Analysis of the Realization of the Rule of Law Ethics in Meta-cosmic Relevance

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Abstract. Virtual reality has facilitated the metaverse, and it has become the subject of much hype in various industries. However, under the mode of "immersive interaction", whether the metaverse can operate, where its social properties should be based, how to realize the rule of law and ethics in the digital social world, and whether the virtual can coexist with reality are all questions that need to be considered. In this paper, the author will discuss the social infrastructure of the metaverse and its possible negative impacts through a dialectical methodology, and focus on the symbiotic relationship between the "digital twin" world and the real world. Ultimately, it is clear that the governance of virtual worlds requires the development of regulations and assessments that map to the real world, taking into account the legal issues that may arise in both the macro and micro dimensions.

Keywords: immersive interaction · virtual reality · meta-universe · legal system · multiple co-governance

1 Introduction

There is currently a lot of hype about the metaverse concept both at home and abroad, and the market expects a lot from the metaverse field. However, before the metaverse can be initially put into blockchain use, countries are wary of the interference of the virtual world with the real-world social system. Qingyu Zhang suggests that in the metaverse, each user cannot live as he or she wishes; otherwise they will have disputes with each other, and people are not absolutely rational. For this reason, he proposed a "two-wheel-driven application of rules and compensatory mechanisms" to govern the metaverse in a universal sense, with internal control as the primary and external control as the secondary [1]. That is, different paths of social control in reality are used to play an indispensable role in different dimensions, thus reflecting the dominant idea of metaverse governance [2]. Therefore, it is necessary to improve the system of digital economic institutions and the rule of law to ensure that its ethical aspects do not cause some irreversible harm to society.

This paper is dedicated to exploring, through deductive and dialectical methods of reasoning, what kind of rule of law perturbations the meta-universe would produce at the digital, reality, and interaction mapping levels and what kind of thinking scholars

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should use to weigh the initial rule of law system. While regulating the scope of certain restrictions, it is encouraged to be able to retain the environment for free development. In this way, establishing red lines and regulating the rule of law will both better enhance the user experience during the embryonic metaverse period and enable greater opportunities for development within a discerning market environment. For countries with strict legal boundaries, the establishment of a rule of law system can help them capture market share more consistently. For the new generation of youth, the metaverse can cultivate their intellectual insights into a diverse world and normalize virtual reality technology, turning it into an age-old dividend for the next generation.

2 An Introduction to Immersive Interactive Media

2.1 Definition

The "immersion" experience, which sociologist Mihaly Csikszentmihalyi calls "flow", is a state in which a person completes an activity or content without being disturbed by any external information and is able to remain fully engaged in the current task. The state of being fully engaged in the current behavior without being disturbed by any external information. This concept is mainly realized through visual perception, isolating the experiencer from the outside world as much as possible. With the development of technology, people are no longer satisfied with the mental perception of indulgence but seek more realistic "interaction", and the development of touch, pain, smell and other comprehensive development, so the virtual reality technology was born. The "immersive" content vehicles are diverse, and can be a beautiful painting, a textured movie, or a replica of a specific historical situation.

2.2 Metaverse

The concept of a "metaverse" was first introduced in the 1992 science fiction novel Snow Crash by American author Neal Stephenson, as a virtual world parallel to the real world, and later conventionally categorized as a fusion of data, cloud computing, AI, and other algorithms. In its IPO prospectus, Roblox, the first metaverse company, stated that a true metaverse should include the following eight key characteristics: identity, friends, immersion, low latency, diversity, anywhere, economic system, and civilization [3].

As a cyberspace with free participation and high immersion, the metaverse needs to meet the following conditions: (1) identity. Users have relatively definite virtual IDs, identities, and images to participate in various activities. (2) immersion. Users achieve simulation and immersive participation through VR, AR, and other devices. (3) freedom. Users have freedom of interaction and freedom of creation, and can make subjective and active transformations of the virtual world. (4) The economic system. Economic system has a certain degree of independence but is also interconnected with the real economic system [4].

The year 2021 is also known as the Year of the Metaverse Due to the impact of the new crown epidemic, the online migration era provides an opportunity for the metaverse to flourish, with domestic and foreign capital speculating wildly and the media scrambling

to report on it. In a way, based on the "digital twin" technology, the metaverse is a way to help human beings verify whether the new virtual society created by them has the possibility to function in a realistic sense.

2.3 The Basic Social Structure of Metaverse "Immersive Interaction"

2.3.1 The Basic Landing Point of the Metaverse—The Game

Since the metaverse is only a virtual digital society concept that has yet to take shape, its develop ability in different fields lays down the diversity of its underlying constructs, and the easiest of them to realize virtual sandbox operations is the field of video games. Although web series and movies are also breaking the rules by integrating various technical means to launch immersive and interactive episodes that dominate the narrative, such as interactive episodes, by appealing to the immersive participation of the audience [5], their freedom is ultimately difficult to match that of the gaming industry.

While some films are devoted to the philosophical exploration of the nested meta-universe concept of "play within a play", they also put the narrative perspective on the free and immersive realm of "game". For example, 2018's "Top Gun" and 2021's "Runaway Gamer" both focus on whether virtual reality in games can become a "second world" with a deep or shallow practical narrative.

2.3.2 Nested Social Constructs

The metaverse is a collection of the virtual world, the real world, and the interaction between the two. The initial realization of the virtual worlds is reflected in the presence or absence of macro perspective of large IP narrative structures embedded with sensory technical anthropomorphism. The former allows users to complete their sense of identity at the moment of entering the virtual world, allowing them to fully engage in the various scenarios created for them digitally. The latter allows users to "interact" without questioning their identity during the "immersion" experience.

In other words, sensory anthropomorphism is an important factor in maintaining the sense of "immersive interaction", which has led to the innovation of related devices in the market. The virtual world is only a sub-world of real life, and property security and real identity still need to be assessed in real life. So, if the metaverse is the link between "virtual" and "real", it no longer functions as a game or other simulation scenario in and of itself, but as an all-encompassing ecosystem in and of itself.

3 Argument for the "Reality" Dimension of the Meta-universe

As we all know, the rules of operation of any basic society rely on the rule of law for worldview construction, and the rule of law can be both derived from the thinking of the real world and formulated according to the laws of operation of its internal world. The three governance principles put forward by Professor Cheng Jinhua are the most extensive set of methods at present. That is, there are three feasible governance principles for the social structure of the meta universe; that is, the rule of law provided by the real world for the development of the meta universe, the co-governance when the real world

interacts with the meta universe, and the autonomy of the construction and operation of the internal ecosystem of the meta universe [6].

3.1 Dialectical Thinking of the Three Governance Principles of the Metaverse

Based on the current legal restrictions on games and film industry, the absolute control of the real world, the combination of the legal consensus at the interactive level and the spiritual autonomy at the deep core of the virtual world may be the best answer to the rule of law in the meta universe. However, if adding the international thinking, the realistic consideration of the metaverse is not simply a consensus between the real and the virtual. Each country has separate and mutually exclusive legal norms and specific national conditions. After determining the means of governance, the next step in the study must be to establish "who" should be recognized as having the right to govern the legal system of the metaverse. Whether mankind needs to extend the borders of the real world to the meta universe to implement separate autonomy, or to establish a similar "meta universe United Nations" to implement co governance, or a unified set of legal systems recognized by all countries to implement the rule of law. This is the next contradiction that needs to be solved in the rule of law in the meta universe.

3.2 Social Construction of "People-Oriented"

Whether the metaverse should be dominated by "technology" or "people" is a hotly debated topic. Professor Cai Wei's team based based their work on the following four thoughts: (1) accessibility, which means that people around the world can safely access the metaverse without being affected by geographic location and epidemics; (2) diversity, which means that people with different hobbies, ideas, and types of people can meet, study, and work in the same space at the same time; (3) equality, which means that avatars can be used to eliminate discrimination in the real world arising from factors such as race, color, gender, disability, and poverty; (4) humanity, which means that cultural heritage can be preserved through virtual worlds, etc. A three-level architecture is proposed: infrastructure, interaction and ecosystem [7].

The essence of the metaverse remains an ecosystem independent of the spirit of the real world, and its thrust remains human-centered and human-serving. The metaverse relies on immersive realism, ubiquitous network access, interactivity, and scalability that are closely related to its social properties [8]. Both technology and the rule of law are ultimately regulated around the center of "human-centeredness".

4 Possible Harm Caused by the Lack of Rules in the Metaverse

4.1 Misbehavior of Individuals

4.1.1 Ethical Level of Misconduct

The metaverse creates an unfettered environment for users to break through the barriers of the real world and swim in the inner world created by the digital twin. However, some of the selfishness, greed, lust, and fighting nature that may have existed in the

early stages of human development may be reawakened. In the absence of specific regulations, many of the games of the past were filled with violence and pornography, such as the classic "Grand Theft Auto" series developed by Rockstar Games, which featured socially marginalized characters chasing each other around major cities in cars, killing and looting. In 2016, many female users of the cross-platform virtual world AltspaceVR complained about the discomfort of other players putting their faces or hands close to their bodies when the mode was changed to private space.

In 2021, during Meta's testing of the "Parallel Worlds" branch, one tester also claimed to have been sexually harassed by an unknown user [9]. Prior to real name registration, the system was unable to track the population of users with moral misconduct issues. Moreover, one of the major differences between the metaverse and other virtual worlds is the change in blockchain technology. Even if personal property is stolen or violated, there is no law that says the game has the right to punish the "avatar" accordingly. So many personal moral failures may lead to the subversion of the fundamental rules of the metaverse.

4.1.2 Confusion at the Ethical Level

At the ethical level, i.e. the level of "human contact and interaction", the current AR and VR of the meta-universe can already solve the problem of switching between virtual characters and real ones. However, it is also a problem whether acquaintances or public figures in reality will infringe upon the portrait right of others. For example, if I use the image of LeBron Raymone James, I often commit fouls and provocations in a virtual basketball game. The game is broadcast live on major platforms. Whether it causes other users to dislike or even slander "James" to different degrees in the two worlds, and whether this in itself will damage the star's personal reputation and portrait rights, whether it will have an impact on his future career, and whether it will breed racial and gender discrimination are all within the scope of consideration.

In addition, a nation may vilify the political or star figures worshiped by another nation for some reason, and some war fanatics or antisocial personalities may imitate the Nazi image and cause negative communication, etc. At the level of the recipient, it is impossible to determine whether the person has a blood or social relationship with the impersonator, and thus there is no way to know whether the impersonated person has authorized the image created by the impersonator in the virtual world, which also hinders the implementation of the relevant legal norms.

4.1.3 Privacy-Level Leaks

As virtual reality applications become more popular and realistic, meta-universe platforms collect vast amounts of user data. The metaverse threatens privacy in new ways. From understanding how people move their bodies to understanding neural activity patterns, it is recording private characteristics [10]. Giant industries in technology such as Amazon, Apple, Google, Facebook, and Microsoft have been advocating password-free physical authentication [11]. Currently, most login devices are able to authenticate by fingerprint, face recognition, or PIN. The metaverse may continue with more biometrics, such as audio and iris recognition, being used to authenticate identities [12].

However, more information entry represents a higher risk. Even the relatively mature Internet technology has not yet launched a perfect scheme. How to ensure that a world with high freedom and high interaction can protect the privacy of users?

4.2 The Loss of Control of Social Patterns

4.2.1 Out of Control of Social Economy

How to establish the value associated with virtual currencies and how the market is going to set up a monitoring system are also issues that need to be considered. The reason why virtual currencies in various games were profitable in the past was that some virtual goods did not actually work in reality. The realistic transactions such as real estate, factories, and foundations that may be acquired in the metaverse can be realized in the metaverse in an extremely realistic way. A combination of past experience shows that the emergence of Bitcoin (virtual crypto digital currency) alone has led to numerous acquisition and selling frenzies in the market coin world. Not to mention that bitcoin does not have an independent economic value. The same reference value as Bitcoin, similar to the much earlier NFT (non-homogeneous pass-through), could easily have been a bubble economy and a misleading value to the economic market at the time. Therefore, it is prudent to first establish the form and value of the currency first, and then test its market operation mechanism and market regulation system step by step. Only then can we hope to bring the dividends of the era of the meta-universe to the real economy.

4.2.2 Distortion of the Electoral System

Virtual images and social operations make it difficult to confirm whether users are capable or whether their psychology is sane enough to implement a legitimate electoral system. In this regard, Yu makes the following four arguments. Firstly, security vulnerabilities and technical defects are likely to lead to governance failure and new anarchy. Secondly, the lack of decentralized trading and supervision will violate the legal norms of the real world and sovereign states. Thirdly, the "direct democracy" and "full participation" implied by the voting mechanism do not rule out a very low turnout. At the same time, the right of property motion will also lead to vote manipulation and oligarchy in the virtual world. Fourth, self-help and border-less global governance, on the one hand, bring about the loss of atomized society and citizenship. On the other hand, it also leads to the rapid digestion, game, and non authoritarianism of public affairs governance [13].

4.2.3 Trade-offs Between Countries

As already mentioned above, some countries may have conflicting rules of governance due to differences in legal behavior. In fact, there are more international pitfalls to be avoided than that. If to meet the "immersion" needs of the full simulation of the real structure of each city, then homeland security cannot be guaranteed. A city's streets and alleys will be reproduced for the people of other countries. Likewise, different countries, and even states and cities, have different basic rules of law. Since the nature of the metaverse is to create a freer space with many tandem users between countries, there is no definitive solution to transnational crime.

4.2.4 Imbalance of Virtual Reality

Unlike real life, virtual characters never feel fatigue, and the "twin world" can have infinite depth in time and space. The self-representation of the virtual character in the virtual environment created by the metaverse affects the user's real behavior in the real world, which is called the "Proteus effect" [14]. This effect may cause people to substitute their roles in the virtual world into real life, but the material aspects of the real world may not be able to satisfy their needs that can be easily achieved in the "twin world".

As a result, some users may escape from reality and become overly dependent on the virtual world, i.e., deeply trapped in the digital illusion and trapped by the deep-seated digital Narcissus effect. In "Top Gun" directed by Spielberg, the metaverse is called "Oasis", which is a hope after real life is presented as a decadent desert, and it gives people a stronger identity with the virtual image than in the real world. But in this way, the virtual and the real will be inverted. The reality of work, transportation, and construction may be paralyzed. The real-world economic system, which is the mother of the metaverse, will be devastated.

5 Preliminary Concept and Study of Metaverse-Related Regulations

5.1 Real Name and Post Restrictions

For a good deterrent effect and to reinforce community norms, we need to strictly implement age segmentation with real ID tracking. According to Dionisio, the metaverse cannot be separated from the underlying features of psychological realism, ubiquitous access and identity, interoperability of content and experiences across virtual environments, and extensibility [15]. It is reasonable to believe that the establishment of identity protects the majority of the population from unknown risks. Similarly, to prevent the digital dark society phenomenon that results from people's excessive addiction to virtual worlds, the so-called "online jobs" in the metaverse should be strictly limited by imposing hourly limits on games and "pay-to-play" in daily activities. This would provide users with a "paid" experience while highly reproducing real-life scenarios, making people aware that they can't do whatever they want in the virtual world. This allows users to put the backbone or other half of their lives into real life, effectively avoiding the digital Narcissus effect.

In this way, the focus of digital communication in human society returns to the essential philosophical inquiry of human beings, responding to the logical origin of who I really am, what I am doing, and what I want to do, making digital space communication more humane and conforming to human habits and behavioral habits [16]. In addition, human beings can also build a bridge between virtual money and the real economy by this means to achieve the "effective conversion" mentioned above, which can also solve the problems of bubble economy and currency devaluation.

5.2 Progressive Development and Professional Assessment

Although the ultimate goal of the metaverse is to achieve multiple hybrid maps of consciousness and reality, such a complex "immersive interaction" system needs to be

polished at multiple levels (rule of law, technology, international recognition, etc.) as mentioned above. Therefore, the initial metaverse infrastructure should be based on a relatively single and mutually independent activity mechanism, and the activity should be green and healthy. Within this scope, personal injury and controversial images (bloody violence, obscene pornography, etc.) should be temporarily avoided. It is unrealistic and risky to rush to develop functional and integrated communities in an era when metaverse technology has not yet changed. Green activities can include sports, parties, education, educational games, basic material needs, etc. That is, to create a safe embryonic environment while developing relevant technologies and strengthening laws and regulations, and then update the content in stages to enhance realism and fun.

For some psychopaths, people with mental illness, people taking psychotropic drugs, people with split personality disorder, and other people with high risk of aggression to the meta-universe filter, a file screening system can be implemented in terms of real name authentication, and the real world should also be a factual record of the different stages of such high-risk people. For potential high-risk groups, professional virtual tests can be implemented, and the written aspect of such tests can be jointly developed by professional psychologists and sociologists. The field test can be implemented in the meta-universe to strengthen their sense of identity through highly immersive content and create a series of scenarios that they may encounter in their daily lives, such as whether they can maintain their sanity or perform good deeds in the face of large amounts of lost property, women and children being victimized, people being injured, and personal or collective reputation being damaged. After a series of tests, the user's behavior or language in the virtual world should also be fed back to the background data in real time to ensure the stable operation of society.

5.3 Sub-servers for Management and Maintenance

The metaverse system allows for hierarchical server building between countries and countries, or even between different regions within a country. Before the issues of autonomy, shared governance, and rule of law were regulated, cross-server management was a comprehensive approach to governance that could take into account multiple countries operating together. At the beginning of the metaverse, everyone conducts activities or socializes in the region according to the existing traditional legal concepts within the region, and everyone abides by the initial rule of law set by their respective countries. As for cross-region exchanges or activities, users can choose other cities' more iconic attractions (which the country the city belongs to has allowed to open) for shuttling, daily activities, and socializing. However, users are not allowed to perform actions or speak in other borders that may cause controversy (the system screens for sensitive words). This ensures the privacy of each country's territory and also ensures that the countries are at peace with each other.

At the same time, an international server should be set up, where each country sends a certain number of volunteers (decided by lottery) to live and engage in a high degree of freedom, creating various scenarios that may cause friction between users, and following up the results of the experiment in real time. At the same time, the international service should set up an organization similar to the "United Nations of the metaverse" for absolute jurisdiction, so as to verify the feasibility of "shared governance". As a

result, the international problems and rule of law conflicts that may arise in the early stages of the metaverse can be alleviated to a certain extent.

5.4 Sentencing at the Criminal Level

If a user is traced to an exact legal violation, it is a difficult problem to find the entry point between the meta-universe and the real world and to sentence him/her accordingly. There are two possible conjectures that can be argued. The first one is "respective punishment". That is, an individual who breaks the law in the meta-universe does not affect its users in the real world itself. However, this conjecture can be rejected because it cannot serve as a deterrent in the real world. After all, the real world is the mother of the meta-universe, if only in the virtual world. The "death penalty" in the meta-universe is to block the number of treatments, which can not compensate for the loss of personal property in the real world. The second is the "effective conversion", which can be through the virtual currency of the meta-universe and the real world economic benefits of the same conversion, but also to develop the relevant laws to carry out a certain conversion of criminal liability. After all, how to carry out equal and effective conversion of liability is the key to whether the metaverse can operate in parallel with the real world.

6 Conclusion

In summary, the metaverse, as a representative concept of the advent of the digital age, is testing the rule of law system of pluralistic governance in human society. Before the metaverse is put into more development and testing, researchers should argue the significance of its realistic level, consider the possible hazards it may lead to, and launch corresponding measures to manage it in conjunction with governments and enterprises to avoid disturbing realistic problems caused by many factors, such as individual level, regional level, and international level. These corresponding measures can include sub-servers for cross-regional management; the development of strict real-name post assessment; the creation of a secure embryonic environment; the introduction of penalties for criminal aspects, etc.

At present, the metaverse has not yet formed a physical commodity or experience, so it is not possible to conduct a large sample of experimental investigation at present, and we can only use deductive reasoning and dialectical method to conduct research. In the future, it is believed that more rule of law ethical tests will be put into the meta-universe system, and large samples will be compared and deduced through the differences between different people and different countries, so as to better stabilize the harmonious co-governance of the real world and the virtual world.

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References

1. Zhang Qinyu. The rule of rules in the metaverse. Oriental Jurisprudence (02) (2022) pp. 4–19.
2. Ren Jiantao. Artificial Intelligence and Social Control. The Journal of Humanities, No. 1, 2020, pp. 33–44.
3. Zhao, G., Yi, H. H., and Xu, Yuan-Chong. Metacosmos, China Publishing Group, China Translation Press, 2021, p. 13.
4. Xiao, Chaowei, Zhang, Minwei, Liu, Helin, Qin, Bo & Huang, Bo. Spatial reconstruction analysis of the "metaverse". Geography and Geographic Information Science (02) (2022) pp.1–9.
5. Xia Ruxue, Liu Shaowen. Dominant narrative-immersive interaction-fictional reality: the deep integration of social media and web drama, New Media Research, 7(22) (2021) pp.75–77.
6. Cheng, Jinhua.The rule of law principle of metaverse governance [J]. Oriental Jurisprudence, (02) (2022) pp.20–30.
7. Haihan Duan, Zhonghao Lin, Jiaye Li, Xiao Xu, Sizheng Fan, &Wei Cai. Metaverse for Social Good: A University Campus Prototype, Proceedings of the 29th ACM International Conference on Multimedia, 2021, pp. 153–161.
8. Dionisio J D N, III W G B, Gilbert R. 3D Virtual Worlds and the Metaverse: Current Status and Future Possibilities. ACM Computing Surveys (CSUR), Vol. 45, No.3, 2013, p.34.
9. Joshua Hansen., Virtual Indecent Assault Time for the Criminal Law to Enter the Realm of Virtual Reality, Victoria University of Wellington Law Review, Vol. 50, No. 1, 2019, pp. 50–57.
10. Falchuk B, Loeb S, Neff R. The Social Metaverse: Battle for Privacy, IEEE Technology and Society Magazine, Vol. 37, No. 2, 2018, p. 53.
11. LUPU Viorel. Web Authentication:No Password; Listen and Touch. Advances in Science Technology and Engineering Systems Journal, Vol. 4, No. 1, 2019, p. 85.
12. Boddington G., The Internet of Bodies-Alive, Connected and Collective:The Virtual Physical Future of Our Bodies and Our Senses, AI & SOCIETY, Vol. 36, No3, 2021, pp.2–6.
13. Yu Jingdong, "Metaverse: Political Order Reconfiguration and Challenges in a Changing World," in Exploration and Controversy, No. 12, 2021.
14. Yee N, Bailenson J., The Proteus Effect: The Effect of Transformed Self-Representation on Behavior. Human Communication Research, Vol. 33, No. 3, 2007, p. 271.
15. Dionisio, John D N, William G B III, and Gilbert R. "3D virtual worlds and the metaverse: current status and future possibilities", ACM Computing Surveys (CSUR) vol. 45, no.3, 2013, pp.1–38.
16. Li H, "From the change of communication mode, is the meta universe just an upgrade of digital space?", 2021, https://netfreeman.com/2021/08/20210811053630132O.html.?