

Legal Discussion of Metaverse Law

Turdialiev Mukhammad Ali Polatjon ogli
PhD researcher of Tashkent state university of law
E-mail: m.turdialiyev@tsul.uz

Abstract

In this article analyzed some legal views of metaverse law and discussion on it. In addition in this article analyzed new changes which metaverse has brought to our life, the short history and new concept of metaverse, applying artificial intelligence in metaverse, the main six key challenges and legal issues of metaverse and such kind of scientific issues. As a result of this article author give some suggestion and recommendation for the development of digital legislation of Uzbekistan in conclusion part.

Key words: metaverse, Tech Industry 4.0, Fourth Industrial Revolution, Internet of Things (IoT), meta law, artificial intelligence (AI), robotics, Virtual Social Interaction, Enhanced Learning and Education, six key legal challenges.

I. Introduction

Tech Industry 4.0, also known as the Fourth Industrial Revolution, is the current trend of automation and data exchange in manufacturing technologies. It is characterized by the integration of cyber-physical systems, the Internet of Things (IoT), cloud computing, and cognitive computing. The goal of Industry 4.0 is to create a more efficient and interconnected system that can adapt to changing demands and optimize production processes. This digital transformation has brought about new technologies such as artificial intelligence (AI), robotics, and advanced analytics that are changing the way we work and live. The Tech Industry 4.0 is paving the way for a more connected, intelligent, and productive world. The Metaverse – introduced by Mark Zuckerberg in October 2021 – has already made waves in online communities [1]. It was a shocking announcement that showed

how technology would increase its influence around the world. While it is still taking form, Metaverse has the potential to change how people go about their daily lives.

There are some new changes metaverse has brought to our life!

1. **Virtual Social Interaction:** Metaverse has enabled people to socialize in virtual reality settings, allowing them to connect with others from around the world.
2. **Enhanced Learning and Education:** Metaverse technology has revolutionized education and learning by creating a more immersive and interactive experience for students.
3. **New Business Opportunities:** Metaverse technology has created new business opportunities, especially in the gaming industry where virtual reality games are becoming increasingly popular. Some companies have already begun introducing Metaverse technology. Retailers like Warby Parker and Amazon have implemented ways customers can try out their products without purchasing them yet.

Others are changing how customers can earn items. Alo Yoga has created what they call the Alo Sanctuary on the popular platform Roblox. Instead of using money, shoppers can complete five days of meditation to receive one of their jackets. Brands could also use the Metaverse to let people try on clothing. It could create a much more interactive online shopping experience. As this technology develops, people could design avatars matching their bodies exactly and try on clothes virtually before buying [2].

4. **Improved Communication:** The use of metaverse technology has facilitated communication between people from different parts of the world, making it easier for them to collaborate on projects and share ideas.

5. **Increased Access to Entertainment:** With metaverse technology, people have access to a wide range of entertainment options, including virtual reality concerts, gaming tournaments, and other events.
6. **Better Healthcare Delivery:** Metaverse technology is being used in healthcare delivery to provide patients with more personalized care and treatment options. This new world could be helpful for both physicians and patients. Going virtual can help doctors assist people far away and improve their accessibility. Those providing care can experience benefits such as:
 - Easier payment calculation
 - Advanced training options
 - Straightforward patient monitoring
 - Expanded revenue cycle management
 - Better patient outcomes [3]

Each of these points can help healthcare providers give a higher level of treatment to their patients. In addition, those in care could use the Metaverse for digital payments, simpler medical record storage, and improved online care.

7. **Enhanced Productivity:** The use of metaverse technology has improved productivity in various industries by providing workers with new tools and resources that enable them to work more efficiently.
8. **The Metaverse may be a solution to the isolation many remote workers face.** Employers could utilize digital workspaces, allowing employees to get to the office without commuting. It could redefine the meaning of “face to face.” People could touch base with their co-workers and bosses in real-time and feel more involved in distanced meetings [4].

AI may also come into play. By creating a digital twin, some workers could choose to send “themselves” to work when they need a sick or mental-health day.

AI can allow employees to still be productive while they need time off. It's capable of benefitting workers and employers. It could change the actual workplace as well. Some envision their companies working from the beach for a day. Others could be taking notes in the jungle or sending an email in space. The possibilities for virtual offices are endless. On top of more social interaction, it can give employees a sense of adventure when coming to work. metaverse technology has brought significant changes to our lives, offering new opportunities for social interaction, entertainment, learning, business growth, communication and improved health care delivery among other things. Because the Metaverse is still developing, many fields can only predict how it might change the world. However, there are some intriguing ideas that may become possible quite soon.

Short history of metaverse

The metaverse is a term coined by writer Neil Stevenson to describe a virtual world that is a kind of collective, shared space [5]. The Metaverse is a virtual space where users can interact with each other and with objects of the virtual world in real time using virtual and augmented reality technical solutions. In the metaverse, users will be able to create, share and experience various digital content and activities together. It will be a fully immersive virtual world, allowing users to experience different emotions and sensations on a par with the physical world. This can affect many areas of life, from entertainment and social media to education and business [6]. Currently, virtual worlds already exist, such as online games and social networks. However, a full metaverse as described in science fiction is still in development. Most tech companies are working on online platforms that could be the foundation of a future metaverse, such as Facebook Horizon. They create an infrastructure so that people can communicate, work and create content inside a virtual environment in real time.

The concept of metaverse

Meta is a term commonly used in virtual and online communities to refer to "self-referential", "meta-level", or "meta-content". At a basic level, "meta" refers to content or information that is about other content or information. For example, a comment on a YouTube video that discusses the video's content is "meta" content. In popular culture, the term "meta" can also refer to self-awareness or breaking the fourth wall [7]. On the other hand, the metaverse is a term coined by science fiction author Neal Stephenson to describe a collective virtual shared space, analogous to the physical space that we inhabit in the real world. The metaverse is a fully immersive, virtual world that allows people to interact with each other and with digital objects in real-time, using virtual reality (VR) or augmented reality (AR) technologies [8].

The metaverse would allow people to create, share and experience digital content and activities together in enhanced ways. The idea of a metaverse has inspired tech giants like Facebook to invest heavily in developing technologies that could create a fully immersive, social virtual world. The goal is to create a world that is as accessible, engaging, and interactive as the physical world. In short, "meta" refers to content or information that is self-referential or about other content, while the metaverse is a fully immersive virtual world that allows people to interact with each other and digital objects in real-time, using VR or AR technologies.

AI and metaverse

AI (Artificial Intelligence) and metaverse are two related concepts in the tech industry. AI refers to the development of intelligent machines or systems that can perform tasks that typically require human intelligence, such as learning, problem-solving, decision-making and more. On the other hand, metaverse refers to a virtual space where users can interact with one another and digital objects, often with the help of VR (Virtual Reality) or AR (Augmented Reality) technologies [9]. AI is expected to play a key role in the development of the

metaverse. With the help of AI, virtual worlds can become more intelligent, interactive and engaging. AI can be used to create intelligent virtual avatars that can have natural and realistic interactions with users. AI can also be used to personalize experiences based on user preferences and behavior, and to create more intelligent and responsive virtual environments.

In the future, AI-powered virtual assistants and chatbots could be used to assist users in the metaverse, help them navigate through virtual spaces, and answer their questions in real-time. AI-driven content creation tools, such as natural language processing and image recognition, can be used to create more realistic and immersive virtual experiences. In summary, AI is expected to play a significant role in the development of the metaverse. It can provide more intelligent, personalized and interactive experiences in virtual worlds, which could lead to a variety of new applications and opportunities that we can't even imagine yet.

II. Methodology

Much of the metaverse-related legal conflict is not new. In fact, we are talking about long-known legal problems in various areas: the intersection of jurisdictions of different states, transactions in the digital space, the status of cryptocurrencies and NFT objects, and the protection of intellectual property in virtual worlds, the regulation of electronic advertising, the protection of personal data in the digital world [10]. This is only on the surface, but if you look deeper, you can see the issues that experts are mainly concerned about so far: cross-border data circulation, regulation of information intermediaries and labor relations, new aspects of crimes against a person. There is no clarity with the antitrust regulation of the metaverses. They take on a special character in countering extremism and money laundering, the fight against drug and arms trafficking. And that's not to mention one of the two inevitable things in our lives - taxes. Here's how to

formulate the main problems that lawyers and participants in the metaverses will face.

III. Results

For example Facebook is accelerating its work on the metaverse, and Mark Zuckerberg says it will be the successor to the mobile internet: Facebook has created a team called Metaverse Product Group to focus on building a Metaverse, aiming to create an embodied internet an immersive virtual space where users can interact with each other and shared environments [11]. Moreover, Epic Games acquires Sketchfab to expand its 3D and AR offering: Sketchfab is a massive repository of 3D models that enable individuals and organizations to share, distribute and interact with 3D content, and it's expected the acquisition will enable Epic Games to accelerate and deepen integrations with Sketchfab across Fortnite, the Epic Games Store and Unreal Engine [12].

Thirdly, the world's leading tech giants are all betting on the Metaverse: With investments from several tech giants, such as Google, IBM, and Microsoft, it looks like the Metaverse is becoming a universal concept gaining much interest from the industry leaders. Another news is that Virtual Realms raises \$15M in a series B round to build a Massively Multiplayer Online Role-Playing Game (MMORPG) or Metaverse: Virtual Realms raised the funding from a major Korean game publisher, Kakao Games, to develop innovative MMORPG and Metaverse. [19, 56p] Next one is that Decentraland, a blockchain-based virtual world, raises \$100M in funding round: Decentraland is a platform where users can create, experience, and monetize content and applications, and it plans to use the funding to expand its team and enhance its technology with better community features [13].

These latest developments confirm the growing interest in the development of the metaverse and its potential for innovation, entertainment, and commerce. The latest news is that Lawmakers in the South American nation held a two-hour hearing using Horizon Workrooms, a Meta platform that allows teams to get

together via a virtual workspace. Colombian lawyers put on virtual headsets to take part, and the meeting was live-streamed on YouTube. Those attending appeared in the meeting as computer-generated avatars.

And the hearing—which saw a complainant trying to sue the police—was a success, according to those in the virtual meeting. “The use of information technology in the development of judicial proceedings has the essential purpose of facilitating and expediting these processes [of executing justice],” said María Victoria Quiñones Triana, magistrate of the Magdalena court. Though not all those tuned into the streaming thought it was a good idea: some commented that seeing cartoon-like figures was ridiculous. “I feel it takes away from the seriousness [of the case],” remarked one viewer. “If I want to see myself in a dinosaur character, is that also acceptable?”

It was the first time Colombia’s lawmakers held a full virtual hearing but elsewhere in the world, hearings using Meta’s tech have taken place: local media reported that last September, a Chinese court held a virtual meeting. Virtual court hearings and meetings generally became the norm in 2020 during the COVID-19 pandemic. With governments imposing lockdowns worldwide, professionals switched to the video conferencing Zoom platform to meet, pumping the company's stock and sending its market cap through the roof.

The sudden overreliance on the technology meant some weird and wacky situations: a Texas lawyer seemingly unaccustomed to using the platform got stuck as a kitten when he couldn’t change a video filter. Meta, previously known as Facebook, has poured billions into metaverse technology but it hasn’t been a financial success yet: Its metaverse Reality Labs lost a whopping \$4.28 billion in 2022 Q4. Despite this, Meta CEO Zuckerberg has pledged more investment into the space. “The two major technological waves driving our roadmap are AI today, and, over the longer term, the metaverse,” he said last month.

IV. Discussion

A. Six key challenges

1. The conflict of states for control over transboundary virtual spaces

Technically, the metaverse is a closed regulatory system with its own regulator and coercive measures. At the same time, any state seeks to maintain jurisdiction over its citizens and its territory. This is clearly seen in the struggle for jurisdiction over disputes in the digital space. Therefore, we should expect increased pressure from national regulators on the metaverses, and in a number of countries they are likely to be completely banned. From a legal point of view, the key instruments of state influence are likely to be concentrated in the field of antimonopoly regulation, legislation on the circulation of information and the protection of personal data [14].

2. New rules for the creation and circulation of content

The Metaverse is a gigantic information funnel. The use of traditional regulatory instruments in it is inevitable [15]. This will require amendments to the law on advertising, updating the rules for the work of the media and adjusting other areas of information legislation. Perhaps the requirements for the internal rules of the metaverses will be established. Another important aspect is the cross-border circulation of personal data. This implies a conflict between national data localization requirements and the need for extraterritorial regulation and clarification of data processing rules [16].

3. Legal status of individual elements of the metauniverse

Metaverses involve virtual transactions with virtual objects. This will inevitably raise the question of the legitimacy of such transactions before the law enforcer and the regulator. As well as the issue of recognition (or non-recognition) of the legal status of digital goods. Special attention should be paid to the issue of confirmation of authority to conclude transactions.

4. The procedure for mutual settlements

The problem of making settlements includes questions about the legal status of cryptocurrencies and game currencies, the use of smart contracts, cross-border settlements involving several information intermediaries at once. And financial regulators will have to decide whether, for example, banks have the right to participate in transactions in the metaverses.

5. Adapting Traditional Legal Institutions to Work in the Metaverse

Any legal institution must be applied taking into account the specifics of legal relations. Metaverses create additional difficulties in the application of traditional institutions. For example, it will obviously be necessary to comprehend new aspects of inheritance or donation, adjust tax legislation to take into account the extraterritorial circulation of digital objects, and possibly finalize labor market laws taking into account new realities.

6. International Regulation of the Metaverses

Until now, humanity has been able to agree on some rules that are universal for most countries for the application of technological advances. It was about cars, airplanes, human cloning, and even, it seems, artificial intelligence. However, whether this can be done in relation to the metaverses is an open question. It is no less important what vector such regulation will take it is possible to form international alliances at the level of developers or even states. It is enough to imagine the emergence of two or three global associations of the largest creators of the metauniverses - and we will see what kind of conflict of jurisdictions this can give rise to [17]. Previously, it was possible to assess the legal risks of a new technology slowly. Mankind has spent almost a hundred years regulating traffic issues and has been dealing with the regulation of artificial intelligence for more than a decade. Perhaps the main feature of the metaverse is that this time we will not have so much time.

B. Legal issues of metaverse

However, it's important to note that the metaverse is a relatively new concept and there is much debate among legal scholars regarding the potential regulation of digital spaces. This includes issues such as intellectual property, data privacy, virtual identities, jurisdiction, and more. Some legal scholars argue that existing laws and regulations might be extended into digital spaces, while others suggest that new laws and frameworks may be necessary to regulate the metaverse. For instance, with regard to intellectual property, legal questions arise about whether copyrights, trademarks, and patents should apply to virtual goods, and if so, how to enforce these laws in a decentralized metaverse. Additionally, the concept of the "right to be forgotten" granting the right to an individual to have data deleted could become more difficult to apply in a virtual world [18].

This shows that there are many legal and regulatory challenges that need to be addressed in order to shape the development of the metaverse in a way that can benefit society, while also safeguarding users' rights and security. It is likely that legal scientists and policymakers will continue to examine and address these issues as the metaverse evolves [19]. The metaverse is an emerging technology that could potentially transform the way people interact, work, and play in a virtual space. While some aspects of the metaverse already exist, such as online gaming and social media, the full development of a comprehensive metaverse could raise new legal and regulatory issues.

Currently, there are few laws or regulations explicitly addressing the metaverse. However, some existing laws and regulations may apply to metaverse activities, such as intellectual property laws and data protection regulations. For example, copyright laws may apply to user-generated content within the metaverse, and data protection laws may apply to personal data collected through metaverse activities. Governments and policymakers around the world are starting to consider potential legal and regulatory frameworks for the metaverse. In July 2021, the

European Union announced plans to explore regulations for the metaverse, including privacy, cybersecurity, and content moderation [20].

In the United States, lawmakers have proposed legislation related to virtual currencies and online marketplaces, which could have implications for the metaverse. Additionally, some legal experts have suggested that existing laws and regulations may need to be updated or reconsidered to accommodate the metaverse's unique characteristics. As the metaverse becomes more prevalent and advanced, it will inevitably raise new legal and regulatory challenges. The development of virtual worlds, where people can interact and engage with each other online, has created a new digital landscape that will require a new framework of laws and regulations to govern it [21].

The legal issues that will arise in the metaverse will include intellectual property rights, virtual property rights, data privacy and security, content regulation, virtual identity, and virtual financial transactions. One critical area of concern is intellectual property. The metaverse will create a wealth of user-generated content, and the ownership rights of this content will need to be clearly defined. Moreover, virtual property rights, including virtual land and avatars, will also need to be protected by law. There will also be a need to protect virtual property rights against cyber-criminals who may try to hack or steal virtual currency or virtual assets [22].

Another significant area of concern in the metaverse is data privacy and security. As people interact online and share personal information, there will be concerns over how this data is stored, used, and protected. There will be a need for laws and regulations to ensure that personal information is safeguarded and that data breaches are punished. Content regulation is another concern in the metaverse, where people can create and upload user-generated content that may not be legal or appropriate. Governments will need to regulate this content to ensure that it does not promote illegal activities, violence, or hatred [23].

Finally, virtual financial transactions will also need to be regulated. As virtual currencies like Bitcoin and Ethereum become more popular in virtual worlds, there will be a need for laws and regulations that govern how these currencies are traded and used. In summary, the legal issues in the metaverse are vast and will require a new framework of laws and regulations to govern it effectively. As the metaverse continues to evolve, lawmakers will need to work together to establish a legal framework that protects users' rights and ensures that the metaverse is a fair, safe, and secure place to visit. In summary, while there are currently few specific laws or regulations related to the metaverse, there is growing recognition among policymakers of its potential impact and the need to address legal and regulatory issues that may arise [24].

C. The perspective of metaverse in Uzbekistan

However, there are indications that the government is taking steps to promote the development of a digital economy in the country. This includes investments in information technology infrastructure, the establishment of technology parks and innovation centers, and the introduction of favorable policies for technology startups and businesses. Recently, the government has also been promoting digital solutions and online services in response to the COVID-19 pandemic. This includes the development of a digital platform for remote learning and an online marketplace for small businesses [25].

It is possible that the development of a metaverse or virtual world could be part of Uzbekistan's broader efforts to promote the digital economy. There may also be potential for technology startups and businesses in the country to get involved in the development of virtual reality and augmented reality technologies that could be used to create a metaverse. However, more information is needed to determine the extent of Uzbekistan's involvement in the metaverse.

Conclusion

As can be seen, current legal challenges are the focus of court rulings and conversations that were inconceivable thirty years ago. The issues that the law will confront and explain will therefore change, but the solution will always be found in the application of the law's norms in actual situations or through the use of analogies. The fact that the protected subject of the law is a natural person (human being) with a soul, the capacity for free will, and a decision-making ability, however, will never alter. Because the physical world, social life, and all the laws governing them are what are real. Because of this, metaverse law will both establish its own laws and be shaped by universal legal ideas.

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