



# Exploring Considerations for Developing Metaverse Ethical Guidelines

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## Abstract

**Purpose:** There are already hundreds of millions of users of the Metaverse platform, and within a few years, it is expected to develop into a stage for new economic activities with huge industrial ripple effects due to the size of users. The purpose of this study is to derive considerations for the development of metaverse ethical guidelines. **Research design, data, and methodology:** The concept of the metaverse was examined through various opinions of industry and experts on the metaverse, and literature related to metaverse ethics was analyzed in the Korean journal database. **Results:** Six issues were identified through the existing research. (1) Establishing a unified definition of metaverse (2) Necessity of establishing ethical principles considering the operator (3) Personal information protection and privacy (4) Expression in a virtual environment (5) Copyright and intellectual property rights of creations (6) Virtual economy and fairness of trade. **Conclusions:** Metaverse ethics will be developed and implemented in a form and method different from the real world, but basically, continuous discussions on ethical rationality are needed in the process. In addition, since the ethical judgment in the metaverse environment accompanies cultural differences and epochal changes, it is necessary to focus on metaverse ethics cases.

**Keywords :** Metaverse, Metaverse Ethics, Ethics Guidelines, Ethical Considerations

**JEL Classification Code :** E44, F31, F37, G15

## 1. Introduction

Activities through non-face-to-face and online channels are diversifying around the world. In particular, activities in the form of online platforms are very prominent, and among them, the metaverse mixed with AR and VR is becoming a hot topic (Yang et al., 2023; Huynh et al., 2023). This can be seen as a phenomenon reflecting various factors such as the development of digital technology and virtual reality technology, the spread and speed of the Internet, and users' demands for new experiences and interactions.

Metaverse is a compound term that combines “meta,” which means virtual and transcendent, and “universe,” which means the world and universe. In this novel, the metaverse means a virtual world that can only be entered through an avatar (Lee et al., 2021; Han & Kim et al., 2021). Recently, the concept has been expanded and defined as a virtual world in which real-life and legally recognized activities are connected in an online environment. It is also widely used in the sense of a virtual world where reality and unreality coexist in overall aspects such as politics, economy, society, culture, and life. However, this definition is also an approach in a comprehensive sense, and there is no unified

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definition in academia and industry yet, and it is recognized as a virtual reality world such as a game world and avatar by general consumers (Yoo & Chun, 2021; Kim et al., 2022; Kim & Bang, 2021; Hwang, 2021).

Following the announcement of the ‘Korean New Deal’ in July 2020, the Korean government newly proposed “support for the creation of a metaverse industrial ecosystem” as a keyword to foster hyper-connected new industries as part of the Digital New Deal in the Korean New Deal 2.0 in July 2021. A policy to take the global leadership of the bus is being implemented (Joint ministries, 2021; Emergen Research, 2023). In addition, Strategy Analytics, a global market research firm, predicts that the sales of the global metabus market will reach about 317 trillion won by 2025 (Park & Kim, 2022; Wi, 2022).

Representative types of metaverse platforms that have successfully developed as current business models include ZEPETO ROBLOX, Gathertown, and Decentraland. These platforms, with their different characteristics, are providing users with a stage for new social and economic activities (Bang et al., 2022). If you look at the economic activities taking place on this representative type of metabus platform, you can make profits by making items or games for avatars by yourself and selling them to other users, and by using them as channels such as advertising or promotion marketing. It can be divided into types such as activities that generate revenue in the real world and trading activities of digital asset works of art using non-fungible tokens (NFT) (Bang et al., 2022; Kim & Lee, 2022). What these metaverse platforms have in common is that numerous users can engage in social and economic activities in a virtual world that is connected to the real world. The number of users of the Metaverse platform is already in the hundreds of millions, and it will likely develop into a stage for new economic activities with huge industrial ripple effects by the size of users within a few years.

In a situation where various issues such as domestic and foreign policy trends, industry, and the number of users are spreading at the same time due to the spread of metaverse, it can be seen that it is time to consider ethical considerations in the metaverse environment. The importance of metaverse ethics is summarized as follows (Kim & Lee, 2022; Kwon & Kang, 2022). First, the metaverse is a virtual space separate from reality, but users experience similar experiences to reality. Therefore, it is essential to ensure the protection of personal information and the safety of users. It is necessary to create an environment where problems such as inappropriate data collection, malicious behavior, and fraud do not arise. Second, because the metaverse is a space where people interact and communicate, the actions and decisions that take place within it can affect the real world. Therefore, an ethical approach that respects the interests and rights of individuals or groups within the metaverse and

encourages diversity and inclusion is needed. Third, artificial intelligence and automation technologies become more important in the metaverse. These technologies can increase user convenience and enjoyment, but at the same time, they can also cause problems such as false information, prejudice, and social inequality. Fourth, in the virtual economy system of the metaverse, virtual assets and currencies are traded, and real money is used flexibly. Accordingly, ethical responsibility and transparency are required in the economic aspect as well.

The purpose of this study is to examine the concept of the metaverse through various opinions of industries and experts on the metaverse, and to derive ethical considerations through a critical literature review related to metaverse ethics in Korea.

## 2. Literature Review

### 2.1. Problems of the Metaverse According to the Subject

The fact that the definition of the metaverse is not unified in academia and industry is suggested in the Introduction. The problems according to the subject are as follows.

The operator of the metaverse platform has established a code of ethics specific to the service to regulate user behavior and recommends it only to users (Joint Ministries, 2022). For example, Roblox, Zepeto, etc. reflect community guidelines or guidelines in their terms of use and impose penalties such as restrictions on use when users violate them. In addition, the frequency of experiences of unethical and illegal acts is accumulating when using the metaverse, and difficulties in performing appropriate measures are expected due to the absence of criteria for judgment.

According to the Information and Communication Policy Research Institute (2022), 47.6% (165 people) out of 347 metaverse users responded that it would be difficult to take appropriate action when reporting unethical or illegal issues. There are two main reasons for responding that appropriate action will not be taken. First, 'differences in the criteria for judging unethical or illegal behavior' between service operators and users, and second, the ethical criteria for users' remarks or actions within the metaverse are unclear, unlike reality.

To establish metaverse ethics, the definition of what metaverse should be clear. Clearly defining the core values and principles that are considered important in the metaverse will help prepare an ethical foundation and reflect the purpose and values of the metaverse. In addition, it is necessary to establish ethical principles in consideration of the application scope and target of the metaverse ethical principles, and it shows that ethical judgment standards must

be clear in the virtual world.

### 2.2. Definition of Metaverse

The potential of the metaverse goes beyond the digital realm and enables interactions that blur the physical and digital boundaries. On the other hand, the definition of metaverse is used in a unified state in academia and industry. Looking at the various opinions of the industry and experts on the metaverse are as follows.

**Table 1:** Various opinions of the industry and experts on the metaverse

Expert	Opinion
Together Labs, CEO	It is a computer-generated simulation of the 3D space used by the user.
Fabricant CEO	The metaverse is the digital layer of life, which will be completed by digitization and hyper-connection of all products and services. The metaverse will be an extension of physical life.
NowhereCEO	Humanity will live in a metaverse where 2D user-generated content, videos, and chat evolve into 3D player-generated experiences. With the technology of the metaverse, mankind will live while expanding its collective presence beyond real life.
Obsess CEO	A metaverse can be defined as a virtual world, a virtual existence of people. It will be a space where you can perform all the activities you do in real life as a virtual being that replaces you in the virtual world.
SNAP Inc. (Marketing officials)	Expected to create a world exactly like the physical world around us. Metaverse technology will be a realm where you can see and interact with things that are physically in front of you and with digital content overlays.
Aglet CEO	The metaverse is a virtual dimension that sits on top of physical reality.
LNG Studio, CEO	The metaverse is a digital twin of our world, but also a place where you can have endless amounts of worlds. It will also be a space where actual transactions can be made and real estate purchases such as Second Life can be made.
Kai Bond, partner, Courtside Ventures	A digital representation of the physical world, the space-time continuum.
Don Stein, founder, Roomkey	The metaverse is a parallel universe of virtual worlds, rooms, and people. There is a virtual economy that powers activities on the platform.
Alexander Fernandez, CEO Streamline Media Group	The metaverse is where the user's physical persona and digital persona become a unified reality.
E. Ayiter,	A collective and persistent online 3D virtu

(International Cyber World Conference)	al world where all content is created by users.
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The metaverse is defined by various meanings in various layers and fields, and although it does not converge into one definition, it can be defined as follows by summarizing opinions.

**Metaverse is a virtual world where various computing technologies are integrated to provide experiences similar to reality.**

Based on the comments, the characteristics of the metaverse can be summarized as follows.

First, it is a virtual reality environment. Metaverse provides a 3D virtual reality environment similar to reality, and users can interact and communicate with other users in the virtual world. Second, it is possible to own and trade virtual assets. Users can purchase or sell virtual assets through the virtual economy system, and increase the value of virtual assets through virtual economic activities. Third, social networking. In a virtual space, multiple users can form groups, communicate in real-time, and form relationships. Fourth, the fusion of virtual and real. By providing an environment that blurs the boundaries between virtual and real, new opportunities and experiences in which reality and virtual work complementarily can be provided. Through these characteristics, the metaverse can be interpreted as promoting social interaction, innovation, and creativity, and providing new possibilities to users by virtually implementing experiences and activities that are difficult in the real world.

### 2.3. Ethics Research in the Field of Metaverse

Papers were collected from DBPia, E-article, and KISS, which are Korean journal databases, to examine ethics research in the metaverse field. The collected papers are 5 pieces as shown in <Table 2>.

**Table 2:** The main keywords of metaverse ethics research

Researcher	Main Keywords
Kim & Lee (2022)	Disruption of identity, metaverse sex crimes, obscene chatting, cyberstalking, hiding avatars, metaverse crime and security, personal information management, protection
Kwon & Kang (2022)	Personal information and data leakage, cybersex crime, financial crime, digital divide, the necessity of metaverse platform ethics regulations
Bang et al., (2022)	Intellectual property rights, personal information

Ahn (2022)	Harmful information, transparency of data
Choi (2021)	Intellectual Property Rights, Copyright, Trademark Rights, Design Rights, Unfair Competition Prevention Act

In the case of Korea, studies related to metaverse ethics are insufficient. If you look at the main keywords of the thesis, you can see that it deals with personal information protection and privacy, expression in a virtual environment, copyright and intellectual property rights of creations, virtual economy, and fairness of transactions.

Users create and share personal information within the virtual world. As a result, issues regarding personal information protection and privacy may arise. It suggests that it is most important to properly protect users' personal information and to secure transparency and consent regarding the collection and use of personal information.

In the metaverse, various virtual objects, environments, characters, etc. can be created and manipulated. At this time, a problem may be raised about the content or expression that other users are exposed to. It seems important to respect various cultures, races, genders, beliefs, etc., and to adhere to the principle of respecting diversity.

Users can act as both producers and consumers. That means you can create and share your creations in the metaverse. To protect the copyright and intellectual property rights of creative works, it is necessary to prevent unfair theft and copyright infringement by clarifying sources, fair use, and protecting the rights and interests of authors.

The formation of a virtual economic system means that virtual assets are exchanged and traded. In such an environment, ensuring fairness and transparency in transactions is of paramount importance. It shows the need to prevent problems such as fraudulent transactions, economic abuse, and fraud, and to protect the rights and interests of transaction entities.

It is believed that the considerations of the metaverse covered in above will be the basis for the safe and ethical use of the metaverse.

### 3. Result

Before developing the metaverse ethical guidelines, this study analyzed various literature related to the metaverse and derived the following six issues.

First, the concept of the metaverse needs to be clearly defined. Since the metaverse is still a relatively new concept, different definitions are used in industry, academia, and research. It seems that a consistent definition is needed to understand the characteristics of the metaverse and develop it in a better direction.

Second, it is necessary to enact ethical principles in

consideration of the application scope and target of metaverse ethical principles. The metaverse is a complex ecosystem in which various stakeholders interact. Since each stakeholder, such as users, operators, developers, and companies, has different responsibilities and authorities, it is necessary to clearly define the scope and target to which the ethical principles apply. Through this, it is possible to establish comprehensive and effective ethical guidelines that consider the rights and interests of all stakeholders.

Third, it is necessary to consider personal information protection and privacy. In the metaverse, users have experiences similar to reality and perform various activities. Therefore, it is important to protect personal information and privacy. It should be possible to properly handle users' sensitive information and to prevent personal information infringement by preparing a clear consent procedure for data collection and storage.

Fourth, it is necessary to consider expressions in virtual environments to comply with the principle of respecting diversity. Metaverse is a space where various people meet and communicate, so the principle of respecting and embracing diversity must be followed. Considering various races, genders, sexual identities, disabilities, expressions, and behaviors in a virtual environment should be guided in a direction that respects and considers diversity.

Fifth, it is necessary to prepare a plan to protect the copyright and intellectual property rights of creations in a virtual environment. In the metaverse, various creations and contents are created and shared. Clear policies and rules are needed to protect the copyright and intellectual property rights of these creations. It is necessary to protect the rights of creators by complying with principles such as proper indication of sources and consent to the use of copyrighted works.

Sixth, it is necessary to come up with a plan to guarantee the fairness and transparency of transactions in a virtual environment. Transactions of virtual assets and currencies take place within the metaverse. There is a need for measures to ensure the fairness and transparency of these transactions. It will be necessary to establish a regulatory and monitoring system to prevent unfair price manipulation, fraudulent activity, and opacity of transaction information.

The issues derived from the literature analysis are just the contents to be considered for the development of the metaverse ethics guidelines, and may not be the core issues. This is because the metaverse is a virtual dimension placed on top of physical reality and contains complex situations and ethical conflicts (Steele et al., 2020). Sometimes you have to make a judgment between conflicting values or interests and to make the ethically right choice, you will have to analyze the situation closely and review various factors. In addition, since ethical judgments in the metaverse environment involve cultural differences and epochal

changes, differences in standards of judgment may occur depending on cultures or times.

#### 4. Conclusions

Metaverse ethics is very important because it will serve as a standard and guideline for the values pursued by human users who operate through avatars in the metaverse space that forms a digital community to be desirable. Metaverse ethics will be developed and implemented in a different form and way from the real world, but basically, discussions about ethical rationality are needed in the process. In addition, the direction of metaverse ethics research needs to be centered on metaverse ethics cases that will be newly discussed by connecting and converging the real world and the virtual world. For example, confusion between the virtual world of the metaverse and the real world can lead to identity fragmentation.

Although this study was conducted limited to literature analysis, future research will be conducted to develop guidelines that can be applied in a flexible situation centered on principles and values rather than specific rules through case studies, expert surveys, and stakeholder opinion collection. Is expected.

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