi-structured interview, the researcher asks the respondents a series of predetermined questions and pre-defined but open-ended questions. In this way, the researcher has a greater control over the subject of the interview in comparison to unstructured interviews, but unlike structured interviews or questionnaires that use closed questions, semi-structured interviews do not have fixed answers for each question range. Semi-structured interviews are probably the most common type of interviewing technique and they are popular in qualitative research. The semi-structured interview gives the researcher some flexibility in how and in what order to ask questions to the interviewee. This means that the researcher can actively listen to what the respondent says during the interview and use these responses to modify or even ask new follow-up questions related to the participant’s individual experience. Partly because structured interviews are a useful technique to apply in research to obtain as profound and comprehensive data about the topic as possible. In the process, new perspectives can be revealed, which might not have been initially noted or considered by the researcher while formulating the interview questions (O’Reilly, Dogra 2017, 37–48).

Focus groups are group discussions that explore a specific set of issues. The group is “focused” in such an aspect that it engages in a particular type of

collective activity, for example, watching a video, examining individual messages, or simply debating about a set of issues. It is important that focus groups are clearly distinguished from the broader category of group interviews using group interaction to generate data. Instead of asking questions to each participant, in focus group the researchers encourage participants to talk to each other by asking questions, exchanging opinions and commenting on each other's experiences and judgments (Kitzinger, Barbour 1999, 5).

Methodologically, focus group interviews involve a group of 6–8 like-minded people who have similar social and cultural background, experiences and concerns about a topic. Participants can be brought together to discuss a particular problem in a specific environment where participants feel comfortable to engage in a dynamic discussion for an hour or two, led by a discussion moderator. The purpose of focus groups is not to reach a consensus on the issues discussed. Rather, focus groups promote a variety of responses that provide a better understanding of participants' attitudes, behaviours, opinions or perception of the research topic (Liamputtong 2011, 3–5).

Focus group tasks can be distinguished by their research purpose, types of information and acquired knowledge, its scientific status and methodological factors. Considering the purpose of the study context, here the research tasks differ from both clinical and experimental tasks. Creating, collecting, identifying, discovering, explaining and generating feelings and behaviours, – all of these are the objectives of exploratory research (Fern 2001, 5).

Content analysis is a research technique for making repeatable and valid conclusions in the context of their use from texts (or other meaningful material). Technically, content analysis includes specialized procedures. They are learnable and separable from the researcher's personal authority and point of view, so can be considered objective. As a research technique, content analysis provides new insights, increases the researcher's understanding of specific phenomena or provides information about practical activities. Content analysis is a scientific tool and a reliable method. More specifically, a research method should produce findings that are replicable. This means that researchers who are working at different points in time and possibly under different conditions should produce the same results, applying the same technique to the same phenomena. Repeatability is the most important type of reliability (Krippendorff 2019, 2).

In its turn, qualitative content analysis is a method for meaningful and systematic description of qualitative data. This is achieved by assigning categories from a coding frame to successive parts of analysed material. This framework is the basis of the method and contains all the aspects for description and interpretation of the material. The method is characterized by three features: qualitative content analysis reduces the amount of data, it is systematic and flexible (Schreier 2014, 2).

Belgian visual sociologist and communication scholar Luc Pauwels points out that websites are unique contemporary cultural expressions, and therefore they constitute a huge potential data store about an action and ways of thinking in modern society and culture. According to Pauwels, for websites to be analysed, they require a method that respects their multimodal and multimedia characteristics. For example, his view is that visual analysis should involve more than simply the number of images and the quantification of their direct content categories (people, buildings, events and artifacts) or categorization of the representation into basic categories, such as types of people, events, and artifacts. He contended that investigation must go beyond quantitative content analysis and include visual representation qualitative aspects. To achieve this goal, Pauwels proposed six steps, which he called “multimodal frameworks for website analysis”: quality preservation of the first impression; the characteristic quantitative listing of noticeable and absent features; in-depth analysis of content and formal choices (written, visual markers, layout); point of view, tone of voice and audience analysis; organization of information (navigation); contextual analysis (technological platform capabilities and restrictions) (Carneiro, Johnson 2014).

Results

Since the representation of socially relevant issues in the communication of virtual influencers is a multidisciplinary phenomenon, several theories were used to explain it. Although virtual influencers are computer-generated characters, according to social agency theory people naturally perceive virtual characters as social actors, with certain anthropomorphic properties. This perception leads people to behave socially towards virtual agents by applying social rules to them, such as politeness and ethical norms.

The representation of socially important issues in the communication of virtual influencers can be classified as a simulation that, according to French sociologist Jean Baudrillard, is far from false view of the world, – it constructs a “real” world that can be identified as hyperreal or an accurate representation of reality. Although the represented social problems are real (LGBTQ+ discrimination, ageism, non-inclusive society, etc.), however, a virtual image does not come into contact with these issues in everyday life, hence, a certain level of deception and simulation is involved that contributes to the formation of a negative connotation by users in the context of virtual influencers.

Socially significant issues in the communication of virtual influencers in social medium *Instagram* may be defined as the topics where a virtual influencer represents certain opinions, expresses complaints or claims regarding the existing order of affairs in the society. Solving social problems requires the influencer to focus on a specific behaviour and expression of certain requirements, for example,



Figure 2. World's first virtual influencer with Down syndrome @itskamisworld

prompting society towards tolerance, creating inclusive social media, advocating environmental protection etc. Social problems are defined by people in terms of activity and behaviour, which they recognize as burdensome. In short, social problems are constructed socially in the interaction of individual actions and participants over a long period of time.

Social agency theory posits that, if an animate agent has life-like characteristics and behaviour, it promotes social engagement, thereby allowing for a simulated human connection with the virtual agent. Meanwhile, an important factor that shapes people's attitude towards virtual agents and how agents and their visual appearance are perceived is an uncanny valley effect, – greater people's sympathy and empathy are acquired by virtual beings that do not too perfectly resemble a human, but rather look like mechanical robots or fantastic characters.

Virtual influencers can be seen as a meaningful and appropriate tool for communication of socially relevant issues on the social medium *Instagram*. However, there must be additional conditions for communication to be considered successful and effective, or to achieve a significant audience engagement factor, implementing real changes in society.

- One condition would be the selection of an appropriate topic and/or socially significant issue, for example, ecology and environmental topics, protection of endangered animal species, recycling. The topic is also subordinated to the visual appearance of the virtual image, the tone of communication.
- The second aspect to consider is that, similar to the predecessor of virtual influencers Kyoko, created by the agency *HoriPro* in 1980, failed to gain a stable audience's interest and sympathy. Likewise, in the case of contemporary virtual influencers, lasting attention of the audience is hard to maintain. Initially, as a new technological phenomenon, it can be fascinating to the audience, however, in the long term this interest is quite difficult to sustain. Therefore, most often virtual characters are used for short-term projects, where virtual influencers in some cases experience their digital

death, thus emphasizing the seriousness of the problem they are trying to communicate.

- Similarly, in the focus group discussion, respondents indicated that, although in a communication of socially significant issues they still prefer a real person, if information is presented in a concise and consistent form, virtual influencers can and should be used.

Speaking of new dimensions and techniques that appear while using virtual influencers in communication of socially important issues, some quite simple and obvious things can be considered. Virtual influencers do not have to sleep or eat, they do not require remuneration, nor will they fall into temptations distinctively characteristic of humans. In short, they are available 24/7 and easily controlled, they do not possess ethical and moral principles. Yet, it should be taken into account that virtual influencers are often created by agencies and teams that control the content of the virtual being and thus the ethical and moral principles of the creative team are transferred to the content of the virtual influencer. Virtual influencers also offer a certain type of distance, because there are sensitive topics and things where people might be ashamed or would like to maintain some anonymity. A virtual avatar can be used to do or represent things which a real person is not able to do, – then it could be considered that the message and the chosen communication technique has an added value.

Representation of socially important issues on *Instagram* using virtual influencers is most evident in hashtags and visual material. However, it is important to note that this particular medium is not well suited for social activism, simply because *Instagram* focuses primarily on visual content. Images are visible in the primary view, only with additional actions it is possible to access the text message. Thus, the content of the text is secondary compared to the image. Meanwhile, it should be emphasized that in most cases, socially significant problems which are represented in the visual content can be read by viewing the entire profile and its visual content as a whole, as well as obtaining additional information outside *Instagram* about the conceptual idea of content creators.

The areas where the use of virtual influencers can be a successful technique in representation of socially relevant issues is the protection of the environment and animals, where a virtual character that is not able to do this in real life could communicate with the audience, for example, a virtual bee (@bee_nfluencer) that communicates with other users about the issues concerning bee conservation and protection. With the assistance of virtual influencers, it is possible to talk about the topics where, for objective or ethical reasons, it would not be appropriate to involve the people themselves, for example, those who have encountered severe and/or traumatic experiences and would prefer to maintain anonymity. Nevertheless, this aspect should be further scrutinized in practice and future research.



Figure 3. The first virtual bee influencer @bee_nfluencer

Conclusions

The interdisciplinarity of the topic opens wide opportunities for further research directions, because technological aspects intertwine with communicative processes and social phenomena, where results can be surprising. Along with the development of artificial intelligence, fully autonomous agents can emerge in the realm of virtual beings. These agents will be able to independently interact with the audience. Furthermore, motion capture and image generation technologies, along with the rapid pace of development of artificial intelligence, could be achieved to such a level that virtual beings will no longer be distinguishable from real people. If new virtual influencer profiles will appear, new topics and questions are bound to emerge represented by means of virtual characters. A greater number of virtual influencers on the social medium *Instagram* will yield a larger amount of data for research, which may open up opportunities for identifying new regularities and making valuable discoveries.

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