

REVIEW ARTICLE

What is the Metaverse?—In the view of philosophical perspective

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ABSTRACT

What is the Metaverse actually? It is an important issue in the terms of theory and practice with huge controversy. Regarding the Metaverse from a philosophical point of view, it could better highlight the inner essence behind the controversy of representation. From the connotation view, it is a digital mapping and mirror world of universe. Extensively, it is a comprehensive integration of digital information technologies. In the view of philosophy, it is an artificial universe created by human beings with digital technology, which is digital universe corresponding to the real universe. In the view of spiritual philosophy, it is a cosmic brain created by human beings with wisdom of natural universe, which is a cosmic heart for the body of natural universe. In the view of cognitive philosophy, it is a digital universe that recognizes everything, and a digital laboratory for human innovation and creation.

Keywords: Metaverse; Metaverse philosophy; parallel universe; cosmic brain; digital laboratory

1. Introduction

Recently, the word “Metaverse” has exploded, but what is the Metaverse? Some people think it is an electronic game, someone thinks it is a commercial means, and some persons think it is the virtual reality technology. In fact, most of people think the problem from the surface but not exploring the essence behind the phenomenon. For understanding the meaning of Metaverse better, it is necessary to analyze the essence of Metaverse in the view of

philosophy, including connotation extension, cosmology philosophy, psychosomatic philosophy and cognitive philosophy in this article.

2. The coming of the Metaverse era

Since the end of 2021, the concept of Metaverse has suddenly exploded, and it seems that everyone has talked about the Metaverse. The question is, why did it suddenly explode at this time? The Metaverse craze could be traced back to March 2021. At that time, a company named Roblox, which was mainly

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engaged in the game industry, was about to be a listed company. Many people have a bad impression of the game because of the negative impression it conveys. Therefore, when Roblox is listed, if it is positioned as a game company, it may give people a feeling of low level. Thus, the “Metaverse” is used to beautify itself. Of course, they did take the game to a new level. People generally think that if a person is addicted to games, it may affect his/her future. Roblox tries to reposition the game from a new angle and position his company as a Metaverse company. Surprisingly, as soon as Roblox went on the market, its share price soared, and it quickly turned dozens of times^[1(p8-14)]. It immediately attracted great attention from various capitals including the financial, industrial and venture capital circles. Many people find it strange, because during the epidemic, most other companies are sluggish. After exploring it, people were surprised to find that Roblox’s success attribute to be a Metaverse company.

By October 2021, the world-famous Facebook company suddenly announced that it would change its name from “Facebook” to “Meta”, which is a great surprise. The reason of changing the name is that Mark Elliot Zuckerberg saw the future development of the information society and the future trend of data technology. The main business of Facebook was social networking in the past, which just likes the Tencent. However, the online social service has almost come to an end now. Facebook’s main business in the past was social networking, just like our Tencent. However, the online social service has almost come to an end now. What is the future of social interaction? Where will the company develop in the future? Roblox inspired Zuckerberg, who realized that the future direction of the company should be towards the Metaverse. In order to express his determination that the company will change from the leader of social networking to the leader of the Metaverse, he decided to rename the company. How determined it is to change the name of a company that has been used for about 20 years and has gained worldwide reputation! From the renaming, we can see that Zuckerberg is determined to occupy the future field of the Metaverse. The era of Metaverse has

come, or the Metaverse revolution is about to happen^[2]. What kind of technology is Metaverse? Many people found that there is nothing new in it. Why did people use the word “Metaverse” to name it? Although the word “meta” is added, it is positioned as “universe” after all. The information technology in the past, such as big data, AI, VR, all claimed to be revolutionary technological changes without using the word “universe”. How did the word “Metaverse” come from? Why do Roblox and Facebook use this word? It looks related to four aspects: 1) science fiction; 2) science film; 3) video games; 4) philosophy. First of all, science fiction was the first to give birth to the concept. Isaac Asimov, a science fiction writer, once fantasized about the future world in which man and machine are integrated in his series of robot science fiction novels, especially in the novel titled “Gods themselves”, which describes the future life of human beings in the parallel universe of “electronic channel”. In 1984, William Gibson published the sci-novel “Neuromancer”, and put forward the concept of Cyberberg. But what is most directly related to the Metaverse is Neal Stephenson’s science fiction named “Avalanche”, which puts forward the new word “metaverse” for the first time^[3]. Secondly, there are science fiction movies that promote the emergence of Metaverse. Among them, there are several famous movies, such as “The Age of War”, “The Matrix”, and “Ready Player One”, which have an important effect on the word Metaverse. Thirdly, video games have also played an important role in putting forward the Metaverse. We used to regard games as a kind of pure entertainment and as a sign of weariness, but this is not entirely the case. For example, games such as “Night at the Fortress” and “My World” have played an important role in promoting the concept of the Metaverse. Finally, philosophy also contributed to the proposition of Metaverse. For example, Jiuyuan Lu and Yangming Wang, the founders of “Lu Wang’s theory of Mind” in China, had put forward the philosophical thought of “My mind is the universe, and the universe is my heart”, and that links the spiritual world of human beings with everything in the universe, and puts forward the ideal and vision of “the unity of man and

nature”.

Facebook in the United States has been re-named “Meta”, and Tencent in China has quickly followed suit. In fact, Tencent has recognized the trend of information integration long time ago, and once put forward the concept of all-real Internet to summarize this future trend. Unfortunately, it was not accepted by the public, so it was not fully promoted, but the concept of Metaverse was quickly spread and accepted. New companies such as Facebook, Tencent and Alibaba have always been difficult to locate what type and nature they are. After big data was put forward, they thought they were companies with big data. After artificial intelligence revived, they thought they were companies with artificial intelligence. However, these positioning did not seem to correctly locate their nature. After the concept of Metaverse was put forward, they finally realized that they were all Metaverse companies.

Now, many people in the venture capital industry are investing in Metaverse enterprises or Metaverse concept stocks, hoping to find business opportunities here. Although many people in China object that they are just speculation. In the half of 2022, the state has published the White Paper on the Metaverse in China^[4], which means that China recognizes the concept or idea of the Metaverse and embraces the coming of the Metaverse era. China has formally laid out the Metaverse, and achieved the same development with the developed countries in the world. Therefore, we hope that there will be China’s voice in the revolutionary era of the Metaverse, and we will become the trendsetter and leader of the Metaverse era.

In academic circles, the Metaverse has also begun to attract widespread attention. The most lively and fastest-accepted academic circles are the news communication field. Several scholars, such as Shenyang in Tsinghua University and Yu Guoming in Beijing Normal University, have greatly contributed to the word Metaverse. It seems that the recognition of the Metaverse in China’s philosophical circles is not so significant, so that some scholars write poems to satirize the Metaverse, or write books to

criticize the Metaverse. At present, only a few scholars recognize the Metaverse with certainty. In fact, the metauniverse is not only a new concept, but more importantly, it means the coming of a new era of technology. Therefore, it is necessary to pay attention to and study it from the philosophical level, and conduct a comprehensive study on the cosmology, ontology and epistemology of the Metaverse. Philosophy of science and technology should respond to the Metaverse, and the most important thing is to answer that what the metaverse is in view of philosophy.

3. In view of connotation and extension, the Metaverse is a digital technology cluster

Some people think that the Metaverse is a concept with no new connotation and extension, which is just conceptual hype. However, it is not the fact. In the view of technological breakthrough, it seems that there is nothing new in the Metaverse, but there seems to be something new. In the view of connotation, it is a cluster of digital technologies. While in terms of extension, it includes all new information technologies since the information technology revolution, especially the new data technologies in the 20 years before and after the 21st century.

The word of Metaverse comes from the English word, and the Chinese translation of this word is not consistent. When the “Avalanche” was translated and published in 2018, Guo Ze translated “Metaverse” into “metadomain”. That is, he translated “meta” into “super”, and “universe” into “metadomain”. The word of “metadomain” sounds abstract, and I don’t know what it means, so it has not been popularized. In 2021, after the rise of Metaverse abroad, domestic scholars use the word “Metaverse”. In fact, scholars in China have created the word “metaverse” in 2002. Han Minqing from Shandong Academy of Social Sciences had published three papers named after “the Metaverse” in journals such as *Philosophical Research*^[5-7]. However, this “metaverse” is essentially different from what we now call the “metaverse”. The metaverse he said is still a natural universe,

which is to explore the source and bottom logic of our natural universe, and it belongs to natural cosmology or cosmic philosophy. The prefix “meta” is no stranger to us. We have seen it in Aristotle’s *Metaphysics*. Isn’t *metaphysics* “*Metaphysics*”? It means to explore the knowledge behind or above tangible physical phenomena. The English prefix “meta” mainly has two meanings, one is “yuan” and the other is “super”. The so-called “yuan” is the “original” or “source”, that is, tracing back to the “root” of something. And “transcendence” is a specific phenomenon, or the essential thing behind it. After careful study, we will find that “Metaverse” is not to explore the source of the natural universe we live in, but to transcend the tangible natural universe of phenomena, that is, to construct a mirror world of the natural universe with data, so this “meta” should mean “super”. More accurately, “Metaverse” should be “Hyperuniverse”, but now everyone has accepted the name “Metaverse” and there is no way to change it.

Extensively speaking, the Metaverse is only the continuation, deepening and development of the information revolution and information society, and it is the unified vision of the comprehensive integration of various information technologies. The concept of the information society was only put forward in 1960s, but it does not mean that it has been realized, because it is a huge and long system engineering. The information society is only a directional prediction of future technology and society, and it also needs the support of a lot of new technologies, which can only be realized step by step. If we compare the information society to an elephant, we are like blind people who touch the elephant, and we can’t touch the whole elephant at once. As a result, since the information revolution, various new information technologies such as computers, Internet, big data, artificial intelligence, blockchain, AI, AR, and VR, have appeared one after another, which have contributed to the information revolution from different aspects. We can also say that in a period of time, we can only focus on solving a certain problem of the information revolution, and it is impossible to solve all aspects of building an information society. This is like the

story of a blind man touching an elephant. Some people touch their thighs, some people touch their tails, some people touch their ears, and different blind people touch different parts of the elephant. After decades of development of information technology, we find that every part of the elephant in the information society has been touched by us, but it is still fragmented, and everyone can’t describe a whole image, that is, I think it should be like this, and he thinks it should be like that. Now we find that we must synthesize all the “parts” to form an elephant’s “body”, that is, the whole of the information society. In view of technology, some people think that the Metaverse is not a technological revolution, so is the word “Metaverse” necessary to be put forward? Some people even think that this is purely a commercial speculation, a conspiracy of capitalists. They think that when other businesses are difficult to do, capitalists create a new concept to package old technologies and cut leaks through packaging. Metaverse is not a single new technology. It is not like the previous new information technologies such as computer, Internet, big data and artificial intelligence, who has its own specific connotation, while the Metaverse includes all the information technologies in the past, which is a kind of technology integration^[8]. That is to say, from the technical elements, there is no new technology, and the technologies that make up the Metaverse are all information technologies that have appeared before. Because of this, some people think that it is old wine in a new bottle. The conceptual bottle is new, but the technical wine inside is old. Yes. In other words, the Metaverse is nothing more than creating a new vocabulary, and its technical core is all existing information technology. As a result, some people have criticized that creating a new word in the Metaverse is nothing revolutionary and meaningless, and even creating this word is redundant. It is a pseudo-concept and nothing more than a kind of hype.

From the 1940s to 1950s, that is, after World War II, digital electronic technology and digital computer appeared one after another. At first, they were mainly used for scientific calculation and real-time control, but some people realized that they

would bring about great changes in information processing. In 1960s, some people began to put forward the concepts of information revolution and information society to summarize this information revolution, and thought that the information society was coming. Later, computers moved from scientific computing to information processing. The most important thing is that artificial intelligence gradually revealed the “intelligence” of machines, and the information revolution has taken place. In the early 1980s, Alvin Toffler put forward the concept of the third wave in time and described the future vision of science, technology and society. In the 1990s, with the rise of Internet technology, some people put forward the concept of cyberspace and put forward a new way of digital survival in the future. At the end of the 20th century and the beginning of the 21st century, computers and the Internet brought about the explosion of data scale, and the information revolution of data mining and knowledge discovery appeared, so the concept of big data was formally put forward in 2012, and it was predicted that the era of big data was coming. After the big data revolution, artificial intelligence has revived. In fact, artificial intelligence is basically synchronized with computers, but there are two ups and downs in the middle. After the second decline, with the rise of big data technology, artificial intelligence rose for the third time. Later, blockchain technology appeared, which solved the problem of data reliability; VR, AR, XR and other technologies have solved the technical problem of connecting the virtual and the reality. Recently, the Non-Fungible Token (NFT) technology has appeared, which has solved the problem of trusted digital rights certificate. However, as we have said before, these new information technologies are like a blind man touching an elephant, touching a part of the elephant in the information society, but they are fragmented, thinking that they are touching the whole elephant, and even trying to replace the whole elephant with a part. Although these information technologies that constitute the Metaverse have appeared one after another, there is a lack of a concept of integrating technologies.

In fact, it is very necessary to put forward the

Metaverse, because we really need a new concept to summarize a new era. Once these technologies are integrated, there may be new emergence, such as the overall effect of $1 + 1 > 2$, so it marks the coming of a new era of technology, that is, the coming of the Metaverse era. The information society put forward in the 1960s only realized the informationization of the whole human society, but the actual development of information technology has already broken through the boundaries of human society and gone deep into the more distant space. In other words, the latest digital technology not only realizes the revolution of information technology and the ideal of information society, but also brings more profound influence. Therefore, the concept of information society has been difficult. In order to summarize the new development of information technology today, it is necessary to use a new concept with stronger generalization power to describe this broader and far-reaching future vision and depict this new era of data revolution, so the concept of Metaverse came into being. Therefore, it is not only possible but also necessary to put forward the concept of Metaverse. At present, although there is a lot of debate, the concept or idea of Metaverse has been widely and rapidly spread. The year 2021 is called the first year of the meta-universe, while the year 2022 has attracted the attention of all countries, all walks of life and all disciplines.

4. From the viewpoint of cosmology philosophy, the Metaverse is a digital parallel universe

There may be two other reasons why the word “Metaverse” should be coined instead of the word “information society”. First, western scholars, media and business circles need to create new words. The information society has been mentioned for decades, and it is not very impactful to summarize the current innovation with the information society, so a new concept is needed to express it. Second, although the current data revolution is the realization and exten-

sion of the information society, it does have something new, that is, it has expanded from social informatization to cosmic informatization. The concept of metauniverse highlights that the current information revolution not only considers its impact on society, but also needs to consider its impact on the universe, so it is necessary to look at this digital movement and data revolution from the perspective of cosmology and cosmology philosophy.

First of all, from the word formation to see the cosmological significance of the meta-universe. “Metaverse” in English word formation is the abbreviation of Meta + Universe, and “Universe” refers to the universe, so “Metaverse” is really closely related to cosmology. The Chinese word “Metaverse” literally shows its connection with the universe. Since “Metaverse” dares to use the word “universe”, I think it must be related to the universe, so we must discuss the Metauniverse from the perspective of cosmology and cosmology philosophy. Judging from the current literature on the Metaverse, it seems that no one has looked at the Metaverse from the perspective of cosmology.

Secondly, from the depth and breadth of informatization, we can see the cosmological significance of Metaverse. The information society mainly depicts the information trend and vision of the society. Later, with the development of digitalization and dataization technology, informatization became dataization, that is, data was used to represent information. Therefore, in this article, information and data are sometimes mixed. In the past, our main consideration was that information would affect the society, and how our society would become an information-based society, so we called it the information society, while Toffler called it the third wave. However, the meta-universe expands its vision to the space, not only in our human society, but also in the earth where we live and the whole space where we live.

Finally, from the perspective of parallel universe, we can see the cosmological significance of

metauniverse. We live in a natural universe that contains the sun, the earth and the moon. But some people think that there are actually many universes, and there are many parallel universes besides the natural universe in which we live. There are universes outside the universe, and these universes are in a parallel relationship, so they are called parallel universes^[9]. There are human beings on the earth, perhaps on other planets, in other parallel universes, and there may be other creatures similar to human beings. From the perspective of cosmology, especially the parallel universe, how to characterize the current Metaverse? Is it about to form a universe? Is the metauniverse really of cosmological significance?

Marxist philosophy holds that the world is made up of matter, and matter is primary. However, due to the limitations of science and technology at that time, Karl Heinrich Marx and Friedrich Engels were unable to go deep into the interior of matter and explore the basic elements or attributes of matter composition. It is not until “information” known that we know that matter also has its constituent elements or basic attributes. Norbert Wiener, the founder of information theory and cybernetics, said: “Information is the information, neither matter nor energy”^[10], what we can find that matter has three basic elements, or three-dimensional properties, namely material, energy and information. The material property of matter makes matter occupy time and space, energy brings eternal movement of matter, and information allows us to know the world. We used to focus on the two dimensions of material and energy, but we basically didn’t pay attention to the information of the third dimension. We use information when we know the world, because without information, we can’t know the world at all. However, we didn’t have a deeper understanding of information itself in the past. It was not until Shen Nong and Weiner, the founders of information theory, put forward the concept of information that information began to be highly valued. How can the information be represented? Shen Nong, Weiner and other scholars have proposed various methods, but now we find that data is the best means to represent and measure information. Therefore, with the development of informatization, people refer more to data and digitization, and mix them with information and informatization. In other words, we can digitize the

world, and we use digitization or data to describe information.

Now, what is the Metaverse in the view of cosmology? From the Marxist point of view, the Metaverse is the information mapping of our natural universe, the information reconstruction of the natural universe, and a parallel universe constructed by our human beings in the form of digital information, which can be called digital parallel universe, or digital universe for short^[11].

In fact, humans have been trying to build an artificial parallel universe for the natural universe, like a Tower of Babel. On the one hand, it can portray and understand the natural universe; on the other hand, it can reflect the innovative and creative ability of human beings. The construction of artificial universes began in ancient times, but because science and technology did not yet have digital means, so the parallel universe was constructed by means of simulation or physics. For example, the ancient people began to paint on the rock walls early on, trying to reflect various natural phenomena in the form of pictures, or to reflect various creative human imaginations. Later, when language and words became available, they began to use language and words to construct parallel universes. Sound and images have also become important means for humans to build parallel universes, and they are more graphic and vivid. However, it is difficult to accurately map the natural universe using artificial universes built by simulated physical means, and physical information is prone to information distortion in the process of acquisition, storage, transmission and processing. More importantly, it is difficult to immerse, interact and share. As a result, this simulated parallel universe has not been constructed perfectly, so it has not been viewed from the perspective of the universe, the perception of the natural universe, the construction of the universe, and the implicit creative activities of human beings.

With the advent of the digital age, digital technology can data all of the natural universe and project it as a digital universe. For example, digital twin

technology can turn everything in nature into a mirror world of everything in nature like looking in a mirror, while intelligent perception technology can convert everything, including human thoughts, emotions and behaviors, into data. Digital technology digitizes everything, essentially projecting the atomic world into the bit world. And bit data can be easily uploaded to the cloud and gathered together to form a “soup” of bit data, which we can call the “soup of data”, the soup of the universe that constitutes the digital universe. Western philosophy is generally subject-object dichotomy, while Chinese philosophy breaks this subject-object dichotomy and believes that all things are one. The philosopher Zhang even used the term “field theory” to describe the unity of heaven and man^[12]. Today’s datafication of everything and the formation of the digital universe, where everything comes together in the form of data to form a soup of data, truly realizes technically the philosophical ideal of Chinese philosophy of the unity of heaven and man and the oneness of all things.

From this, we can see that the Metaverse is a digital universe created in addition to the natural universe to reflect and portray our natural universe. More importantly, we can also connect these two universes through technology, such as VR, AR, and XR. Through these technologies, we can step into this man-made digital universe and achieve immersion, interaction and sharing. Thus, from the cosmological point of view, the Metaverse is a digital parallel universe created in addition to the natural universe. In terms of the philosophy of the universe, we have gone from living in a single natural universe to a dual universe, i.e., one that is natural and a digital universe that maps to the natural universe. Compositionally, the Metaverse includes the natural universe, the digital universe, and the digital bridge connecting the natural universe to the data universe, but we generally understand the Metaverse in a simplified way as the digital universe and its digital bridge.

4. From a mind-body philosophical point of view, the Metaverse is the digital universe brain

We know that Marxism believes that the world is made of matter, and that the long-term evolution of matter gives rise to consciousness. The relationship between matter and consciousness is the relationship between archetype and mapping, or matter is the basis, while consciousness is the human brain's dynamic reflection of the material world. In fact, in the language of computers, the relationship between matter and consciousness is somewhat similar to the hardware and software of a computer, and we can say that the world consists of both hardware and software. Our natural universe, i.e., the universe of matter, is equivalent to the hardware of a computer system. However, where is the software system for it? We know that consciousness as human software is actually a mapping of the material world and a function of the human brain. Why are humans so smart? It is because humans have a heart or brain in addition to a body. Our brain produces consciousness so that we are able to reflect, portray and think about the natural world. However, the natural universe in which we live, if we analogize it to a human being, seems to have only a body and no mind or brain. What is the Metaverse that we are trying to construct now? In fact, it is to create a reflective and thinking brain for the natural universe as the body of the universe, that is, the digital universe brain^[13].

In order to build the brain of the universe, we need a series of digital technologies, including various hardware technologies and intelligent algorithms, as well as data as mapping and mirroring. In essence, the human brain is actually a data processing system, including the physiological brain and its data as a reflection of the world. The use of digital technology to digitize the natural universe, including the human brain, and then gather data together, while artificial intelligence technology to integrate and gather big data, processing and discovering data algorithms, resulting in intelligence, so we can also call it the intelligent universe.

In recent years, many of our cities have begun the construction of city brains or smart cities, which is the externalization and amplification of our human brain, giving the city intelligence and wisdom

within the scale of the city. That is to say, the construction of the city brain and smart city limits the externalization and amplification of the human brain to the scope of the city. If we expand this scope and expand it to such a huge scope as the universe, isn't that the construction of the universe brain and intelligent universe? Therefore, the Metaverse is to enlarge the human brain from the construction of city brains and smart cities to the level of the universe, that is, to create a cosmic brain for the natural universe so as to become a smart universe. It can also be said that the cosmic brain is the data of the human brain wisdom and gathered into the digital universe, so the cosmic brain is the integration and amplification of the human brain intelligence. In this way, through the construction of the Metaverse, the natural universe has been installed by humans with cosmic-level super brains. In the digital parallel universe, data converge together to form a soup of data, and data interact with each other to form wisdom. Like the human brain, the cosmic brain may eventually become capable of thinking. Because it will gradually acquire the ability to collect, store, process, discover and innovate, and may even appear cosmic consciousness.

As we all know, our brains actively reflect the material world and generate consciousness and gradually form wisdom by processing information from the material world. Once formed, human consciousness has a certain independence and can be freely imagined and created. A digital parallel universe formed by bringing together all the data in the natural universe through digital technology. We say it is similar to the cosmic brain that humans use digital technology to create for the natural universe. As a digital mapping of the natural universe, the cosmic brain can reflect the entire natural universe, and the aggregation of data and its interaction may emerge a consciousness similar to that of a person. As a digital mirror of the natural universe, on the one hand, it depends on the natural universe, on the other hand, it has relative independence. Therefore, a digital free kingdom is formed, and in this data kingdom, all kinds of subjects can freely imagine and create, give full play to their innovative and creative abilities, and

emerge various unprecedented creative worlds. It is a kingdom of free consciousness, a kingdom of imagination, and we can call it Itopia after the name of Utopia, which can be called “Itopia” in English, that is, “Idea-topia”^[14]. This kingdom of Itopia is a kingdom of free consciousness enlarged to the cosmic scale, and it is also a function of the cosmic brain. In the world of Itopia, human consciousness, which was previously invisible and untouchable, is data-driven and visualized by means of data, intelligence, and virtualization.

Chinese philosophy believes that all things are not complete subject-object relations, but the presence of all things, and the unity of heaven and man. But in the past, Chinese philosophy has remained in the midst of philosophical ideals, lacking practical and visible paths. The construction of the Metaverse, especially the emergence of Itopia, provides a path for the technical realization of the unity of all things and the nature and man in one according to the Chinese philosophy. Through Metaverse technology, everything in the natural universe, including human thoughts, emotions, wills, behaviors, etc., is digitized and becomes an element in the construction of the digital universe. In other words, everything in the universe is mapped to the data space of the digital universe, and everything becomes the data soup of the digital universe, and coexists in the data universe space, which is the use of technical means to realize the philosophical ideal of the unity of all things and nature and man in one.

Western philosophy divides the world into subject and object, which is the so-called subject-object dichotomy and separation of the two worlds. The object world obeys its own operating laws, that is, objective laws, and is an inevitable kingdom; man, as a subject, has free will and is a free kingdom. “The Critique of Pure Reason”, one of the three major critiques of the philosopher Immanuel Kant, argues for the inevitability of the objective world. “The Critique of Practical Reason”, on the other hand, argues for the nature of human freedom. His third critique, “The Critique of Judgment”, attempts to be a bridge between the kingdom of necessity and the kingdom of

freedom. However, he felt that this bridge could not bear the heavy task, so he believed that the two kingdoms of necessity and freedom were still the Chu River and Han realm, that is, what he called the starry sky above his head and the moral law in his heart. The advent of the Metaverse era may use technological means to achieve inevitable and free grafting. Because the natural universe is a kingdom of necessity, and the digital universe is a free kingdom of Itopia. Virtual reality, augmented reality and other technologies can realize immersion, experience, and interactive functions, connecting the two kingdoms with technology.

5. From a cognitive philosophical point of view, the Metaverse is a digital innovation laboratory

With the development of digital technology, the cognitive tools and methods of the human mind have undergone major changes, because digital technology can transform the human mind into quantifiable, visual, and immersive variables. The Itopia world is a bit like our brains, where the minds can open the sky, create freely, fantasize and speculate, and transcend our living world, and are not willing to be bound by various constraints, such as the laws of nature, social laws and regulations, and ethics. For example, although we are already in the modern society and have said goodbye to the era of feudal emperors, if you want to experience the daily life of emperors, the Metaverse can realize this ideal of yours, you can play a virtual role in the digital universe, and experience the peak of power to call the shots. The human mind has a strong imagination, transcendence, and creative ability beyond reality, which is the so-called life not only has the immediate scruples, but also desire the poetry and distant places. Unfortunately, this ability is difficult to describe, learn, and communicate. More importantly, it is difficult to observe and repeat research through the laboratory like other physical phenomena and physical variables. However, the advent of the Metaverse era and the formation of the digital universe have enabled us to digitally map everything to form a digital world, and

the data of all things in the universe exists in this digital universe. Therefore, future scientific research may be data mining, data algorithms, data modeling, data simulation in the digital universe world, especially a variety of multi-dimensional, immersive, interactive simulation and experience, so the Metaverse is a huge digital innovation laboratory.

With the digital innovation laboratory of the Metaverse, human thoughts and behaviors can conduct data experiments in this digital laboratory, and the humanities and social sciences have a human thought laboratory similar to the natural science laboratory. We have already said that the digital universe is a kingdom of Itopia, like the free will of man, allowing for the free flow of ideals, free imagination and innovative creativity. What exactly is Itopia? In fact, “i” means the ideal. Our human mind is actually a kind of data. When the things of the external world are mapped to our brains, our brains can convert external things into data, and the aggregation, processing and interaction of these data may produce what we call knowledge, and the aggregation and interaction of various knowledge may also emerge so-called wisdom. The emergence of human thought is an extremely complex process, so everything becomes complicated by the participation of human beings. More importantly, people’s thoughts are still an invisible and intangible thing, although sometimes we can express it through words and describe it through words. However, it is generally difficult for us to judge whether the ideas described by these languages or words are true. People often say that we are not roundworms in other people’s stomachs, because we often don’t know what others think, and only make some guesses.

With the digital innovation laboratory of the Metaverse, we can innovate and create in this digital laboratory, and even carry out innovative practices such as creation declared by myths and religions that were difficult to carry out in the past. How did our natural cosmic world come about? How was everything in the world created? This is a mystery that is difficult to solve through the ages, and because the solution is too difficult, it has to be left to religion

and mythology. But in the Itopia world, we can use digital, realistic methods to achieve innovation, creation, and making objects in the Itopia world^[1(204–205)]. Why do today’s young people like to play computer games? Why are games like Fortnite and Minecraft so popular? It is because in this game world, players can give full play to their imagination, use digital modules to create their own imaginary world from scratch, and can also use some basic elements to create everything. Regardless of the player’s role in the real world, they can be kings or creators in the virtual game world.

The foundation of digital creation and making digital objects is data, and data is the beginning of the Metaverse, because the Metaverse is a world of bits. We who study philosophy know that the ancient Greek philosophers always wondered what the world was made of. Tangible and intangible things, such as water, fire, earth, air, infinity, and atoms, have been guessed all over again. They think that our world is made up of one or more elements, so they call it the foundation. Physics tells us that the world is made of atoms, molecules, and later traces its roots to quarks, which can be said to be never-ending. However, from the point of view of numbers, the most basic things that make up the world are the two numbers 0 and 1, the so-called bits, which means the most basic things, so Pythagoras believed that numbers are the basis of everything. If looking at the world through the lens of data, everything is data.

In the late 19th and early 20th centuries, due to the rise of mathematical logic, mathematical logicians attempted to symbolize human language by turning natural human language into logical symbols. What are the benefits of implementing symbolization? It can solve the problem of distortion in language transmission and logical reasoning. Natural language is difficult to solve the problem of information loss or information distortion in the process of information transmission, and if language is symbolized, then precise transmission and logical reasoning can be achieved. There are two central issues in the philosophy of science, one is discovery and the

other is proof. In the view of logical empiricists, experience is the source of scientific discovery and logic is the means of argument for theory. In the 20th century, philosophy gave more importance to logic, that is, to deductive reasoning, logical proof and analysis, so the 20th century was called the era of analytic philosophy, and later the linguistic turn, the philosophy of language emerged. It can be said that analytic philosophy and philosophy of language basically ruled the entire 20th century. However, do we continue to follow the path of analytic philosophy and philosophy of language after entering the 21st century? The language of the 20th century is, in fact, the natural language of our species. However, after the 21st century, there has been a shift from natural language to data language. All kinds of intelligent machines, such as Electronic computers, intelligent machines, and the Internet, can only recognize digital language, so digital language is the universal language to communicate with the whole world, and achieve human-computer communication.

As data becomes the most fundamental thing in the world, and the foundation of the Metaverse. There will be a revolutionary shift in the way we perceive in the age of the Metaverse in the 21st century^[15]. First, in terms of cognitive objects, there will be a shift from language to data: the previous object of scientific cognition was mainly the real world, collecting data and discovering laws from real-world phenomena. With the establishment of Metaverse, a digital parallel universe, we can do data mining and data discovery from the Metaverse, so the object of our scientific cognition will shift from the real world to the data world. Second, in terms of cognitive tools, there will be a shift from logic to algorithms: scientific cognition in the 20th century paid special attention to logic and to the logical relationships between various phenomena. But in the era of Metaverse, to find patterns from the huge amount of data, we mainly rely on algorithms to find the computational relationships between data through algorithmic tools. Third, in terms of cognitive approach, there will be a shift from analysis to synthesis: in the past, we used to fragment an object in order to know it, breaking the whole into parts. Nowadays, big data

technology has turned the world into a complete fragmentation until it is fragmented into the last two bits of data, 0 and 1. In the Metaverse, in order to understand things, we have to synthesize pieces of data consisting of 0 and 1, and discover problems and patterns by integrating the pieces. Fourth, in terms of scientific cognitive goals, there will be a move from scientific proof to scientific discovery: previous studies in the philosophy of science have focused on the problem of scientific proof. Whether it is logical positivism, Karl Popper, or Thomas Samuel Kuhn, what they do is the problem of scientific proof, that is, how to test and prove propositions that have already been discovered. The question is where do the scientific propositions for testing and proving come from? Popper believed that one could not rely on induction because it was unreliable, so what did scientific discovery depend on. He believed, it depends on the bold conjecture. Albert Einstein also said that there is no necessary logical pathway to scientific discovery, and therefore the 20th century philosophy of science did not study the problem of scientific discovery. Popper's famous book, "The Logic of Scientific Discovery", ostensibly examines scientific discovery, but in fact dismisses the problem of scientific discovery and addresses only the problem of scientific proof. In the 21st century, we have ushered in the big data revolution and the era of Metaverse. In this era, everything can be data, and the whole world can be converted into data. After everything in the universe becomes a world of data, we discover knowledge from this huge amount of data, data world through data techniques like mining, algorithms, modeling and so on. Therefore, scientific cognition should move from scientific proof to scientific discovery. Fifth, in terms of cognitive outcomes, there will be a shift from causality to correlation. In the past, we always emphasized the law of cause and effect, causality. In Metaverse time, what is more important is correlation. As long as there is a correlation between the two, it is considered that there is a certain connection between these two phenomena. From the correlation of the data, we can find something useful as long as it is relevant. In the

view of Metaverse epistemology, data mining, algorithms, simulation, and knowledge discovery are what we will focus on in the future philosophy of science. We can say that the Metaverse, the laboratory of ideas for digital innovation, is ready for the experimental conditions for the data shift of scientific cognition.

6. Conclusion

The concept of Metaverse has just been introduced, and many people still understand it only at the literal and technical level, so it is difficult to deeply understand what the Metaverse is, and this has led to various debates. To truly understand the Metaverse, we must use a philosophical perspective to see through its philosophical nature. This paper analyzes what the Metaverse is from four perspectives: the extension of conceptual connotation, cosmic philosophy, philosophy of mind and body, and cognitive philosophy. From the connotation and extension of the concept, we can see clearly the technical nature of the Metaverse, that is, the Metaverse is nothing but a comprehensive integration of various information technologies in the past, so the Metaverse is an information technology cluster. From the perspective of cosmological philosophy, the Metaverse is an artificial universe, a digital parallel universe created by humans with massive data intelligence. From the perspective of mind-body philosophy, the Metaverse is the cosmic brain that human beings have wisely created for the natural universe, and the natural universe and the digital parallel universe constitute the cosmic body and the cosmic mind. In terms of cognitive philosophy, the Metaverse provides the data basis for the data steering in scientific cognition and serves as a digital innovation laboratory for humanity. Therefore, the Metaverse is like a multifaceted God, and we can see its different facets and essence from different perspectives.

Conflict of interest

The author declares no conflict of interest.

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