A New Model of Dance Performance Art—Performance Analysis of Metaverse Application

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Abstract

This study reflects the explosive increase in interest and demand for online performance distribution after COVID-19, in contrast to the existing perception of only performance halls or festivals as a distribution channel for performing arts, and a new paradigm and new method of performing arts distribution. Let's take a look at the future prospects of performance distribution in the metaverse. When performing in the metaverse, a virtual space, the background desired by the choreographer can be easily implemented with digital technology, and while new spaces that cannot be experienced in the real world can be realized in the virtual world, a set to decorate the stage, and facilities such as sound and lighting equipment. It is not very necessary, so it can be seen as the scalability of space expansion. In addition, the collaboration between the avatar industry, which is a virtual character in the game, and the performance industry can be seen as an expansion of multidisciplinary arts as a new place where performance audiences of a new era gather and a communication industry where feedback from performance audiences is possible. Lastly, through NFT of digital contents, great scarcity will be granted through metaverse, a new market, which will expand the scope of performance distribution. As a result, at the present time when a new culture is emerging through the combination of platforms and contents in the metaverse, a virtual space, there is a great potential for development of performance distribution in the metaverse. It is believed to be essential for development.

Keywords: performance distribution, metaverse, multidisciplinary arts, COVID-19, NFT

1. Introduction

1.1 Necessity and Purpose of Research

In the era of the Fourth Industrial Revolution, where automation and connectivity are maximized with artificial intelligence, smartphones are considered a cultural life and a part of life beyond a household device, and people live in a digital world without missing a day. In other words, the digital world is positioned as human life, market, industry, and culture regardless of generation. The digital world is developing further based on 5G, the 5th generation communication protocol. This 5G technology has the characteristics of ultra-high speed, ultra-low latency, and hyper-connectivity, enabling virtual reality, augmented reality, autonomous driving, and the Internet

of Things to be implemented, enabling mobile phones to connecting all electronic devices beyond.

With all the above technological developments, real world areas such as society, economy, culture, and industry have already been formed in virtual space, and the advent of the untact era due to COVID-19 has further accelerated the development and execution of virtual space. In this situation, the metaverse is a topic that is receiving worldwide attention, and it can be expected as a phenomenon that can completely break down the boundary between the real world and the virtual world.

Just as the sun is at the center of the solar system, Nvidia's CEO Jaxon Huang predicted that the next 20 years will unfold more like science fiction than the past 20 years as the metaverse emits hot energy and light in future marketing. (Wonho Kim, 2021) In fact, the metaverse has naturally permeated into everyday life for several years, but has been dealt with and developed in earnest as the influence of the MZ generation, who is good at digital devices, has rapidly emerged. As a result, a relatively safe market economy was formed in the metaverse, and more and more people became interested.

The small market that bought and sold items within the game owned the artwork.

It has expanded into a large distribution market for buying and selling tickets, and there are cases of performing in the metaverse, so it is necessary to look into the future prospects of new performance distribution.

Performance distribution, a part of arts management, is a major link between art works and audiences, and is a medium that plays a role in balancing creation and enjoyment. (Lee Seung-yeop, 2009) Performance distribution is mainly carried out by organizations under the Ministry of Culture, Sports and Tourism and related organizations This is done while directly planning and distributing performances through projects such as performing arts festivals. In addition, it is common for cultural centers or art theaters to organize and distribute performances nationwide, and other performances are distributed due to demand from performance agencies and festival agencies, and art such as Seoul Art Market.

Through the market, artists and art groups directly distribute their performances. This distribution method is a distribution method prior to the COVID-19 era, when face-to-face performances were mainly conducted, and there have been attempts at online performances due to the 4th Industrial Revolution, but the need for online performances was not widespread among artists. The interest and demand for performance distribution was very insufficient. According to Kim Seon-yeong (2018), a significant part of the reasons for the neglect of distribution in the performing arts are the existing perception that only performance halls or festivals are the distribution channels for performing arts, and the acquisition of reputation and recognition from the market as an intermediary. One of the reasons for this is the tendency to regard it as the capacity of a performing artist or group rather than a performance artist. In addition, it is said that the distance from the industrial point of view, the passive attitude toward technological development, and the difficulty in forming an objective price are also analyzed as causes. (Kim Seon-yeong, 2018)

However, at this point in the culture and arts industry, where there is no objection to the convergence of various technologies in the stage space, convergence and utilization of more advanced technologies is an artic and thought that artists should take all. Since the MZ generation, who are future customers and audiences, enjoy using the metaverse and already enjoy the culture in it, the concept of metaverse is recognized in the field of performing arts.

If we consider tabus as an opportunity to advance into other industries and recognize it as a background in which performance distribution can be vitalized, it is considered that it will be a starting point for moving into a new market where performing arts can develop.

Therefore, this study aims to organize the concept and use cases of metaverse and at the same time to study the future prospects of performance distribution in the metaverse, a new paradigm of performance distribution. Furthermore, it aims to suggest a new direction for performance distribution and to help artists who produce and distribute performances in line with the upcoming generation system. In addition, studies dealing with use cases and marketing of the metaverse have been preceded, but there is no prior study on performance distribution in the metaverse.

I think Hwang's recognition and consideration of the overall concept of this is a meaningful study for the future performing arts.

In this study, the following research questions were set in order to carry out the research purpose presented above.

First, what is the metaverse?

Second, how is the metaverse being used in the real world? Third, how should we look at performance distribution in the metaverse?

1.2 Methods and Limitations of the Study

This study is to organize the concept and use cases of the metaverse and to study the future prospects of performance distribution in the metaverse, a new paradigm of performance distribution.

The research methods for this are door old research, research data net machine company and are door old research data research. Chapter 2 conducts research on the outline and use cases of the metaverse as a theoretical background.

Chapter 3 discusses the infinity of space, the scalability of multidisciplinary arts, and the scarcity in new markets with the prospect of performance distribution in the metaverse. Finally, Chapter 4 contains the significance and suggestions of this study as a conclusion.

The limitations for this study are as follows. First, starting from the era of COVID-19, the types and forms are developing differently, so the point of view of case studies in the metaverse is limited to after the COVID-19 incident. Second, online performances transmitted through online streaming platforms are not considered metaverses. Performances in the metaverse are limited to performances in which a virtual space is formed in a virtual world.

2. Theoretical Background

2.1 Overview of the Metaverse

Metaverse, a concept derived from Neal Stephenson's 1992 novel Snow Crash, is a combination of Meta, which means 'virtual/transcendent', and Universe, which means 'world/universe', as a compound word, means a three-dimensional virtual world. This metaverse has been developed among various researchers.

Although it is difficult to give a clear definition of the metaverse as it is discussed a lot in different perspectives and concepts, in general, the metaverse means a three-dimensional virtual space where social and economic activities like the real world are possible.

As we have undergone scientific and technological development, the definition of this metaverse has also expanded.

Meta are virtual space and reality.

It is an actively interactive space, and as a method itself, it is simply a three-dimensional space.

It is said that the intersection of the real world and the virtual world, not the virtual space, is another world realized with 3D technology. It is a possible new society and market.

These metaverses can be divided into four types. ASF (Acceleration Studies Foundation), a non-profit technology research organization, classifies the metaverse as Augmented Reality, Lifelogging, Mirror Worlds, and Virtual World (virtual worlds). To briefly explain the 4 types above, augmented reality is a technology that displays a 3D virtual image superimposed on a real image or background as a single image. Example like *<Pokemon GO!>*.

There is Lifelogging means to record life, and it refers to recording and saving an individual's daily life on the Internet or smart phone, and social network service (SNS) is a representative example. The mirror world is a system that reproduces 3D CG on the Internet, and Google Earth, a service that provides regional information of the world through satellite images, maps, topography, and 3D building information, is a representative example. Lastly, the virtual world is a system that creates a certain environment or situation in the space of a computer and provides an environment in which they interact with each other so that they can feel like the real world. A representative example is Second Life, which provides a service that allows users to create individual avatars and interact with each other.

2.2 Metaverse Use Cases

Due to the development and commercialization of the Internet, the ear component began to take shape about 20 years ago. In the early metaverse, a 2D form of electronic game was a game in the form of a game service supported by the development of the Internet and 3D graphic technology. Since then, with the spread of PCs and smartphones, the lifelogging metaverse, a form of life communication service such as Cyworld and Facebook, has become universally popular. The difference between the two areas is described by dividing the bus into several categories such as virtual world state, purpose, content creation, and content consumption. However, at the present time, having gone through the 2000s, 2010s, and 2020s, the metaverse is divided into a game-type metaverse and a life-type metaverse.

It is facing a new turning point beyond the scope and form of previous studies that have been disassembled and studied. The metaverse, which was focused on games and entertainment, is expanding to companies, schools, government offices, fashion, and popular culture, and is being used in a variety of ways, and qualitative changes

are occurring in its scope and form. As virtual experiences are connected to reality and everyday life is realized in virtual space, the metaverse that breaks down the boundary between reality and virtuality is now in full swing, and among the MZ generation who are familiar with the Internet and digital devices, it has become an online social life. is establishing itself Metaverse, which was formed based on games, has begun to be used in various fields such as schools, companies, sports, MICE, entertainment, fashion, and retail business in everyday life thanks to the spread of untact culture caused by COVID-19. In 2021, Soonchunhyang University held the nation's first metabus freshman entrance ceremony with an avatar, and Konkuk University and Soongsil University held a non-face-to-face metabus festival enjoyed by avatars. SKT held a recruitment briefing session on Metaverse.

LG U+ provides 8K social wVR, real baseball, rti middle e.

It provided a service as if watching a game in a field. Virtual SEOUL, produced by the Seoul Tourism Organization, is a meta bus platform that can hold MICE events and has functioned as a venue for non-face-to-face meetings and publicity for the tourism industry. On the domestic platform of Metaverse, ZEPETO, girl group BLACKPINK held a fan signing event in September 2020, and girl group ITZY held a fan meeting in February 2021. In addition, through ZEPETO, global fashion companies such as luxury brands Gucci and Christian Louboutin promote their products within the metaverse and sell items worn directly to avatars. As you do, avatars can cook and eat ramen themselves, or perform and watch songs and dances in the busking space. As such, the use cases of metabus are gradually increasing in various industries. According to Yail Koh, Jungmin Yoo, and Yiju Hwang (2021), the metaverse is expected to form a global market size of about $280 billion in 2025, (9) Go Yae-il, Yoo Jung-min & Wang Yi-joo, 2021) is expected to be used in various ways in the future as an interest of many companies to catch the MZ generation, the future customer, and is solidifying its position as a new market, cultural space, and cultural industry.

3. Prospects of Performance Distribution in the Metaverse

3.1 Infinity of Space, Infinity of Performance Distribution

VR (Virtual Reality), a term familiar to us, is a state-of-the-art technology that enables real-life experiences in a virtual world.

One part of the metaverse string thread bow dragon of the museum Reproduction or exhibition viewing of works of art can be easily encountered in everyday life.

Viewing the exhibition through virtual reality can be seen as breaking down the restrictions on space because you do not have to go to the space yourself.

Regarding the possibility of the metaverse in the field of art, Seonghee Kim, Hyunwoo Lee, Won Ryu, and Kwangshin Kim (2014) argue that the implementation and utilization of the metaverse means the expansion of the field of digital content technology, and if the exhibition space is implemented as a metaverse, it is said that it becomes epoch-making metacontents that can contain objects and related contents. (Sunghee Kim, Hyunwoo Lee, Won Ryu & Kwangshin Kim, 2014) In other words, expansion of exhibition space through metaverse enables infinite expansion of exhibition items. The expansion of space not only expands the items in the exhibition space, but also opens up infinite possibilities in the field of performing arts.

We can open up Stage-based performing arts, which are often limited by space, we can solve space limitations through Metaverse, so we can expect more performance works and active distribution. For stage-based performing arts, basically, there must be a venue for performances, audience seats, sets to decorate the stage, and space for facilities such as sound equipment and lighting equipment. However, if the performance is held in the metaverse, a virtual space, the size of the venue does not have to be proportional to the audience seats, and there is no need to create a physical set to decorate the stage. The background that choreographers want can be easily implemented with digital technology, and new places that cannot be experienced on stage in the real world can be realized in virtual space. It is possible to perform for foreigners without going abroad, and since many people can watch the performance at the same time, there is no limit on the number of spectators. In other words, since the performing arts in the metaverse are guaranteed the infinity of space, this is the performance content and the audience.

It is possible to grow the infinite development potential of the receiving water.

As an example of this, Fortnite, a representative overseas metaverse platform, provides a virtual space called Party Royal where concerts and various events can be held. In April 2020, American hip-hop musician Travis Scott held an online concert through Avatar at Party Royale. The concert, which broke space restrictions for 45 minutes, attracted about 12.3 million simultaneous accesses and earned 20 million dollars (approximately KRW 22 billion), which became a big issue. In this way, the practice of expanding space through the metaverse is preceded by popular culture. Starting with this precedent, if the metaverse is actively utilized in the performing

arts, it will lead to the expansion of performance contents and the development of the number of future audiences thanks to the infinite space, which will soon lead to the infinite development potential of performance distribution.

3.2 Expansion of the Range of Convergence, Scalability of Multidisciplinary Arts

Multidisciplinary art, which means art in a new medium that cannot be explained by the existing genre classification or art in which various genres of media combine to create new effects, is more diverse attempts and effects of performing arts at the present time when digital technology has developed. is arousing Due to the development of digital media technology, the technology of performing arts has also developed considerably, and the use of projector mapping technology in stage performances is a method that artists and audiences are already familiar with. Just as the development of the arts is ultimately a process of utilization and mastery of technology, (Lee Eui-shin & Kim Seon-yeong, 2017) it is a time when convergence with new areas is greatly needed for the better development of the performing arts and the diversity of multidisciplinary arts. In the performing arts, the boundaries of genres are collapsing and the flow of multidisciplinary arts platforms are appearing in the metaverse where the boundaries between types and realms are collapsing.

Representatively, the metaverse's www.platformti.leportentite.org (FORTNITE), There are THE SANDBOX, ROBLOX and ZEPETO, the domestic platform of Metaverse. The most common platform in the metaverse is the game content platform, and as these game platforms began to collaborate with the performance industry, positive aspects began to appear. According to the Global Game Industry Trend report, real-time performance streaming through video platforms for the first time Based on the live performance in Fortnite, which was mainly attempted, the game online performances through platforms are also showing a rapid increase. (Strabase, 2021). As another example of Fortnite, in September 2020, the music video for BTS' new song *Dynamite* was first released in Fortnite and attracted worldwide attention, which is why Fortnite crosses the boundaries of game platforms and people. It is an opportunity to recognize that it is a place to enjoy, and it is specified that in-game events are establishing themselves as a new stage for performing arts. Also, in May 2021, The Sandbox and Skull, a famous reggae singer in Korea, signed a collaboration to realize a reggae-themed event space in the game platform, where concerts, fan meetings, and limited edition Skull items and products are sold. It can be seen as an example of collaboration between different industries in a game platform. As the performance industry collaborates with the game industry, it can naturally expand through collaboration with the avatar industry, which is a virtual character in the game. The avatar industry is an economic consumption activity to decorate avatars, which are virtual characters, and add various options.

It is an industry where this is done. ICL by rt through the website.

It is possible to form a mutual relationship by vicariously satisfying or communicating with each other in virtual space. When the music video for BTS' new song *Dynamite* was released for the first time, audiences not only watched the music video through their avatars, but also purchased items at the same time so that the avatars could embody the same choreography of *Dynamite*. This is a method of interactive communication in which a dance that could not be performed in real life can be performed through an avatar, and immediate feedback can be provided as a spectator. In a word, the collaboration between the avatar industry and the performance industry can be viewed as a communication industry in which feedback from performance audiences is possible. When considering the cases above, it can be seen that the range of convergence in the performing arts, such as collaboration between the game industry and the performance industry, and collaboration between the avatar industry and the performance industry, has already begun to expand through the metaverse. This movement is a performance art.

It can be seen that the possibility of collaborating with various industries within the metaverse beyond the collaboration between the game industry and the avatar industry has been opened. In other words, collaboration between other industries and the performing arts within the metaverse is an element that will expand the range of convergence of art genres, cause the expansion of diversified arts, and evoke the vitality of performing arts distribution.

3.3 Great Rarity in New Markets

Metaverse platforms such as Fortnite, The Sandbox, and ZEPETO are characterized by a system in which users directly create games or create content to enjoy with each other. Similar to the real world, real estate, items, and cultural industries are distributed to distribute assets. The point is that mutual economic activities between users are possible, such as forming. Mutual economic activities in the metaverse where the boundaries of these areas have collapsed are blocked.

This is done through cryptocurrency based on chain technology.

The biggest characteristic of alcohol is that information is stored in a distributed network.

By storing, it is almost impossible to arbitrarily change or manipulate the stored information later, and it is based on a decentralized distributed network without notarized transaction intermediaries. (Choi Seong-won, Lee Seung-mok, Ko Jung-eon, Kim Hyeon-ji & Kim Jeong-soo, (2021) In other words, due to technological development, a relatively safe market economy as it is being formed, users can become creators, mediators, and consumers in the metaverse freely.

Among them, non-fungible tokens (NFTs), which are virtual currencies that uniquely mark digital content and grant ownership, are a part to be noted in the performing arts. Just as each artwork has a different value, NFT-ized artwork in virtual space already has a virtual asset and original certification, so NFT can be seen as a new technology that opens up the possibility of intellectual property rights being blockchainized.

With the rapid rise of buses, the blockchainized NFT market is also expanding, and large markets such as Opensea, Superrare, and Rarible are already active. A representative example of a work of art that has been turned into NFT and distributed is the digital artist Beeple's 'Every Day: The First 5000 Days'. As it was successful, it formed the record of being the third most expensive bidder in history and the highest ever for a digital work. Since the ownership of NFT cannot be forged and altered and the information is disclosed transparently, the value of the artwork rises, and it is circulated at a high value in virtual space because it has ownership and scarcity at the same time. NFT of digital contents in virtual space is possible not only for works of art but also for video contents. In February 2021, the scene of LeBron James' dunk shot in the basketball NBA was sold for $208,000 (about 200 million won). In this way, the NFT of digital contents goes beyond art works and video contents to create user-created content.

It's possible to learn the basics such as bata, items, architecture, writing, etc.

It can be foreseen that the scope of the distribution market can be greatly expanded in entertainment arts. If someone's performance art work is NFT in the metaverse, and its artistic value and rarity are endowed together, and ownership is created, I think the value of this performance art work will be infinite. In other words, since performing arts works in the metaverse will increase the value of intellectual property rights, the metaverse in the performing arts is a new market and a space where great scarcity can be granted, and the NFT of performing arts works is a new window for performing distribution.

Figure 1. 'Everyday: The first 5000 days'

Figure 2. Digital Fusion

4. Closing Remarks

This study reflects the explosive increase in interest and demand for online performance distribution after COVID-19, in contrast to the existing perception of only performance halls or festivals as a distribution channel for performing arts, and a new paradigm and new method of performing arts distribution, Meta. We looked at the future prospects of performance distribution in buses.

When performing in the metaverse, a virtual space, the background desired by the choreographer can be easily implemented with digital technology, and while new spaces that cannot be experienced in the real world can be realized in the virtual world, the performance. It does not require large facilities such as size, sets to decorate the stage, and sound and lighting equipment, so it can be seen as expandability of performance distribution as well as expandability of space. In addition, the avatar industry, which is a virtual character in the game.

Collaboration in the performing arts industry is a new place where new times public kites, spectators, audience and audiences gather, and a communication industry where feedback from performance audiences is possible. With the expansion of multidisciplinary arts, you will be able to look Lastly, I think that NFT of digital contents will give great scarcity through metaverse, a new market, and expand the scope of performance distribution. As a result, at the present time when a new culture is emerging through the combination of platforms and contents in the metaverse, a virtual space, there is a great potential for development of performance distribution in the metaverse. It is considered necessary for the development of art.

The future prospects of performance distribution in the metaverse derived from this study are as follows. First, the use of the metaverse is the basis for performance content thanks to the infinity of space.

It can lead to expansion and development of the number of future audiences, which will soon lead to infinite performance distribution. Second, the collaboration between the metaverse and the performing arts, which have collapsed boundaries, is an element that invigorates the performing arts distribution by widening the range of convergence of art genres and causing the expansion of multidisciplinary arts. Third, since performing arts works in the metaverse can increase the value of intellectual property rights and safely distribute through NFT, the metaverse can be viewed as a new market for performing arts distribution and a space that gives great scarcity.

The future prospect of performance distribution in the metaverse derived as above is meaningful in presenting a new direction of performance distribution to artists who will face the upcoming generation system with the task of developing and popularizing the performing arts. Furthermore, the new paradigm metaverse and consideration of performance distribution lead to a positive effect on future performance distribution, so we expect follow-up studies on new methods and various cases of performance distribution in the metaverse beyond all his research. In particular, as a self-contained distribution channel for public performances that transcend aspects of popular culture, I hope Tabus will be used and studied.

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It is an augmented reality (AR) avatar service operated by Naver Jet (Z), and is a representative metabus platform in Korea launched in 2018. Provides a service that allows users to communicate with other users or experience various virtual reality experiences by creating '3D avatars' using facial recognition, augmented reality (AR), and 3D technologies. (Source: Dictionary of current events)

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