

Original Research Article

## The Metaverse: An Urban Revolution

### Effect of the Metaverse on the Perceptions of Urban Audience\*

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Received: 22/11/2021

Accepted: 22/12/2021

Available online: 21/01/2022

**Abstract** Cities are the most important places wherein contemporary human beings settle. For this reason, the changes affecting the urban landscape can influence the lives of most people. As the new media, the Metaverse can enable people to be present in the 3D virtual world through mediums. Since this technology will provide unparalleled communicative amenities, which did not use to be available to humans, it is expected to pave the way for dramatic changes in all human relations in societies. Given that the Metaverse seeks to reconstruct the world, the urban landscape, which is a product of the perceptual interactions between humans and the city, seems to be influenced by its emergence. This study seeks to answer this question: “What effects will the emergence of virtual cities versus physical ones, have on the perceptions of these cities, or more precisely, the urban landscape?” For this purpose, this study employs a qualitative method and uses bibliographic data to explain the concept of landscape from the perspective of experts and describe its various aspects. This study also attempts to introduce the fundamentals of the media and explain its impact on the urban landscape. The findings of this study show that the media, as an intervening tool, seeks to create a purposeful image of reality in the minds of the audience, and the Metaverse, as a tool presenting the world in three dimensions, can create more believable images than reality. This increases the likelihood of its reception by the audience more than ever. Thus, this media can present an image of the city that adds to the accumulations of the schemata of the audience. Therefore, in their confrontation with urban symbols, the schemata represent an association driven from the experiences in a reconstructed virtual world. Since in this process, the perceptions of the audience change, it can be acknowledged that the Metaverse can affect the urban landscape.

**Keywords** *Metaverse, Urban landscape, Media, Perception, Virtual reality.*

**Introduction** During the historical developments over the past centuries - especially after the Industrial Revolution – cities turned into the most important human settlement. Today, they are considered to be the heart of the civilization of contemporary civilizations. Urban

developments, which affect the lives of a large number of people and the essence of their civilization, are of great importance. Earlier, Sean Parker<sup>1</sup>, the founder of the Napster site and one of the former founders of Facebook, claimed that the next evolution of human beings after migrating from farms to cities is migrating and living on the Internet. Now, with the unveiling of a preview of the Metaverse by Mark Zuckerberg<sup>2</sup>, the hypothesis that has been predicted for decades is more realistic than ever, and human life seems to be on the verge of a

\* This article is part of Morteza Hemmati's doctoral dissertation entitled “Developing a conceptual model of the urban landscape through mental interventions” which is being supervised by Dr. Seyed Amir Mansouri and advised by Dr. Nasser Barati in the Faculty of Architecture of the University of Tehran.

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historic transformation. As many large companies<sup>3</sup> and capitalists have bought land plots in the virtual worlds such as Decentraland, Sandbox, CryptoVoxels, the forthcoming developments show that this technology would grow and have a deeper impact on human life in the coming decades. As a significant portion of the Metaverse seeks to “reconstruct the real universe” in the virtual world, the impact of this technology would not be limited to cyberspace. In this regard, one of the most important questions triggering the mind is “What effects will the emergence of virtual cities versus physical ones, have on the perceptions of these cities - or more precisely, the urban landscape?” This article seeks to investigate the effect of the Metaverse on the perception of real cities theoretically. For this purpose, in the first part of this article, the concept of the urban landscape is defined and its various aspects are examined and in the second part, the description of the Metaverse as a medium is presented and its effects on the perceptions of the audience are explored and finally, in the final part of this article, the Metaverse is discussed through the lens of the urban landscape.

## Research methodology

Driven by a qualitative method and based on bibliographic data, this study aims to investigate the effect of the Metaverse on the audience's perceptions of the city. The aim of this study is twofold: first, it explains the concept of landscape from the perspective of experts and sheds light on its various aspects. Second, it introduces the basics of media and the Metaverse then describes this media from an urban perspective. In line with the objective of the study, first, the theoretical foundations of perceptual concepts are presented and then the pertinent literature related to perceptual effects are reviewed. In other words, this research seeks to create a chain of logical propositions through theoretical data, then presents a final proposition that explains how the Metaverse can affect the perception of citizens of the real city - without any physical intervention.

## Urban landscape

### • Whatness of a landscape?

Cartesian bipolar world was challenged when the term place was conceptualized as an objective-subjective phenomenon whose components are inseparable<sup>4</sup>. The emergence of the landscape concept goes back to the intellectual developments of the Renaissance in the 15th century AD, in which under the influence of modern classical ideas, the discovery of the physical world was made, and the distinction between the physical world and the phenomenal world was created in Europe (Alehashemi & Mansouri, 2017; Berque, 2013a; Roger,

1995; Collot, 2011). With skepticism in positivist ideas, this concept found a new meaning in the late nineteenth century under the influence of the achievements of experimental sciences such as physics of relativity – and it was proposed as an interdisciplinary discipline focusing on geographical and cultural issues (Merleau-Ponty, 2012, 46; Alehashemi & Mansouri, 2017; Troll, 1950). This concept, which dealt with the symbolic mental and social structures of landscapes, combined the landscape with the concepts of the humanities. In 1890, the term cultural landscape was first introduced in the science of geography (Jones, 2003). Then, in the twentieth century when phenomenology emerged, understanding the relationship between subject and object underwent a fundamental change and laid a foundation for the modern concept of landscape (Carman, 2012, 33; Alehashemi & Mansouri, 2017). In this view, the landscape is a kind of place whose objective and subjective dimensions are intertwined and inseparable. As Simmel puts it: “A landscape is formed when a group of natural phenomena, widespread on the surface of the earth, is perceived through a special kind of unity” (Simmel, 2007, 25). Lassus also expresses the landscape as a continuous phenomenon whose objective and subjective aspects are inseparable (Mahan & Mansouri, 2017, 21), and Berque considers it as a kind of place that is a product of human-environment interaction (Berque, 2013b, 25). If the landscape is considered to be a perceptual phenomenon, the following definition can be given: “landscape is a perceptual relationship created between” human as a perceiver “and” environment as perceived “through a” continuous “link and results in a product whose nature is “objective-subjective” (Hemmati & Saboonchi, 2021, 26).

### • Urban landscape approach

According to the definitions, the term city is a landscape phenomenon that is fluidly formed between concepts and the physical environment. It is a product of what humans perceive about their living environment. In other words, the word urban landscape refers to the types of a landscape characterized by qualitative nature whose features emerge through quantitative elements. Human conscience and experience testify that the urban landscape has material and physical symbols, to the extent that some have mistakenly considered the physical form to be equivalent to the urban landscape rather than its symbol (Mansouri, 2010; Mansouri, 2011). As the city is an objective-subjective phenomenon. Urban landscape, according to the French Aesthetician Alain Roger, is an objective-subjective process that shapes people's views about the city (Nussaume, 2011). The emergence of the urban landscape should be attributed to the developments of the contemporary city in the

last century. After the Industrial Revolution, when contemporary cities faced deep social and environmental crises due to partisan ideas, the perception of the city as a landscape quickly gained the attention of urban experts and led to the emergence of the term “urban landscape” (Palermo, 2008). Urban landscape as one of the types of a landscape is a new knowledge that is the product of a new interpretation of contemporary man from the category of space. In the new understanding of space, of which the city is an example, it is not only a physical being but also a phenomenon with intertwined dimensions of matter and meaning. Waldheim considers the interpretation of the city as a landscape as a new development in the understanding of the city (Waldheim, 2016, 2-11). Turner in his book entitled “City as a landscape” - which in Persian is mistakenly translated as city as a landscape - has explained the perceptions of citizens of the city (Turner, 1998). In this view, the city as a “place” is not only the product of physical processes but also the product of the perceptual processes of its target community. On the other hand, the urban landscape can be considered as the most important type of landscape because in the last century, with the significant increase in urbanization, cities have become the main platform for the presence of contemporary humans. Describing the importance of the urban landscape, Spirn states: “The urban landscape is more than a symphony, a poem, a sculpture, a dance or a scientific experiment. The urban landscape is a context in which the inhabitants lead their daily lives” (Spirn, 1988, 125). Accordingly, the city as a context for the daily life of citizens has a landscape nature, the existence of which is tied with the perception of the audience.

#### • Urban landscape as text

As mentioned earlier, the landscape is perceptual in nature and is based on what the subject of the perceptual process perceives. Hemmati and Saboonchi state, “Although so far the definitions offered by landscape experts for this concept are very different, there is a consensus among experts that landscape is a product of a perceptual process; this means that there are “perceptual apparatuses” or “perceivers” that form a perceptual process in relation to the “perceived” (Hemmati & Saboonchi, 2021, 16). Majidi and his associates describe this issue as follows: “The urban landscape as a kind of landscape which is perceptual in nature. Based on the nature of the landscape, it can be said that an urban landscape approach is a holistic approach in which objectivity and subjectivity are inseparable and the perceptions and minds of the audience play a major role. By referring to a phenomenon as a landscape, one indicates its state (adverb and not adjective) and the approach that governs the phenomenon (Majidi,

Mansouri, Sabernejad & Barati, 2019, 51-53). Simply put, urban landscape means what the audience perceives about the city is not necessarily the same as what is presented to them through the physical form of the city, and the urban audience has multiple readings of the city. That is why in the theoretical structure of this concept, a special role has been conceived for human perceptions. Urban landscape seeks to organize the city based on the citizens’ perceptions of urban symbols. In the last century, the semantic view of the city has resulted in the recognition of the city as a “text” in the sense that the city as a “symbolic” phenomenon carries concepts that are sent to the minds of the audience. Noroozitalab describes the textuality of the city as follows: Since the city is the embodiment of the collective spirit of the city and its citizens, the physical form of the city cannot be separated from its semantic aspects. In other words, the city is composed of form and meaning” (Noroozitalab, 2010). Therefore, it can be concluded that the city is a text in which the physical aspect is mixed with the mental interpretation of the audience (Boyer, 1994; Sholeh, 2011; Adelvand, Mousavilar & Mansouri, 2016). In other words, the landscape of the city, due to its symbolic essence, acts beyond a fixed text as a dynamic language structure that can transmit data to citizens and generates numerous messages in the minds of the audience over time (Hemmati, Mansouri & Barati, In press). This issue is important in this paper because the texts are read and understood as cultural entities and understanding the urban landscape as a text reveals that the interpretations formed in the minds of the audience are not the same, fixed, and definite.

#### Metaverse

##### • Whatness of the media

Undoubtedly, today the media has become one of the main aspects of contemporary human life. The importance and breadth of the media in today’s world are such that the standard of civility of societies can be measured by the development of media infrastructure. Media in its general sense means a mediating agent or thing, and in a specific sense, it refers to any means that mediates between the message and the recipient. Media, therefore, are tools for conveying the message both individually and collectively, and over time have evolved from “primitive individual” forms to “advanced collective” forms (Zokaei & Hasani, 2016, 41). However, the media not only play an intermediary role in conveying the message but also affect the audience. The media is any means of communication; the media carries the message through a “medium”<sup>5</sup> (Inglis, 1998, 37). Therefore, in other words, it can be said that the media is a tool for transmitting text. This text is cultural data that

is sent to the minds of the audience through the media. In general, from the point of view of sociologists in today's world, it depends on the continuous communication and interaction between people who are very different from each other. In the ancient world, traditions used to be transmitted in the local community, and cultural ideas were gradually spread over large areas, and the processes of cultural dissemination were long, slow, and discontinuous (McQuail, 2006). In the past, the influence of the mass media was considered limited to entertainment, and its impact on the cultural attitudes of the society was considered insignificant. Giddens finds such a view completely misleading and cites the media as a groundbreaking tool in shaping the culture of society. Today, the media acts as a grounding tool for social attitudes and by providing the framework of experience, cultural attitudes, creates a structure within which people interpret and organize information (Giddens, 2000). Hjarvard also interprets this process as an influential issue on culture and society, stating that the theory of "becoming a media" and states: "Media becoming an important concept in modern sociology because it is primarily related to the process of the renewal of culture and society" (Hjarvard, 2020, 14). Mediatization should be seen as a process of modernization, on par with globalization, urbanization, and individualization, through which the media, in similar ways, help to dismantle social relations from existing contexts and reintegrate them into new social contexts (Giddens, 2000). In other words, with the expansion of non-cultural communication with the dual spatialization of the culture path, the authority of culture will develop from "indigenous sources" to "non-indigenous sources" (Ameli, 2011). Hjarvard describes this process as follows: "From the mediatization of culture and society, we understand the process by which culture and society become increasingly dependent on the media and their logic. This process is characterized by a dichotomy in which the media are both integrated into the functions of cultural spheres and other social institutions, and at the same time, in turn, gain recognition as a social institution. As a result, social interaction within the relevant institutions, between institutions and in society in general, is increasingly taking place through the media" (Hjarvard, 2020, 37). Therefore, if we consider culture as a set of beliefs that determine the attitude of people in society towards external issues, the proposed issues indicate the evolution of people's attitudes through exposure to the media.

#### • Intervention in the perception of reality

One of the most prominent features of the media is the influence of external realities on the attitude of the audience. This feature has made today's media go

beyond a medium and sometimes become a tool in the hands of supernatural forces to influence people's minds. Inglis argues that all media are not equivalent but some media outlets, such as television - compared to a device such as a telephone - provide the ground for the manipulation of messages. "Telephones, radios, films, and televisions, along with human print and sound, are all valuable mediums. The problem, of course, is that when we begin to analyze how each one works, they are by no means worthless, and the word "medium" acquires a slippery meaning when it is manipulated (Inglis, 1998, 37). Today, the role of new media is examined beyond a messaging structure, but as a device for producing messages and influencing the minds and attitudes of the audiences. The role of the media in shaping the collective attitude in the new century has expanded to such an extent that some thinkers such as McLuhan have interpreted it not as a messenger but as the message itself (McLuhan, 1998) which has had far-reaching consequences on the dimensions of contemporary human life. McLuhan explains the capabilities of the new media as follows: "In fact, in reality, the real message is the means of communicating through the media itself, or more simply the impact of the media on individuals or society, depending on the severity of changes in the scales and criteria that any new technology or extension of existence create in daily life" (ibid., 5). Lippmann states that our mental image of the world is primarily influenced by the messages we receive indirectly from the environment. By emphasizing the differences between the world and the realities that we know and based on which we act, he reminds us that we treat everything that we believe is a correct image in a way as if it were part of the environment itself (Severin & Tankard, 2013, 459). This is why people think of what the media offers them as the realities of the world. The media can present a false image of the truth to their audiences to the extent that they refrain from interpreting the content of the media and instead of realizing the objective truth around them, tend to believe in the truth of the media images (Littlejohn, 2005, 753). By using the word pretense - rather than representation - and referring to the fact that the media constructs "hyperrealities", Baudrillard believes that the image presented by the media substitute the facts in the minds of the audience (Hjarvard, 2020, 31; Mehdizadeh, 2021, 293-300).

#### • The Metaverse; its impact on the perception of the real world

Virtual worlds are computer-generated stable online environments in which different users settled in different physical locations can interact remotely for different purposes. Virtual worlds form a subset of virtual reality applications, a term used to refer to



computer simulations of three-dimensional objects (Dionisio, Burns, & Gilbert, 2013, 34; Nevelsteen, 2018, 11). The Metaverse or the virtual three-dimensional world is a term that was first used in 1992 in Neal Stephenson's<sup>6</sup> novel named "Snow Crash" (Penfold, 2009, 140; Gaafar, 2021, 68). However, this concept has been used in other literary works since the mid-1970s. This concept later spread to computer games in the following decades, and in the mid-2010s entered a new phase with the "Second Life" game, which created a limited virtual reality life experience for individuals (Lynch, 2012, 163; Lee et al., 2021, 2-3). Now, decades after the design of this space in text and video media, with a preview of the future of this space by Facebook creator Mark Zuckerberg on October 28, 2021, public attention is increasingly being drawn to this concept. As mentioned, the Metaverse is also a form of a virtual world and a hypothesis of the next generation of the Internet that provides users with a three-dimensional cyberspace experience. This three-dimensional virtual space connects the audience through mediums such as virtual reality headsets, augmented reality glasses, etc., and associates them with their avatars<sup>7</sup> in the virtual world – in which their virtual bodies are – and makes it possible for people to experience this space more precisely. It should be noted that the simultaneous development of interface technologies for the physical perception of cyberspace seeks to simulate other human senses such as touch, smell, etc. in cyberspace. As a result, the perception of this space would be more than an objective spatial experience<sup>8</sup>. In other words, these virtual worlds through the avatar will allow the user to overcome the physical limitations of his body as much as possible. Moreover, since it seems that the Metaverse is simultaneously seeking "reconstruction of the world", it would also be possible to cross geographical boundaries (Nayar, 2015, 46). But what is remarkable is that since the Metaverse, as the new media, will provide individuals with an exchange of the real world, it seems that it would not just change their understanding of space and time. Experiences, events, organizations, and interactions that individuals make in cyberspace will affect the existing society in reality (Ning et al., 2021, 17). Nayar states that "The insidious point about cyberspace is the ways in which it rebuilds the material world ... cities are re-organized ... and change social relations" (Nayar, 2015, 304). As some researchers have drawn the "emotional geography" of the audience, considering the dialectic of cyberspace and real space where these dualities interact (Thien, 2005; Frith, 2020). Thus, as stated earlier that audiences perceive the media's portrayal of the world as an awareness of their surrounding world. The Metaverse is likely to

be able to provide the audience with more believable data from the world. This will occur by using the many possibilities of simulation. As a result, it would have a deeper effect on the interpretation of the real world.

## Discussion

Based on what has been presented, city is a landscape phenomenon. This phenomenon as a symbolic creation of space is based on "the audience's perceptions of the environment." Thus, the urban landscape can be imagined as a readable text that is relatively read by the audience based on their mental accumulations - experiences, ideas, beliefs, etc. As soon as an audience face the physical form of the city, he or she perceives the phenomenon based on the association of the meaning formed in his/her mind, and in simpler terms, refers to his/her mind. In addition, as mentioned before, the new media are more than a medium, but a device for producing messages and influencing the mind of the audience. In other words, these media as a messaging device in today's world have become tools to promote cultural data - or rather targeted convergence of attitudes - and send cultural messages of the upstream institution to his mind and seek to create a mental image or form the interpretation of the goal in his mind. The media have different degrees of influence depending on the possibilities, as radio usually has more limited persuasive power than television, and both of these media are more influential than their predecessors. As mentioned, the media can present the image of reality to the audience in a manipulated and targeted way by representing or beyond pretending to be the real world. In the meantime, it seems that the Metaverse, as a medium that has a much wider range of tools to reflect the real world and seeks to "reconstruct the world" through the three-dimensional context of the virtual world. As a result, the Metaverse can create a much more believable picture of the world in mind. Because the audience indirectly, as noted, perceive the media image of the real world as the world awareness. What the Metaverse represents from the city - or so-called self-reconstruction - influences what we receive from the city in the real world. For example, if an event takes place in a reconstructed urban space in the Metaverse and this event is perceived by the avatar of the observer, the perceived subject becomes part of his mental accumulation. In this case, the audience is associated with the real urban space and interprets what it receives from the outside environment in combination with new accumulations of the meta-world. Thus, this process means that the Metaverse can transform the urban landscape or the audience's perception of the symbolic environment of the city - without interfering in the physical features of the city.

## Conclusion

The Metaverse, a world beyond the physical universe, which has been created on the virtual platform, would bring about a dramatic change in human relations. The Metaverse, which seeks to rebuild the world, will get much further in transforming the existing relationship between humans and the city. In the past, the city used to be a symbolic phenomenon reflecting real-world experiences. With the advent of the Metaverse, it seems that the real city can evoke experiences from the virtual world. As mentioned before, the media essentially as an intervening medium seeks to create a purposeful image of reality in the minds of its audience, and the Metaverse as a tool that presents the world in three dimensions and can create more believable images than what exists in the reality. Thus, the audience is more likely to accept those

images more than before. As a result, the Metaverse might give an image of the city that contributes to the audience's schemata accumulations. Therefore, when confronted with urban symbols, the schemata indicate an association fueled by experiences in a recreated virtual environment. In other words, this means that virtual world experiences are linked to real-world experiences and that communicators' perceptions of urban symbols can be transformed without changing the physical form of the city. Therefore, since the previous perception is not the same as the new perception of the city, it can be acknowledged that the Metaverse can change the urban landscape. This important ability to affect the landscape without changing the physical form of the city may be considered the greatest future urban development. This should be undoubtedly called an urban revolution.

## Endnote

1. Sean Parker stated, "We lived on farms, then in cities, and now on the Internet" (Quotes, n.d).
2. Mark Zuckerberg is a computer programmer and co-founder of an online social networking site known as Facebook in the United States.
3. Many large companies have recently purchased land to build a store in the Metaverse. For example, on November 22, 2021, Adidas announced the preparation of a piece of land in the virtual world of Sandbox (Currency, n. d)
4. Mansouri states that "In response to the Church's extreme Aristotelian subjectivism, which saw the heaven (metaphysics) governing earth (physics), Descartes used "dualism" to classify categories and to divide phenomena objectively and subjectively. In this division, the city is recognized as a physical (objective) reality. Otherwise, it must be a metaphysical phenomenon like imagination" (Mansouri, 2010).
5. The term medium in English also refers to people who in the past have claimed to be connected to the world of the dead (Inglis, 1998, 37). These intermediaries claim that they do not speak in their name and speak in the language of the soul of the deceased if the reality is the opposite. By creating this similarity, the author seems to be stating that

the media does not act only as a neutral interface.

6. Neal Stephenson is a writer of science-fiction novels and speculative fiction from the United States.
7. Avatar is a kind of online identity which is usually a graphical representation of a user in a virtual environment. This identity can be modified to look like anything the user wants. In addition, this identity is created to do things in the online environment (Nayar, 2015, 37).
8. Involving the body's senses to create more accurate simulations of the real-world experience is one of the topics that has attracted the attention of researchers and scientists in recent years, and significant progress has been made in this area. For example, Hypnos Virtual has unveiled technology that can produce bio-aromatic or olfactory sensations in cyberspace (Techopian, n. d), or similar companies have developed OVR technology to produce prototypes of virtual olfactory senses (Tech Trends, n. d). Likewise, other technologies for touch, taste, etc. are being developed (New Scientist, n.d.; Disruptive, n. d; Technology Review, n. d; Nikkei, n. d). As researchers believe, we will be able to taste, search, smell, and touch virtual reality in the near future (Caesar VR, n. d).

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#### HOW TO CITE THIS ARTICLE

Hemmati, M. (2022). The Metaverse: An Urban Revolution Effect of the Metaverse on the Perceptions of Urban Audience. *Tourism of Culture*, 2(7), 53-60.

DOI: 10.22034/TOC.2022.323276.1067

URL: [http://www.toc-sj.com/article\\_143468\\_en.html](http://www.toc-sj.com/article_143468_en.html)

