Research on Ethical Risk Governance of the Metaverse

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Abstract: The metaverse is a cutting-edge technology ecosystem that has emerged to further promote the digital transformation of social life. Its core feature is immersive three-dimensional experiences, attempting to create an independent parallel space separate from the physical world. It represents an innovative and disruptive moment in the evolution from two-dimensional spaces. While the virtual platform of the metaverse creates favorable conditions, it also poses complex and controversial social and ethical risks. This paper analyzes the inherent ethical concerns of the metaverse, scrutinizing its ethical issues, and proposes pathways to mitigate its social and ethical risks, safeguarding the metaverse's fairness and rationality, promoting the virtuous rehabilitation of virtual communities empowered by the metaverse and avoiding it becoming a tool of capital, technology, and domination, enslaving and alienating humanity.

1. Introduction

Throughout the history of human thought, there have been numerous conceptualizations similar to that of the metaverse, yet most are mired in idealistic fantasy. The metaverse, on the other hand, seeks to map the real world onto a virtual world with the intention of creating a truly existent space. In the early 20th century, Han Minqing proposed the concept of the "metaverse" from a philosophical perspective. Since the advent of the metaverse's inaugural year in 2021, consensus on the deeper levels of the metaverse has gradually formed from prior research. The information ethics of the metaverse era will pose new challenges, calling for the rectification of cognitive biases in information ethics to guide its healthy development [1]. This paper explores the technological and ethical risks posed by the development of the metaverse and seeks to promote its healthy and sustainable development from the individual, market, and societal perspectives under the guidance of ethical risk theory.

2. Prediction of Possible Risks of the Metaverse

The concept of the metaverse is gradually permeating various sectors of society, and is expected to entail a profound transformation in people's way of life and production. Although metaverse technology offers convenient and intelligent solutions for human life, it also carries associated risks, emphasizing the dual-edged nature of technological progress.

2.1. Individual Cognitive Risks

The metaverse constitutes the integration of cutting-edge science and technology, enabling individuals to experience a three-dimensional sensation through audio, visual, and tactile perception. This platform breaks away from the physical rules of reality as we know it, allowing for the redefinition of a vast majority of production and living styles within a virtual world. Within the metaverse, individuals engage in immersive interactions that allow them to experience sensations similar to the real world. However, this virtual space also includes "inherent risks and uncertainties", [2] both in terms of physical and ethical risks. As people immerse themselves in the metaverse, they satisfy their psychological needs, while disregarding the "reality" of the physical world. As Descartes argued, "I think, therefore I am". Simply thinking can prove existence, with sensory perception becoming the primary marker of self-existence, thus promoting a subjective idealism that could ultimately lead to society's obsession with the virtual parallel space created by the metaverse. As people rely on the subjective experience of sensory perception to define their existence, they may become immersed in the virtual parallel space of the metaverse, leading to a potential confusion between the virtual and real world. This confusion could exacerbate existing social and psychological issues, as the metaverse may create uncertainties regarding the boundaries between reality and virtuality. The essence of the universe lies in its social nature, rather than its virtuality. [3] The blurred boundary between the immersive and the real further complicates matters, as people may become addicted to uncertain virtual rewards or praises, and create a new set of rules that challenge the conventional physical laws of the world. The metaverse has the potential to liberate human perception from its reliance on the objective material world, and push beyond the boundaries of the virtual and real.

2.2. Market Operation Risks

The rise of the metaverse has been greatly facilitated by the immense power of capital. The metaverse system requires a vast interconnected network of users, a multitude of standardized docking systems, and the operation of large-scale infrastructure. However, the influx of powerful capital into the metaverse, from its inception, has given it inherent monopolistic features. Within this space, all social behavior leaves a digital trail, which has the potential to be stolen and used to manipulate and exploit members of society, leading to the emergence of a new form of social inequality. Despite the metaverse's essence as a progression in technology, it portends a future where human society may be dominated by technological revolution. At the present time, the challenges related to the interface of technology and the metaverse require management and manipulation by those in positions of leadership. It remains to be seen how this situation will develop, as the management of the metaverse could potentially lead to extreme autocratic rule. Moreover, the metaverse's concentration of wealth and data poses a grave challenge to the protection of users' digital privacy and digital property rights. The risks associated with the metaverse originate from factors such as the collapse of consensus, the expansion of user experience, virtual generalization, technical deficiencies, insufficient cognition, outdated ideologies, and poor regulatory standards.[4] Furthermore, the metaverse has the potential to disrupt existing wealth distribution systems and exacerbate real-world wealth disparities. The technological prowess within the metaverse may evolve into a tool of monopolistic control for tech giants, leading to the control of capital manipulation and industry monopolization in a new, veiled space.

2.3. Social Development Risks

The capture and tracking of every individual's information by big data, coupled with its intrusive

dissemination methods, will inevitably subject people's words and actions to severe interference. The societal control that technology and the forces behind it can exert is difficult to predict, and people may find themselves lost in the virtual world. As Sunstein elucidates in Information Utopia, because the public's information needs are not all-encompassing, they are only willing to focus on the content of their choice, which can trap them in an "information cocoon". As a cutting-edge technological ensemble, the metaverse's backend system will employ algorithms to understand users' preferences and filter out heterogeneous information, transmitting the content favored by its managers. Over time, people may be solidly enveloped in the information being conveyed by the managers, and lose their right to choose and learn independently. Ultimately, this will lead to people's loss of autonomy in thought and judgment, becoming individuals who lack the ability to think for themselves and make independent decisions. The one-dimensionality that technological development in industrial societies has brought about will increasingly intensify in the future. People will become immersed in the illusions of virtual reality, information overload, and freedoms that lack critical spirit. They will blindly accept reality, thereby continually weakening their resistance. Any action that limits an individual's freedom or obscures their subjectivity and brings about hidden technological control is a form of anti-life modernization that demands vigilance. [5] Ultimately, the metaverse is just a means for humans to achieve a better quality of life, and it demands constant follow-up and progress from humanity. The virtual world requires ongoing investment from the real world to maintain its existence and updates. If humans become one-dimensional in the virtual system, the system will be unsustainable. Although they may enjoy a good life in the virtual world, it will result in a sense of emptiness in the real world and the inability to achieve self-awareness and consciousness.

3. The Paths to Mitigate Ethical Risks in the Metaverse

In response to the ethical risks associated with the emerging metaverse, this study advocates a dialectical approach to acknowledge the inherent duality of metaverse technology. Based on this understanding, this paper suggests addressing these risks through a three-dimensional approach, which focuses on challenging the dimensions of cognition, market, and society.

3.1. Mitigating Cognitive Risks

The high degree of freedom and openness inherent in the metaverse often leads individuals to develop inaccurate perceptions of this virtual world. Oftentimes, people attempt to remedy the shortcomings of reality by immersing themselves in subjective virtual experiences, resulting in a blurred division between materialism and idealism. Therefore, maintaining a clear differentiation between the metaverse and reality is key to sustainable development. It is imperative to emphasize the fundamental role of real-life experiences in shaping our understanding of the virtual world, which should be viewed as a supplement to and reflection of reality, thereby encouraging a mutually beneficial relationship between the two worlds. However, the highly immersive nature of the metaverse also poses significant cognitive challenges, potentially impacting one's ability to discern between the two worlds during transitions. [6] To mitigate such challenges, individuals must be encouraged to return to reality and view the virtual world as an extension of reality, while enhancing real-life social interactions to reduce virtual immersion. Moreover, to promote the development of a more comprehensive understanding of the metaverse, more intensive efforts should be directed towards the development of an industry-oriented metaverse to leverage the benefits of modern technologies, optimize resource allocation, and accelerate traditional industrial transformation.

3.2. Mitigating Market Risks

As the metaverse continues to surge in popularity, its corresponding rules and regulations are still in the exploratory phase. There is a need to remain vigilant against capital speculation and other illegal activities that may arise from this new virtual world. The ultimate form of digitized cultural heritage within the metaverse is still unknown, leaving potential ethical risks and the risk of a capital bubble. [7] Therefore, in the current development phase, industry and market players should maintain rationality and increase the comprehensive legal regulation and industry supervision of virtual society to minimize risks, with rule of law as the guiding principle. This will ensure a safe and sustainable development of the metaverse, while prudently undertaking regulatory efforts. Furthermore, while guarding against and resolving potential social risks in the metaverse, capital and technology should be encouraged to actively participate in its long-term development. It is also vital to conduct a deeper level of ethical inquiry regarding the value of technology. New ethical guidelines for the metaverse must be developed to shape a beneficial and sustainable metaverse civilization environment. [8] From an ethical perspective, technology should prioritize people as the highest standard of technological value, by integrating traditional ethical standards and basic educational values. This means "moral materialization"-viewing technology as an object embedded with value, and then using the design, manufacture, and popularization of technology to achieve moral goals. [9] By constructing a new cultural model through ethical guidance, technology can be directed towards the positive path, constructing a reality of shared governance through diversity, openness, and cultural interdependence. A dual approach should be taken to ensure ethical guidance from both legal and moral standpoints, guiding the design of the metaverse system with ethical principles and strengthening the regulatory management of laws and regulations for external systems.

3.3. Mitigating Social Risks

Within the metaverse environment, it is incumbent upon every individual to engage in continual learning, reflection, and critical thought, enhancing their self-awareness and enabling timely adjustments to their lifestyles in the face of alienation. The technology of the metaverse ought to be characterized by an outward-looking and exploratory approach, promoting the diversified development of humanity, rather than guiding individuals towards an excessive focus on self, trapping themselves within a self-imposed "information cocoon". Respect for the sovereignty of individuals should be central to the development of metaverse technology, preventing the problem of excessive freedom engendered by an over-reliance on virtual space, and allowing people to exercise their right to freely choose from among relevant products and services. Technological progress must be aligned with human values, incorporating both rational and emotional needs into the promotion of practical capacity. [10] It is essential to recognize that virtual society is not a "utopia" but rather a form of media. Only by grasping the essential characteristics and underlying correlations of real and virtual forms of existence can a more comprehensive, diverse, healthy, and sustainable social model be constructed. The development of technology must be guided by reason and benevolence, excavating the inner motivations of individuals, enriching the form of society, and ultimately realizing multi-dimensional development.

4. Conclusions

The metaverse represents an entirely novel form of human storytelling, pushing humanity towards an unprecedented new stage. As we promote the development of the metaverse, we must also prioritize the challenges and risks posed by virtual social security. We need to consider the

alienation that technology can bring and the reasonableness of social application, while also being wary of the impact of the metaverse technology wave, including the influence on individual ideology, the harm to market monopolies, and the potential risk to social sustainability. In this regard, we must prioritize the human element in our approach, raising moral standards, ensuring the implementation of relevant rules and regulations, and improving the self-awareness of individuals to build a path forward. The collective efforts of stakeholders can be directed towards this goal, with diverse funding and constructive collaborations aimed at creating a platform devoted to benevolent technology.

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