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DIGITAL POSSIBILITIES OF THE ATMOSPHERE: METAVERSE AND HALLUCINATORY IMAGE

Serkan Can HATIPOĞLU [1,*], Cansu TATLI [2]

[1,2] Department of Architecture, Faculty of Architecture and Design, Eskişehir Technical University, Eskişehir, Turkey

ABSTRACT

Considering the propositions of the virtual universe with its short history, there are digital twins and various economic investments. While the Metaverse points out a novel universe, it is able to promise much more than producing a copy of the self and imitation of conventional economic interactions. To reveal these potentials, it is necessary to determine the areas that must be meticulously focused on. Although Metaverse has permeated daily life dialogues, studies in the academic field are limited. Likewise, research about its architecture and space needs to be developed in this area. No matter how far the new universe propositions go, they still stick with the quantitative values of the physical world. This issue obstructs the creation of its own reality. However, the universe's own digitalized digitalised structure does not require that the imagination of the spaces stuck with a quantitative basis. To avoid quantitative and reductive attitudes, focusing on the atmosphere of this universe may be a solution. The study aims to collide the possibilities of the Metaverse and the architectural atmosphere discussions to make an alternative reading of the Metaverse. Developing theories about the atmosphere of spaces and conducting atmospheric studies about Metaverse allow us to develop meta-experiences of the Metaverse. Focusing on the architectural atmosphere, immediate appreciation, ecstatic being and hallucinatory image will deepen the definition of Metaverse and provide a multi-layered experience. The image of the atmosphere and ecstatic being is associated with a 'hallucinatory image'. The hallucinatory image has a structure that does not narrow down its references to the physical world. With this aspect, it may provide forms of alternative perceptions specific to the Metaverse. The hallucinatory image, parallel with the sensation of an ecstatic being, stimulates us to sense the atmosphere produced by the Metaverse.

Keywords: Metaverse, Architectural atmosphere, Image, Meta-experience, Ecstatic being

1. INTRODUCTION

As an intention of a novel universe, Metaverse provides innovative experiences, relationships and interactions in digitalised environments. So far, developments of such interactions have mostly been followed through media. Although Metaverse has been frequently included in dialogues of daily life, academic studies are limited. Likewise, further research on architecture and space needs to be developed in this area. To envision how the meta-experiences (of meta-universe) might emerge, there is a need to build a theory about the atmospheres of the spaces in this universe. The study aims to superpose the possibilities of Metaverse and the architectural atmosphere discussions and to make an alternative reading of Metaverse.

2. METAVERSE: THE SEARCH FOR META-EXPERIENCES

2.1. The Developments in the Virtual World

Beyond the conventional universe perception, the prefix "meta" (meaning "beyond") and the suffix "verse" (shorthand for "universe"), Metaverse is an attempt to build a universe with other possibilities. To understand the process, we will look at the brief history of the virtual world. According to Dionisio, III and

*Corresponding Author: serkanch@eskisehir.edu.tr
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Gilbert [1], virtual world developments have basically five phases (Figure 1). The first phase, beginning in the late 1970s, was text-based virtual worlds such as the role-playing dice game Dungeons and Dragons. The second phase, in the 1980s, was Habitat for the Commodore 64 by Lucasfilm. It was a profile commercial application of virtual world technology and the first virtual world with a graphical interface. Habitat employs the term "avatar", as a description of digital inhabitants, in the virtual area. In the third phase (in the 1990s), Web World offered an isometric world. It offers open-ended building capability, incorporation of user-based content and virtual settings for online environments used in real-time. Following that, Worlds, Inc., Activeworlds and OnLive! Traveler enabled users to socialise in 3D spaces. They provided a space based on Neil Stephenson's 1992 novel Snow Crash.

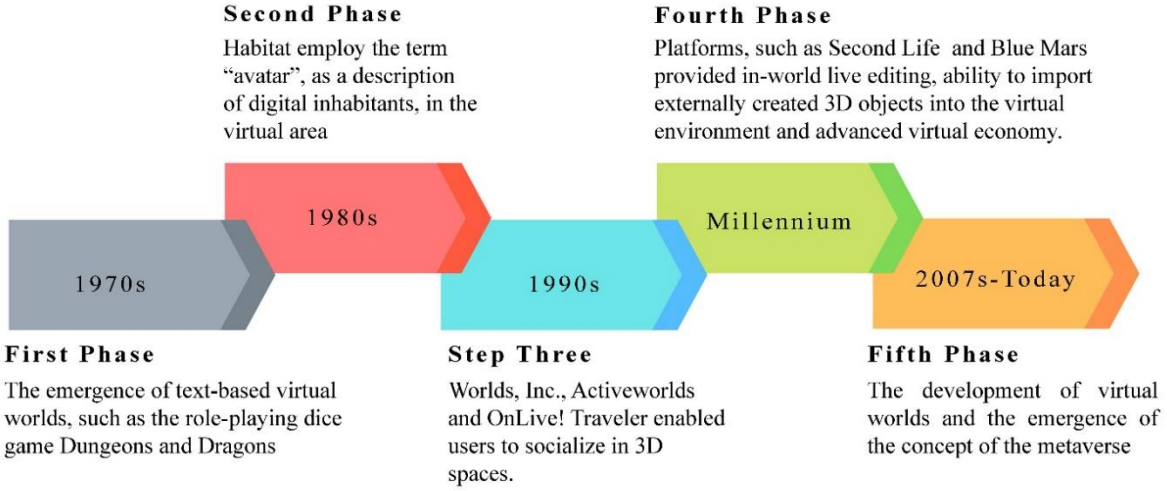

Figure 1. Developments of virtual worlds in five phases (by the authors)

The fourth phase, in the early 2000s, was commercial virtual worlds. These developments trigger involvement of major institutions from the physical world and improvements in graphical fidelity. Platforms, such as Second Life (2003–present) and Blue Mars (2009–present), provided in-world live editing, the ability to import externally created 3D objects into the virtual environment and an advanced virtual economy. The former was virtual world for corporate and educational institutions, while the latter focused on the gaming industry. The fifth phase (2007- present) was open-source decentralised contributions to the development of 3D virtual worlds. Solipsis (2007) was the first open-source decentralised virtual world system. It theoretically allowed new server and client variants to be created from the original code base. Imprudence/Kokua (2008) and OpenSimulator (2009) followed it. The multiplicity of interoperable viewers and servers, similar to the Worldwide Web, was last parts of the fifth phase. Users can choose among virtual words without compatibility concerns along with standard virtual world protocols, formats, and digital credentials. In line with these developments, Metaverse introduces the environment's level of spatial, environmental, and multisensory realism that creates a sense of psychological presence. The concept of Metaverse, with its widespread use in the 2010s, has been integrated into everyday life. It has become to have a significant role in many fields such as education, trade, travel and shopping. With VR and AR technologies, reality has begun to be perceived in a novel way.

The change in communication paradigms emerged from computers in the 1990s, the web in the 2000s, and mobile devices in the 2010s. Today, the paradigm shift may happen with Metaverse by adding a new dimension to the digitalisation process. In cyberspace, the aim is to produce all-inclusive experiences [2].

In his statements on Metaverse, Zuckerberg [3] declared that the sense of presence and togetherness will be established in shopping, leisure, and educational activities. This process shows that experiences beyond what we can imagine may also occur with such technological advances. It is evident that a new meaning of the world and medium for social issues will emerge as a result of meta-experiences. Along with this belief, there were many investments as follows: Facebook's change of name to 'Meta' and its acquisition of Codec Avatar, a virtual reality initiative, and ByteDance's acquisition of Pico Interactive and so forth.

2.2. Various Approaches to the Metaverse

As a first reaction to such developments, sceptical approaches stem from stakeholders of technological investments focusing on just economic benefits. Also, the extreme speed of developments bring about struggles for adaptation. Likewise, discussions about the truth have similar tensions and extend to the design process [4]. With technological tools (e.g., AR and VR devices), post-truth arguments have become remarkable again. Accessing resources in a short while may engender a tendency to democratise against the restrictions to obtaining information. However, the researchers predict that the technological superiority of developing countries will increase, and the cultural divide will become sharper [5]. In terms of hardware, which is often included in the components of the Metaverse, it is also challenging to obtain the powerful computers and connections for such a universe [6]. The investments of various companies have been mentioned before as interest in this field. Nevertheless, the potential domination of these companies may result in a problematic turn. Tinworth [7], with a concern caused by this possibility, emphasises that companies should not be allowed to have hegemony.

2.3. Metaverse and Self

Reflecting one's own self and body as she/he perceives it constitutes the process of corporeal being in the physical world. There is the creation and reflection of more than a self in the media. Hence, different profiles represent different selves. Although represented selves are similar at some point, there may be challenges for an interactive network among them. Based on the precedents in social networks, a universe with replicas of bodies from the physical world cannot generate experiences beyond the familiar ones. Considering the Metaverse as merely the presence of a twin self corresponds to a reductionist attitude as a replica of the existing world. On the other hand, the presupposition of a different 'me' may facilitate grasping the unique possibilities resulting from Metaverse. That 'me' will probably turn into a single and intricate self-related to the body.

2.4. Initial Steps for Metaverse

The motivation for developing a new universe inevitably lies in economic benefits. Advancements such as NFT (non-fungible token) produce new economic models beyond conventional lines. Such models are essential initiatives in confirming the uniqueness of the values that will occur in the Metaverse. However, it is still in earlier phases, and the imagination of meta-experience (beyond the existing experiences) is limited. Here, the economic flows have not found their original aspects yet. With Metaverse as an economic initiative, there is a fiction offering a twin life beyond the internet (but mostly imitating the physical conditions) in the virtual world.

Along with the possibilities of the Metaverse, users tend to pay attention to their representation and spend money on it. Following that, brands develop various attempts to take their place in the digital market. Bitmoji (first in 2016) has collaborated with Bergdorf Goodman to offer luxury clothes for their users' avatars. In 2018 Carlings launched its first digital clothing collection called Neo-Ex. Until the Metaverse, digital clothing remained just 2D photographs and videos. Users have an experience as though they are

wearing these outfits through Metaverse. The emergence of such perception has accelerated highly-known brands' presence in Metaverse. In 2019, 'The Fabricant' was presented as the world's first digital fashion studio. It is a studio where users can also become digital fashion creators. The world's first piece of digital couture created by The Fabricant and worn by Johanna Jaskowska sold for $9,500 (Figure 2).

Figure 2. A digital dress by The Fabricant [8]

The Animator Overcoat, designed from liquid metal in collaboration with The Fabricant and Toni Maticevski, presents users with possibilities that do not exist in the physical world. It is reshaped by adapting to the new world identities of the users (Figure 3).

Figure 3. The Animator Overcoat [9]

In 2021, Gucci joined this trend and sold the digital design shoe, which appears on the screen with the mobile phone when the camera pointed towards the feet, for $12.99 (Figure 4). Gucci also began to create virtual spaces, called Garden, with special requirements to sell their products in a Metaverse. Moreover, Gucci collaborated with Roblox company, presented a virtual bag for sale, and sold it for a higher price than in the physical world [10].

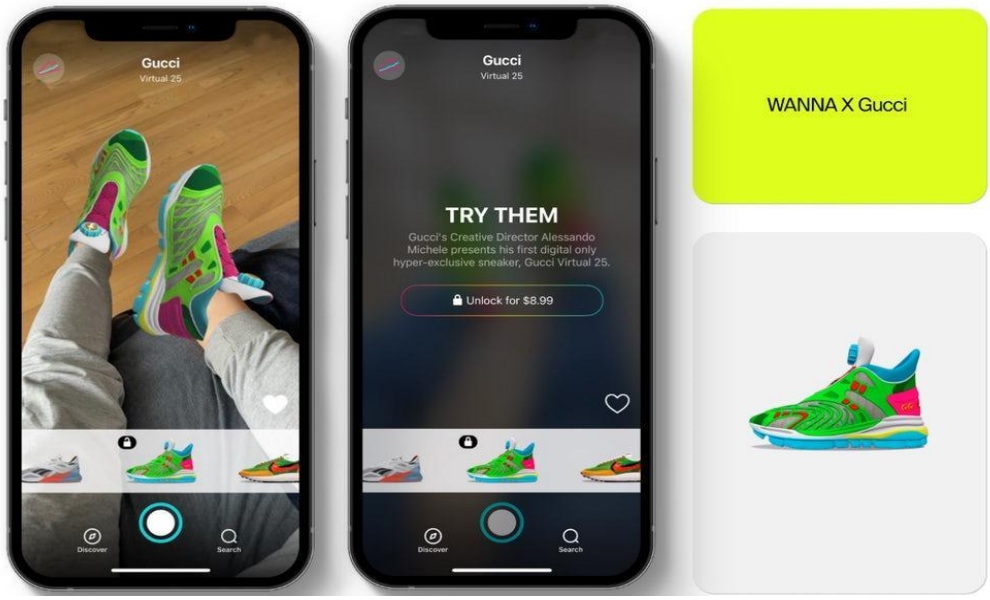

Figure 4. Digital shoes by Gucci [11]

The virtual world of the metaverse is leading to the development of business environments that are much more complex and multi-faceted than existing models. Intertwined physical, electronic and virtual spaces have economic, social and political consequences. Companies need to find novel and systematic ways to take place in virtual world of Metaverse [12]. Dan [13] demonstrates the interest of brands (e.g., Coca-Cola, Nike, Microsoft) in NFT technology with personalised products. Such collaborations, investments and expenditures indicate that the interest in the field is increasing. However, the digital media experiences are based on social status indicators (such as clothes and bags to present social class). It shows that novel experiences have not started to expand and have yet reached their potential to generate and transform the imagination. Similarly, initiatives such as digital marketplaces and art galleries result in conventional relationships based on not fully exploring the possibilities of digitalisation.

2.5. Introduction to the Possibilities of the Metaverse

Personalized tokens like NFT are one of the ways to create a unique experience environment. Further, expeditions between spaces and reformation of the time as milliseconds liberate users and spaces. Adaptable scales of spaces depending on users also expands the range of personalised experiences.

Metaverse offers both production and cooperation in many fields such as economy, art, education and culture. However, its digital-based structure engenders some security concerns. The pace of technological developments beyond expectations, profit-based contents; and the lack of control and legal regulations causes threats and problems. Studies conducted in China point out the concern that this system may establish dominance over others [14]. There are also no strict legal regulations in this area throughout the European countries.

Considering all the possibilities and concerns, the Metaverse has the potential to transcend conventional economic and spatial relations. However, there is a need for studies on how to construct the meta-experiences of the meta-universe. Although it is not a trend in current dialogues, theories about the atmosphere of spaces and atmospheric studies will allow us to define these meta-experiences.

3. ARCHITECTURAL ATMOSPHERE AND DIGITAL POSSIBILITIES

3.1. Basics of Atmosphere

In the literature on the atmosphere, Heidegger [15] has a starting point and stresses the concept of mood and attunement. They originate as Stimmung (mood) and Einstimmung (attunement). There are different translations of Stimmung, such as ‘mood’ or ‘Being-attuned’ [15]; ‘attunement’ [16]; disposition’ or ‘affect’ [17]; ‘an attunement to things’ [18]. “It seems as though a mood is in each case already there, so to speak, like an atmosphere in which we first immerse ourselves in each case and which then attunes us through and through” [19]. Having some moods characterise the being. Further, the mood is influenced by how things stand out from themselves in both material and mental senses [20]. A space envelops us in a particular atmosphere or mood. The atmosphere is a phenomenon that transcends boundaries like subject and object. Its integrative attitude ties individuals, places and things in the space.

Atmospheres spread uncontrollably over the space rather than oriented toward an object or subject. Once entering a room, a specific atmosphere begins to be sensed; it is quite difficult to determine where the atmosphere is. Since the non-directional structure of the atmospheric orientation, “we are unsure where they are. They seem to fill the space with a certain tone of feeling like a haze” [21]. Due to all these blurry outlines of the atmosphere, there is no place to discuss a crystallised image of it. Although this makes

building explicit theories on atmospheres difficult, it also prevents being easily exposed to a reductionist approach. Another characteristic that enhances blurred sight is the immediate appreciation of the atmosphere. The complex integration of numerous factors recognised as an atmosphere, emotion, mood or ambience is comprehended suddenly. Thus, this is an immediate affective reaction that emerges spontaneously. Zumthor [22] explains his atmospheric experience as "*I enter a building, see a room, and - in the fraction of seconds - have this feeling about it*". In other words, atmosphere envelops the subjects who become immersed in them before logical reasoning. Sudden immersion into affectively filled tones of the space is critical for the internalisation of spatial experience.

3.2. Ecstatic Being

In addition to the atmosphere itself, discourses about the entities located in it have been developed as "ecstatic being". Being of a thing is not limited to its physical shape; it may step out from itself [23-24] and imposes itself on other things. Ecstasy of things transcends their own tangible borders and diffuses themselves onto the physical world. The being of an object separates itself with its own ecstatic tone rather than its physical and tangible distinctions. Its ontological reality tinctures and attunes the world in a sense the ecstasy of a thing in concert with other things.

With the intersection of ecstatic matter and people's state of mind, social codes shape the atmosphere. In this respect, the atmosphere is constituted by the presence of subjects and the ecstasy of things. We should focus on how the totality of ecstasies makes it what it is, rather than grasping what a thing is [25]. Because ecstatic beings correspond to essence beyond the superficial properties of things.

3.3. Hallucinatory Image in Architecture

The image of the atmosphere and ecstatic being may differ from the conventional understanding of the image. Subjects can suddenly find themselves in an atmosphere and quickly adapt to the process of becoming a part of that atmosphere. We claim that 'hallucinatory image', corresponding to the ambiguity and instability of the atmosphere, enables this transition.

With questions about observation techniques, Crary [26] examined how the status of the observer was redefined by the early 19th century. He analysed the stereoscope, a primitive photographic instrument. Stereoscopic image, as he noted, is an assemblage of local zones of three-dimensionality, zones imbued with hallucinatory clarity, and it cannot obtain a homogeneous modality. Therefore, the hallucinatory image had a presence in the early dates of technological tools initiatives. At that time, technological limitations provided the gaps to allow for such images.

Hallucinatory experience also has place in the texts of Merleau-Ponty [27], who examines the relationship of myths to the body. According to him, myth has an essence within the appearance; the mythical phenomenon is not a representation but a genuine presence. Thus, individuals who experience their environment through mythological consciousness are able to go beyond critical thinking that takes place in merely geometric space and prioritises objects. Hallucinations and myths result from shrinkage in space, and they are a rooting of things in our body. Therefore, they are the oneness of man and the world and the kind of proximity of the object. Hallucinations and myths are repressed by everyday perception or by objective thought. However, philosophical consciousness rediscovers them.

From another perspective, there is a hallucinatory effect in an artistic experience, especially a cinematic one [28]. Moving images substitute our thoughts so that we can no longer think what we want to think. In

a similar vein, architecture can lead human intentions, emotions and thoughts with the hallucinatory air resulting from the space. Therefore, we claim that the atmosphere may have hallucinatory tones (with hallucinatory air in the diffusion of atmosphere). Figure 5 shows some experiential studies of the hallucinatory image in the air.

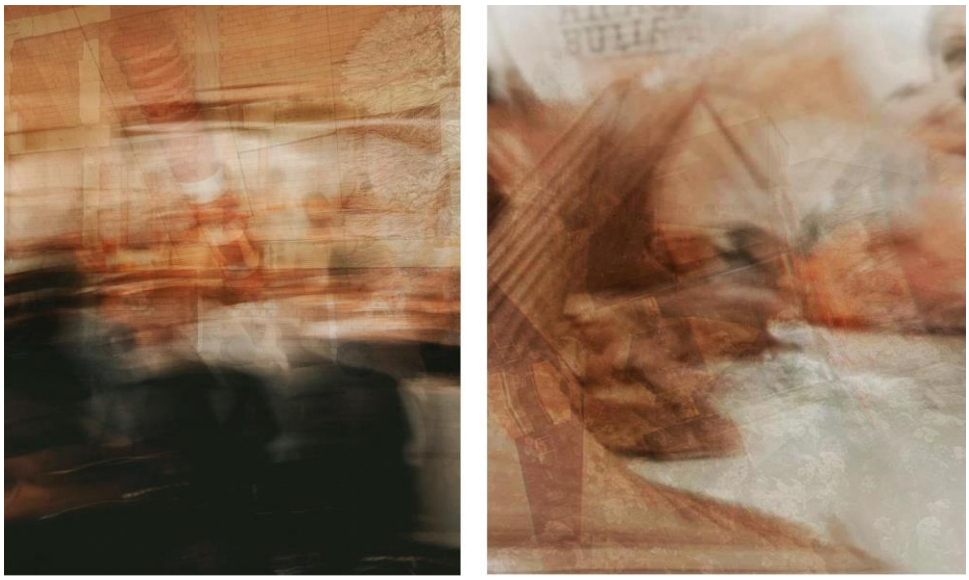

Figure 5. Hallucinatory image experiments (by the authors)

Neither a thing's description nor visual representation completely corresponds to the thing itself. They are developed to communicate by mediating the presence of the thing. In such descriptions and representations, things move away from their ecstasy. By them, the mere appearance is received without the substance and essence. Therefore, ecstatic being is not able to being sensed in representations but in atmospheres. In a nutshell, the ecstasy of things is significant owing to stimulating to emerge and evoke its presence. To step out from itself and imposes itself on other things as an ecstatic being, there is a need for attunement (*Einstimmung*, by Heidegger [15]) in the atmosphere. We suppose that such an atmosphere, especially in discussions of digital space, can be built with hallucinatory images. An alternative reading of the Metaverse has been developed by the collision of possibilities from the Metaverse and concepts of the atmosphere (e.g., ecstatic existence, attunement, hallucinatory image). Our study introduces the meta-experiences of Metaverse (primarily spatial experiences).

4. ATMOSPHERE, ECSTATIC BEING AND HALLUCINATORY IMAGE IN METAVERSE

No matter how far the new universe propositions go, they still stick with the quantitative values of the physical world. It obstructs the Metaverse to create its own reality. Investments from mostly top-brands, high-priced purchase and sale in such universe models provoke quantitative evaluations (in the definitions of Metaverse). Requirements for advanced hardware with their quantitative superiority also prioritise quantitative perception. However, the universe's own digitalised structure does not require that the imagination of the spaces stuck with a quantitative basis.

Considering the virtual spaces of the Metaverse, there is a spatial dimension which is open for further research. Parallel with the elaborations of NFT technologies and the economic structure of this new

universe; we need to focus on space in there and explore the potential meta-spaces of Metaverse. Hatıpoğlu and Tokman [29] developed various discourses on atmosphere and its perception in digital space. As a follow-up study, several points can be addressed specific to Metaverse. With the sensation of the presence, Metaverse can find out about its unique experience. Such experiences should have atmospheric aspects as a key to feeling existence beyond those coming from digital platforms (e.g., Zoom). Böhme [24] discussed forms of presence and referred to the ecstatic being for them.

Metaverse is less likely to parallel with the twin identity of the virtual world. The presupposition of different "me" (as an individual of meta-experience) will evolve into a whole and intricate self. Even though more than one individuality due to the different codes of behavior in various social status, they are dissolved into a single body. More than one individuality is currently managed in a single body due to the different codes of behaviour in various social statuses. This shows that the self is not entirely built with a disjunctive and duplicative procedure. The creation of self in its own reality, instead of imitating the realities of other selves, fits in the ground of Metaverse. In hyperreality through simulacra, as Baudrillard [30] noted, people are rendered incapable of thinking with the illusion of reality completely formed in mind, and they make their choices based on unreal things that replace it by making them feel as real. Therefore, the real thing is destined to be a copy of the real. Universes, where the real is reshaped by existence and self, have no chance to hide the truth. Because perceptions have turned into instant realities.

The word 'universe', also at the root of the metaverse, includes an attitude that covers many fields in a single medium. Further investigations are required in all "meta-" components of this medium. For experience and image, the following question arises: "How is an image formed beyond the (conventional) image?". There is a need for discussions and explorations of what are meta-experiences and how they may emerge. Beyond digital representations, we suggest that such image is able to be formed with only atmospheric concerns. We call "hallucinatory image" for these meta-images as a trigger of ecstatic being. Although still an introductory proposition, hallucinatory images can generate the meta-image of the meta-experience in Metaverse. To recognise this experience and image, researchers and developers should allocate a important place for the atmosphere in the Metaverse.

Advanced hardware and super-fast internet connections are requirements for realistic (and real-time) images as a replica of the physical world. These required resources are not available to everyone. Here, we should focus on spatial experience with atmospheric priorities rather than a setup that requires compelling systems with visual priorities. Former priority can increase accessibility, thus, democratising spaces and experiences of Metaverse. In the latter priority, struggles in development are inevitable. Technical data such as pixel density and images should remain a secondary layer. The focus should be on how to design and build the hallucinatory image as the meta-image of this universe. Because creative dissolution from physical reality will not be available by collecting physical images or creating a twin identity and reality. Ecstasy of things and subjects may facilitate to build of hallucinatory images and novel experiences of Metaverse. Attunement of ecstatic beings and hallucinatory images may lead the literature on atmosphere in new directions.

5. CONCLUSION

Along with the promise of a novel and unique universe, Metaverse brings much potential in the research area. Although it seems like a medium where commercial enterprises, for now, it also enables to go far beyond this. The meta-experiences, self, and unique image of this universe will construct themselves in the process. In terms of spaces, there is an area that should not be overlooked at the introductory stage of

Metaverse developments and research: The atmospheres of spaces. The phenomenon of presence in virtual environments should be reviewed along with the presence in atmosphere discussions. The tones of the atmosphere are open to being sensed via ecstatic being. Ecstasy is considered a direct manifestation of the essence. In this respect, the ecstasy of things corresponds to moments when the essence becomes apparent. The image associated with the atmosphere and ecstatic being address as the "hallucinatory image". Such an image gets rid of the destructive effects of digital representation on ecstatic being. Therefore, hallucinatory imagination defines and redefines images formed by immediate appreciation of the nebulous diffusion. Similar to atmospheres, these images have an uncertain structure due to their ambiguity and sudden appearance. This structure intensifies the hallucinatory affect. With the aforementioned phenomena and concepts, this study expands the spatial and digital theories around the discussions of atmosphere.

CONFLICT OF INTEREST

The author(s) stated that there are no conflicts of interest regarding the publication of this article.

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