

RESEARCH ARTICLE

Meta-Morphosis of Copyright and User-Generated Content: Can East Asia’s Emerging Policies Navigate through the Metaverse?

Elnur Karimov[†] 

Max Planck Institute for Innovation and Competition, Munich, Germany
Email: elnurkarimov95@gmail.com

Abstract

Social-creative metaverses, which foster user creativity and encourage user-generated content, promise a revolution in digital creativity. However, metaverse developers often enforce strict regulations on user-generated content through user terms and conditions, restricting or permitting its reuse. These rules place an artificial barrier between users and their copyright, often waiving moral rights and making economic rights subject to mandatory licences. Using *Second Life* as a case study, this article demonstrates how metaverse regulations undermine users’ intellectual property rights and control over their creations. Furthermore, it examines emerging intellectual property policies in Japan, South Korea, and China, noting a lack of awareness regarding the impact of these regulatory layers on user creativity. Highlighting the importance of the external regulation of user terms and conditions, the article proposes potential policies and strategies for East Asia and beyond to protect users’ copyright ownership and mitigate the negative effects of restrictive metaverse terms and conditions.

Keywords: Metaverse; User-Generated Content; User Creativity; Copyright; Intellectual Property; Japan; China; South Korea

1. Introduction

“Metaverse” is a neologism first used in Neal Stephenson’s famous novel *Snow Crash* (Stephenson, 1992, p. 24). The book describes a computer-generated virtual space where users regularly interact with one another to retreat from their daily lives (Stephenson, 1992, p. 24). Today, there is no universally accepted definition of the *metaverse* (Kasiyanto and Kilinc, 2022, p. 304). However, the concept of the metaverse has gained widespread attention from scholars who describe it as a convergence of multiple interoperable computer-simulated virtual worlds with a collective and shared space accessible by virtual

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reality (VR) or augmented reality (AR) devices (Ives and Junglas, 2008, p. 152; Lastowka, 2010, pp. 61–62; Yemenici, 2022, pp. 71–72; Green and Works, 2022, p. 1). The promised image of the metaverse in this definition is still far from today's technological reality due to limitations in hardware capacity, energy consumption, and the absence of standardised protocols for interoperability (Ondrejka, 2004–2005, p. 82; Lastowka, 2008, p. 908; Stephens, 2022, p. 13; Wang et al., 2022, p. 5). The closest representations of the metaverse are massively multiplayer online role-playing games (MMORPGs), such as *Second Life*, *There, Decentraland*, *Sandbox*, *World of Warcraft*, *Minecraft*, *Roblox*, *Horizon Worlds*, and *EverQuest*. These MMORPGs, akin to the definition of the *metaverse*, simulate the real world by offering humanoid avatars, virtual currencies, and virtual land (Belk, Humayun, and Brouard, 2022, p. 199; Kalyvaki, 2023, p. 87; Yemenici, 2022, p. 73). MMORPGs have become an indispensable tool for entertainment and social interaction, encouraging users to invest time and financial resources in virtual worlds (Abramovitch and Cummings, 2007, p. 74; Reuvine, 2007, p. 264).

To understand the existing versions of the metaverse, it is important to distinguish between combat-collection and social-interactive MMORPGs. Users (or gamers) in combat-collection MMORPGs, such as the *World of Warcraft*, navigate through the virtual environment using an avatar, collect virtual objects to enhance their avatars, and complete quests for rewards either individually or in groups (Papagiannidis, Bourlakis, and Li, 2008, p. 611; Cifrino, 2014, p. 239). In contrast, in social-creative MMORPGs such as *Second Life*, *Decentraland*, or *Sandbox*, users often collaborate to create new content or build virtual estates without concerning themselves with the game script. This article uses the term *metaverse* to collectively refer to those social-interactive MMORPGs that are the focus of this article.

The metaverse not only encourages but also relies on user creativity in most instances (Klimmt, 2011, p. 3; Fernandez and Hui, 2022, p. 4). Creativity within the metaverse, free from the constraints of the physical world, gives birth to user-generated content (UGC). UGC can manifest as content crafted by users through a straightforward assembly of virtual objects, such as avatars equipped with weapons, potions, or accessories. Furthermore, UGC may also encompass original content created by users both within and beyond the metaverse, such as clothing designs and accessories. In order to examine the implications of copyright ownership concerning users' original works, this article will concentrate specifically on the original UGC generated within or outside of the metaverse.

In the metaverse, users can not only display but also monetise their UGC, owing to the lucrative virtual economy of virtual objects supported by metaverse developers (Lessig, 2006, pp. 107–108; Ondrejka, 2004–2005, p. 84). The global metaverse market is predicted to reach 678.8 billion US dollars by 2030 (Ministry of Internal Affairs and Communications of Japan, 2023). Due to its increasing economic value in the metaverse, UGC is often subject to stringent internal regulations via user terms and conditions (UTCs) developed and enforced by metaverse developers. As the terms become stricter and more restrictive for users of the metaverse, UTCs may suppress user creativity by redirecting the fruits of users' creative labour to the developers, consequently turning the metaverse into a less user-creativity-friendly environment. As it is envisioned as one of the primary sources of creativity in the society of the near future, the metaverse should not be left to serve such corporate interests only by favouring metaverse developers in terms of the extent of copyright ownership over UGC. The anti-creativity and anti-competition effects of the metaverse should also be considered by policymakers, given the unprecedented power of developers established through UTCs.

Based on the survey of the relevant literature on UGC and the metaverse presented in **Part I**, the author of this article argues that UTCs add an additional layer between users and their copyright by regulating the intellectual property (IP) regime applied to UGC. **Part II** explains the case study and comparative analytical methodologies employed to

accomplish two objectives. These objectives are to explore the scale of the risks faced by UGC in the metaverse and to determine the stance of the emerging metaverse policies concerning the defined risks. In **Part III**, the article continues to reveal the often-overlooked abstract layer between users and their copyright, this time in the metaverse, through a case study on *Second Life*'s UTCs. This is followed by a comparative analysis of the emerging metaverse and IP policies in Japan, South Korea, and China. The study aims to determine whether the current state of metaverse policies in East Asia can influence the additional layer introduced by the UTCs of the metaverse while serving fair competition in the digital metaverse market. The **Conclusion** wraps up the discussion by presenting recommendations for the emerging East Asian metaverse and IP policies to prevent the additional layer contributed by UTCs from stripping users of their copyright and legal control over UGC.

2. Literature review

In the digital environment, *user-generated content* (UGC) is a term used to describe copyrightable content created by users and posted to various corners of the internet, such as book reviews, *YouTube* videos, or *Instagram* photos (Lastowka, 2008, p. 895). In the context of the metaverse, *user-generated content* also refers to three-dimensional copyrightable works created by users within the metaverse using built-in content-creation software. Additionally, UGC encompasses content produced outside the metaverse and subsequently uploaded or adapted to the metaverse using the built-in menu functions. For example, the *Second Life* metaverse allows users to upload their designs and other creative works to the server in order to utilise them in a three-dimensional digital format (Ondrejka, 2004–2005, p. 90).

Whether created inside or outside the metaverse, UGC is generally expected to pass muster for copyright protection, given the relatively low threshold of the originality requirement granted by applicable copyright law (Reuvine, 2007, p. 271). Furthermore, it should be noted that the copyrightability of UGC is independent of the internal regulations imposed by developers through UTCs (Caramore, 2008, p. 16). Often, the content-creation tools of the metaverse do not impose technological limitations that would compromise the originality of users' artistic works (Reuvine, 2007, pp. 283–284). However, the extent of copyright protection for UGC becomes unclear when metaverse developers utilise a contractual instrument, UTCs, to modify the user's copyright. In this context, UTCs or end-user licence agreements act as the metaverse "constitution" by establishing mutual rights and obligations of developers and users, along with other internal rules such as the terms of service (TOS) (Hossain, 2016, p. 41).

At the core of the conflict lie users' proprietary rights to their UGC and contractual arrangements between users and developers of the metaverse. As a matter of fact, the discussion of ownership of avatars, virtual land, virtual objects, and other UGC by users is not a new topic of debate, given the emergence of user-led real-market trading of virtual items (Stephens, 2002, pp. 1519–1520; Kalyvaki, 2023, p. 87). While some scholars have shown a conservative attitude towards recognising cyber-property in general (Carrier and Lastowka, 2007, p. 1484; Cifirino, 2014, pp. 246–247), others, who cite the Lockean conception of property rights, have supported users' proprietary rights to virtual objects of the metaverse in light of their labour and financial investment in creative activities (Lastowka and Hunter, 2004, p. 50; Sheldon, 2007, p. 760; Suzor, 2010, p. 1856; Stephens, 2002, p. 1530). Regarding users' proprietary rights to virtual objects of the metaverse, the peak of the debate dates back to the US District Court case, *Bragg v Linden Research, Inc.* In this case, the defendant denied the users' ownership of the virtual objects by presenting

them as part of the defendant's service.¹ This approach has later been embraced in most UTCs of the existing versions of the metaverse. Developers tend to employ carefully drafted, strict, and restrictive language to impose upon users their ownership of the virtual world as bits and bytes of data stored on the server while limiting the IP rights to the elements of the virtual world enjoyed by users (Horowitz, 2007, p. 457; Stephens, 2002, p. 1514).

On the one hand, UTCs provide flexibility in regulation to ensure the safety of users while maintaining the enjoyment of the game within an uninterrupted and fair flow of the metaverse (Fairfield, 2008, p. 475; Roquilly, 2011, p. 654). At times, UTCs shield lawyers from the disruptive questions of the metaverse concerning the applicability of real-world laws, as well as the legal issues of jurisdiction, enforcement, and liability (Abrahams, 2007, p. 8; Chen et al., 2007–2008; Cifrino, 2014, p. 255). Furthermore, UTCs allocate rights attached to UGC between metaverse developers, the user who created the UGC, and third parties (Lastowka and Hunter, 2004, p. 50). Conversely, many scholars have expressed concern about UTCs becoming the sole “governing law” of the metaverse, with developers wielding extreme and unreasonably disproportionate power to regulate user behaviour (Kayser, 2006, p. 63; Sites, Peele, and Fairfield, 2010, p. 6; Abramovitch and Cummings, 2007, p. 76; Fairfield, 2008, p. 432; Kasiyanto and Kilinc, 2022, p. 303). The discrepancy in the bargaining power of metaverse developers and users enables developers to cherry-pick the most favourable and pliable IP rules, incorporate them into UTCs, and limit their liability (Lastowka and Hunter, 2004, p. 50; Abrahams, 2007, p. 7; *see also* Veloso III, 2008, pp. 61–2; Kalyvaki, 2023, p. 87). Consequently, users' copyright over UGC may be relegated to obscurity or restricted under the developer-friendly clauses of UTCs. The additional layer introduced by UTCs between users and their UGC arises from the contractually enforced limitations imposed on copyright ownership and control exercised by users.

Empirical studies comparing UTCs of several MMORPGs have demonstrated that users' copyright in the metaverse increasingly relies on the clauses of UTCs that limit developers' liability (Ondrejka, 2004–2005, p. 941; Sheldon, 2007, p. 773; Lastowka, 2008, p. 915; Roquilly, 2011, p. 658). It is therefore not surprising that many scholars concur on the necessity for regulating the metaverse in some form and addressing the issues surrounding copyright ownership of UGC (Slaughter, 2008; Stoup, 2008, p. 340; Gong, 2011, p. 30; Xiang, 2022; Fernandez and Hui, 2022, p. 5; Stephens, 2002, p. 21). Regarding the characteristics of the regulation, some scholars propose leaving such regulation to the technological measures (code), UTCs (contract law) employed by developers, or a combination of both (Lessig, 2006; Stoup, 2008, p. 320; Roquilly, 2011, p. 655). However, the majority of scholars further advocate for external regulation of the metaverse through legislation or case law (Balkin, 2004, p. 2064; Roger, 2008, p. 423; Ramos, 2022, p. 9; Fernandez and Hui, 2022, p. 5; Gong, 2011, p. 31; Lastowka and Hunter, 2004, p. 72; Reuvine, 2007, pp. 307–308; Abrahams, 2007, p. 9; Cifrino, 2014, p. 244; Abramovitch and Cummings, 2007, p. 80). The aim is to utilise external regulation to prevent IP violations in the metaverse (Balkin, 2004, p. 2064), mitigate the excessive power exercised by developers through UTCs that extinguish users' right to bring legal claims (Abramovitch and Cummings, 2007, p. 80; Gong, 2011, p. 32), and provide a legal framework for UTCs to rely upon (Fairfield, 2008, p. 476). Some scholars condition the external regulation of the metaverse upon its utilitarian grounds. While the theory of the “law of intertation” suggests enforcing UTCs in a manner akin to charters of integration (Castronova, 2004, pp. 204–205; *see also* Balkin, 2004, p. 2091), it opposes interference with MMORPGs by

¹ *Bragg v Linden Research, Inc.* (2007); The common approach of early metaverse developers to real-market trading of virtual objects has been terminating user accounts or aggressively filing IP lawsuits against those users who engaged in unauthorised real-market trading of game items. *See* Veloso III (2008), p. 39; Lessig (2006), pp. 108–109.

legislation or case law unless such interference yields a unique benefit to society. The theory evaluates the “benefit” against the level of users’ engagement in the co-creation of the metaverse (Kayser, 2006, p. 70).

Despite the depth of scholarship on UTCs and user creativity in the metaverse, the additional layer between users and their copyrights remains a largely understudied subject. In the following sections, the author contextualises this extra layer within the social-creative metaverse of *Second Life* in comparison with the real world, and proceeds with a comparative study of the emerging metaverse policies in East Asia, with an emphasis on the copyright ownership of UGC.

3. Methodology

To assess and discuss the negative impacts of the UTCs on UGC, the analysis in this article begins with a case study of the clauses of the UTCs of *Second Life* regarding the IP regime of UGC. *Second Life* is selected for this analysis due to its acknowledged prominence in academic and media circles, attributed to its large user base (Stoup, 2008, p. 342) and its comparatively user-creativity-friendly UTCs among competitors in the metaverse market (Zack, 2007, p. 229; Gard and Goda, 2008, p. 917; Van der Graaf and Cobarr, 2008, p. 3; Kennedy, 2009, p. 3; Abrahams, 2007, pp. 5–6; Lastowka, 2010, p. 15). It is acknowledged that basing the main arguments of the problem analysed in this article on a single MMORPG may cast doubt on the universal applicability of the conclusions to all versions of the metaverse. The author of this article also acknowledges that the methodology in this article diverges from the previous comparative approach in the literature, which tends to examine the UTCs of different MMORPGs (see Sheldon, 2007, p. 763; Roquilly, 2011, p. 658).

It should be noted that the purpose of this analysis is *not* to condemn all candidates of the promised metaverse based on the analysis of *Second Life*’s UTCs. Rather, the aim is to portray the potential threats to user creativity and its implications in the metaverse, as well as to inform the emerging metaverse-related public policies in East Asia. As one of the leading providers of the metaverse, *Second Life* offers insight into the challenges of copyright protection for UGC in this context. Furthermore, since its inception, *Second Life* has promoted a friendly and supportive approach to user creativity, exemplified by allowing users to retain their copyright within the metaverse. The majority of other metaverse developers do not exhibit a similarly positive stance towards users’ proprietary rights regarding the elements of their metaverse. In these circumstances, focusing on *Second Life* serves to inform emerging policies about the threats posed by a creativity-friendly metaverse and raises awareness among policymakers regarding the directions that can be taken by the creativity-suppressing UTCs of other metaverse developers.

The focus of the case study is those clauses of Linden Lab’s UTCs and the TOS that directly or indirectly impact users’ ability to own, access, or exploit their UGC in the metaverse. The operation and enforceability of users’ copyright in the metaverse are compared to that of the real world to reveal the additional layer between users and their UGC hidden in the restrictive clauses of UTCs. The analysis continues with a comparative examination of the emerging policy papers and reports in China, Japan, and South Korea that specifically address IP ownership issues within the metaverse. The popularity of the metaverse is growing rapidly around the world (Kayser, 2006, p. 66), as well as in South Korea, China (Ministry of Internal Affairs and Communications of Japan, 2023, p. 20), and Japan (Ministry of Internal Affairs and Communications of Japan, 2023, pp. 14–15). In contrast to this growing popularity, the survey of the relevant literature revealed a lack of scholarship discussing the Asian perspective on user rights in the metaverse. The objective of the analysis is to identify a pattern in the emerging policy discussions in East Asia regarding the level of (un)awareness among policymakers about the negative impacts of

the additional layer. The author of this article ultimately aims to bring diverse East Asian perspectives to the regulation of IP-related issues in the metaverse to ensure the optimal solution for safeguarding user creativity within this digital environment.

4. Analysis and discussion

4.1. Second Life and user-generated content

4.1.1. An overview of Second Life

Second Life is one of the first and most popular social-creative metaverses, developed and released by Linden Lab in June 2003 as a three-dimensional virtual gaming and social platform (Zack, 2007, p. 225). Users of *Second Life* craft their avatars and other virtual objects, often by investing considerable time and financial resources, and exchanging virtual objects with other users for *Second Life*'s virtual currency, Linden dollars (Sheldon, 2007, pp. 756–757; Lastowka, 2008, p. 911). Unlike combat-collection MMORPGs, users do not have to follow any quests or storylines in the *Second Life* metaverse (Kribble, 2007, p. 13; Van der Graaf and Cobarr, 2008, p. 4). The laws of physics of the real world operate differently in *Second Life*; users can teleport to their destinations, fly effortlessly in the skies of the virtual world, and swim in the depths of the ocean without sinking or dying (Wang et al., 2022, p. 3; Yemenici, 2022, p. 78). In addition, the Linden Scripting Language and sophisticated content-creation tools allow users to rebuild the virtual environment by modifying the game script (Botterbusch and Talab, 2009, p. 9; Lessig, 2006, p. 108; Stoup, 2008, p. 317). The metaverse also allows users to upload their works, such as designs of clothing, accessories, or vehicles, to the game server.

Linden Lab has embraced the concept of the virtual economy in *Second Life*, acknowledging UGC as the primary and driving component of the business model (Suzor, 2010, p. 1857). In 2019, the UGC-based virtual economy of *Second Life* was estimated to be worth 567 million US dollars (Stephens, 2022, p. 8). To incentivise UGC and encourage creativity on the platform, Linden Lab has revised *Second Life*'s TOS multiple times, which now recognises that users retain “full intellectual property protection for the digital content they create, including characters, clothing, scripts, textures, objects, and designs.” While this allows users to licence and sell their original UGC without fear of a lawsuit in the metaverse, they cannot claim rights to Linden Lab's own content (Karimov, 2021, p. 102). Furthermore, UGC is subject to multiple restrictions and compulsory licences on this platform.

4.1.2. Second Life's user terms and conditions on user-generated content

There are two types of content on *Second Life*: **Linden Content**, which is created or acquired by Linden Lab and licensed to users as part of the service, and **User Content**, which is published, uploaded, or submitted by users, and referred to here as UGC (Linden Lab, 2017). Users retain their economic rights to UGC, which include the right to use, reproduce, distribute, offer for sale, sell, and license the UGC in the metaverse. In contrast, Section 2(3) of the TOS strips users of their moral rights to the User Content, including the right to integrity and attribution (Linden Lab, 2017). When the applicable copyright law prevents such waiver of moral rights, the TOS declares users' moral rights as not enforceable (Linden Lab, 2017).

The question of users' moral rights in the digital environment is neither novel nor unique to the metaverse scenario. Although moral rights represent and protect the valuable bond between an author and an original work (Rajan, 2011, p. 9), their importance has gradually diminished in the discourse surrounding copyright. In particular, moral rights have consistently been overlooked in policy discussions aimed at enhancing

copyright protection in the digital era (Kheria, 2007, p. 4). It has primarily been the economic interests of copyright holders—mostly publishers and record labels—that have dominated the copyright discourse (Kheria, 2007, p. 4). This is evident in the negotiations and drafting phases of the WIPO Copyright Treaty, the WIPO Performances and Phonograms Treaty, and the EU Directive 2001/29/EC on Copyright and Related Rights in the Information Society, where the initial attempts to provide stronger protection for moral rights ultimately proved unsuccessful (Rajan, 2011, pp. 261–262). Consequently, digital platforms have been assertive in terms of waiving authors’ moral rights or rendering them non-enforceable through UTCs on a contractual basis. The weakened protection of moral rights has effectively transformed copyright into “an author’s right without an author” (*un droit d’auteur sans auteur*).²

The traditional rationale for the waiver or limitation of moral rights has been their potential to disrupt the interactive nature of the digital environment through the over-enforcement of moral rights by copyright holders (Lehman and Brown, 1995, pp. 146–147; European Commission, 1995, p. 67; for further discussion on this matter, see also Kheria, 2007, p. 5). In this understanding of the digital environment, it is presumed that any given work will inevitably undergo significant alterations or modifications upon digitisation (European Commission, 1996, p. 27). This means that the digitisation of the original works often results in the loss of the quality of their digital copies, particularly in the case of musical and audio-visual works (Synodinou, 2024, p. 179). Furthermore, it is commonly assumed that the service flow provided by digital platforms could be jeopardised by the rigorous enforcement of moral rights by authors, which could impede the interactive experience offered by digital platforms (Synodinou, 2024, p. 179). It is important to emphasise that the rationale behind the waiver or weaker application of moral rights on digital platforms is based on presumptions that lack substantial empirical evidence.

As observed in *Second Life*, this pervasive approach to moral rights has been transplanted into the metaverse context through UTCs, which is the conventional method. The same approach to moral rights can be expected from other current and future metaverse developers. Nevertheless, even if the justifications provided by existing digital platforms to limit or waive moral rights were supported by concrete empirical evidence, waiving or rendering moral rights non-enforceable in the metaverse is a rather simplistic approach that neglects the distinctive characteristics of the platform provided by the metaverse. It also underestimates the capabilities of the underlying technology. In other words, the argument that an author’s literary and artistic works are susceptible to frequent distortion in the interactive digital environment may not be universally applicable to the metaverse. For example, according to Section 2(3) of Linden Lab’s TOS, users agree to waive their moral rights even if the UGC is altered or changed in a manner that is not agreeable to the user (Linden Lab, 2017). This stipulation should not presume such an alteration of UGC, let alone use this presumption as a rationale for the waiver of moral rights. The metaverse affords the author/user the ability to not only upload their UGC to the server but also to utilise the built-in content generation tools to create UGC within the metaverse. It is crucial to examine the vulnerability of the UGC made in the metaverse to infringements of the rights to integrity and attribution before waiving users’ moral rights.

The UGC created using the built-in tools of the virtual environment, such as three-dimensional digital geometric shapes, can be expected to exhibit greater resistance to the distortion inherent in the digital interactive environment. As these works have been produced within the metaverse, they would not be subject to the same quality degradation that typically results from the transformation of other works into a digital format. Such transformations into three-dimensional formats would not lead to substantial alterations

² For the discussion of this term coined by Prof. Schricker in 1988, see Kretschmer (2003), pp. 337–338.

in public perception either. The works created with the built-in tools of the metaverse and published on virtual land or estates will be perceived by the public in the manner in which they were created. The perception of avatars regarding the digital works created within the metaverse is analogous to the perception of real humans towards real-world paintings or musical compositions. Furthermore, the public in the metaverse consists of avatars controlled by real humans who are acquainted with the visual format of the metaverse and the potential digital forms that the UGC can assume within this digital environment. The creator of the original UGC in the metaverse is also cognisant of the potential alterations arising from the interactive nature of the metaverse.

Although the metaverse has the potential to alter the original works created outside of it and uploaded to its server (Synodinou, 2024, p. 182), this is much less likely for works created within the metaverse. It is therefore necessary to differentiate between these categories of UGC in the metaverse, according to their vulnerability to distortion and alteration of public perception. The metaverse is different from other digital platforms. The waiver or non-enforcement of moral rights to users' original works in the metaverse through UTCs should not be allowed without careful deliberation. The consideration of the differences between the characteristics of different technologies operating digital platforms is crucial. An author's moral rights should be upheld when they are much less likely to be infringed upon within the normal operation of the platform.

The limitations imposed by *Second Life* on users' copyright to UGC extend beyond moral rights. Sections 1(2) and 1(3) of the TOS highlight the non-proprietary and non-returnable nature of UGC, particularly in the event of service interruption, termination, or account closure (Linden Lab, 2017). The circumstances surrounding service interruptions or terminations may be deemed to be beyond the control of the developer and thus may be regarded as occurring in accordance with the principles of *force majeure*. However, the decision to close user accounts remains at the discretion of the metaverse developer. As stated in Section 5(1) of the TOS, the decision to terminate the service or close user accounts rests solely with Linden Lab (Linden Lab, 2017). In addition, Linden Lab reserves the right to delete or modify the data of the service without prior notice or liability (Linden Lab, 2017). According to Section 1(5), "Linden Lab owns the bits and bytes of electronic data stored on its Servers, and accordingly will not be liable for any deletion, corruption or data loss that occurs in connection with the Service" (Linden Lab, 2017). It should be noted that this kind of service interruption, termination, or account closure has direct implications for UGC. In Section 5(5), users are duly informed that upon the termination of their account, they can no longer access their account or any content or data stored on the servers (Linden Lab, 2017).

The TOS permit the developer to permanently delete UGC from the server without prior notice or assumption of liability. Users are not necessarily informed of these actions or provided with any recourse or remedies for the loss of their UGC. The excessive control exerted by the metaverse developer over the data of the service and its destiny may disrupt users' access to their UGC, thereby depriving them of the ability to exercise economic and moral rights, both within and beyond the metaverse. In light of the proprietary character of UGC as a copyright-protected work, the consequences of its permanent deletion seem more severe than the expropriation of private property for the public interest, due to the lack of compensation or remedies. Furthermore, the endorsement of such a deprivation of users' creative labour through UTCs is contrary to the fundamental objectives of copyright law. The foundation of copyright law is the principle of the author's uninterrupted access to their creations, which is safeguarded by moral rights that are typically regarded as non-transferable. In addition to the unilateral abrogation of moral rights through the use of contractual clauses, the metaverse developer appears to prevent the author/user from benefitting from economic rights without any remedies or liability. In doing so, the relevant clauses of the UTCs contradict the utilitarian

policy objectives that shape copyright law, which aim to ensure that the author can reap the benefits of their works (Peukert and Windisch, 2023). Despite economic rights remaining available to users under UTCs, the potential for termination of the user account or suspension of service at any time for any reason introduces an element of uncertainty surrounding the user's copyright. As a result, the economic rights of metaverse users are precariously suspended by UTCs.

As stated in the previous paragraph, the TOS of *Second Life* do not provide any remedies for such a “risk of participating in the Service” (Linden Lab, 2017) incurred by users. Meanwhile, users continue to contribute to the growth of the metaverse by creating UGC and uploading it to the metaverse. In this context, the implications of the termination of a user account in the metaverse on UGC can be compared to the consequences of the termination of an author's copyright in the traditional sense, such as in the case of the author's death. In the real world, an author's death does not necessarily result in the complete eradication of their work or its placement in the public domain. Quite the contrary, the purpose of copyright is to ensure the continued enforceability of an author's work by their heirs for a fixed period following the author's death. Whereas the termination of a user account may result in the permanent loss of UGC, which could previously only be used within the metaverse. While the termination of a user account does not directly result in any immediate consequences concerning the copyright of the UGC in question, it nevertheless renders the exercise of any economic or moral rights impossible.

A closer examination of these issues reveals a conflict between the copyright of metaverse users to their original UGC and the proprietary claims of developers to the entire service and its components, which are stored as data on a designated server (Caramore, 2008, p. 2; Reuvine, 2007, p. 286; Slaughter, 2008). The metaverse developer asserts ownership over “the bits and bytes of electronic data stored on its Servers” (Linden Lab, 2017), which does not treat the UGC uploaded by users to the server differently. This treatment is based on the presumption that, as a metaverse developer offers users the ability to create UGC, which consequently becomes part of the electronic data stored on the server, the ownership of data by the developer applies to UGC. In this logic, without the service provided by the developer, users would be unable to create the UGC in the first place.

In addition to the argument regarding data ownership, Linden Lab, as the developer of this metaverse, aims to retain the freedom to update or terminate it without infringing on users' proprietary rights (Caramore, 2008, p. 6; Slaughter, 2008). This possessive approach to the components of the metaverse could be justified by the dependency of the metaverse's existence on objective factors and circumstances beyond the developer's control. These include the viability of the developer's business, unexpected technical issues, and user behaviour. On the other hand, the limitation of the developer's liability in the event of service interruptions or account termination, which is analogous to the waiver of moral rights, appears to be an expedient solution that fails to consider users' control over their copyright. In contravention of the objectives of copyright law, developers exploit the freedom of contract afforded to them by virtue of their superior bargaining position, effectively assimilating users' copyright-protected UGC within their proprietary electronic data. UTCs have historically served as the primary instrument for e-commerce, social media, and music streaming platforms to exercise their significant bargaining power (Alpa, 2024, p. 3). Previous studies have argued that as the bargaining power of digital platforms increases, the rights of users who contribute their UGC to these platforms to receive fair remuneration decrease (Iaia, 2021, pp. 174–175). In the context of the metaverse, UGC is particularly vulnerable to infringements and is therefore subject to additional uncertainty regarding the enforceability of copyright in the event of service interruption, termination, or account closure. The asymmetries in bargaining power between users and metaverse developers, coupled with the ambiguities in the developers'

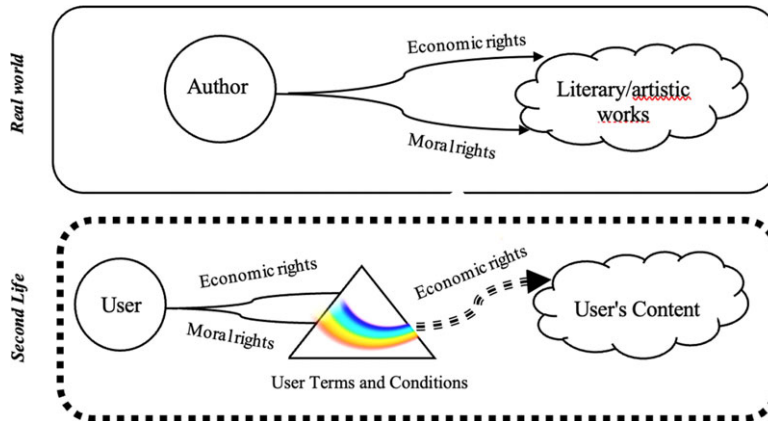


Figure 1. Copyright refraction in the real world and the *Second Life* metaverse.

liability regime, serve to increase the value gap between these two groups of actors (Iaia, 2021, p. 175; Oprysk, 2021, p. 943). This, in turn, raises questions as to the extent to which creative users will be able to exploit their works in the metaverse and receive fair remuneration.

The metaverse developer may be compelled to terminate the service or user account, which could result in the deletion of UGC. However, in such cases, it is important to achieve a balance between the interests of the developer and those of the users. Following the temporary suspension or termination of the service or user account, the metaverse developer can still demonstrate consideration for users' valuable assets, including UGC, by providing prior notice and facilitating the secure removal of UGC. In the event of abrupt termination of the service or user account, which precludes the possibility of such rescue operations targeting UGC, the developer should provide the user with appropriate remedies. The remedies intended to compensate the user for the damage incurred as a result of the loss of UGC do not necessarily have to be monetary in nature. For example, in cases of temporary service termination, the developer should offer the user, who has suffered a loss of copyright-protected UGC, certain privileges within the metaverse and endeavour to restore and support the user's business or creative works.

To gain a deeper insight into the implications of UTCs on users' copyright, it is important to distinguish between the processes by which authors and users, respectively, obtain and exercise IP rights to their original works in the real world and the *Second Life* metaverse. In the real world, authors are typically granted a set of economic and moral rights to their literary and artistic works by virtue of their authorship (*ipso facto*). This occurs without the need for formal approval or registration from a central authority. Conversely, within the context of the *Second Life* metaverse, the extent to which users may exercise copyright over their UGC is contingent upon the specific clauses of UTCs. As illustrated in Figure 1, the UTCs of the *Second Life* metaverse function as a prism, refracting the economic and moral rights to UGC in distinct ways. The moral rights of attribution and integrity of UGC are not preserved following the "refraction of the rights" through UTCs. In addition, economic rights are subject to significant distortions as a result of the refraction process. For instance, they are vulnerable to non-enforceability as a result of the deletion of UGC from the metaverse following service termination or account closure at any time and for any reason. Additionally, as will be discussed in the following section, they are subject to various licences that are automatically granted not only to the metaverse developer but also to other users in accordance with the UTCs.

4.1.3. Disproportionate licences targeting user-generated content

Second Life can be examined from the perspective of the licences granted for UGC. As anticipated, the UTCs recognise an array of rights exercised by Linden Lab over the content of their metaverse. In addition, the UTCs impose significant limitations on Linden Lab's liability for IP violations perpetrated by third parties and for the termination of the service (Linden Lab, 2022; see also Lemley and Volokh, 2018, p. 1116; Sites, Peele, and Fairfield, 2010, p. 9). Most importantly, while Linden Lab and metaverse users cross-licence Linden Content and UGC to each other, the terms of these licences diverge considerably in their respective scope and content.

Under Section 2(2) of the TOS, Linden Lab grants users “a non-exclusive, non-transferable, non-sublicensable, limited, personal, revocable licence to use, reproduce, distribute, prepare derivative works of, display, and perform the Linden Content solely as permitted through the normal functionality of the Service and under these Terms” (Linden Lab, 2017). This is referred to as the **Linden Content Licence**. In contrast, the **Service Content Licence**, as granted by users to Linden Lab for the utilisation of their UGC in accordance with Section 2(3) of the TOS, has a considerably broader scope (Linden Lab, 2017). It is a cost-free licence that targets UGC and its derivative works, including those derivative works created by users themselves. It permits the use of UGC and its derivative works by Linden Lab for any purpose, including commercial gain (Linden Lab, 2017). The **Linden Content Licence** confers limited rights upon users for the use “solely as permitted through the normal functionality of the Service” (Linden Lab, 2017).

The **Service Content Licence** permits Linden Lab to exercise the full range of economic rights over the UGC uploaded to the metaverse. The licence is unconditional, irrevocable, and perpetual, effectively conferring upon Linden Lab the same rights as the owner of the UGC. However, the terms of the **Linden Content Licence** granted to users do not extend the same generosity to the utilisation of Linden Content. Furthermore, the stipulations of the **Service Content Licence** are deemed to be unfair, as the substantial role that UGC plays in the *Second Life* metaverse renders the commercial value of Linden Content contingent upon UGC. In *Second Life*, no Linden Content exists without UGC.

Nevertheless, to a certain extent, the extensive scope of the licence granted to Linden Lab over users' UGC can be justified by the developer's need to operate the metaverse. The normal operation of the metaverse entails the reproduction, modification, distribution, and public availability of UGC. In the digital era, copyright law has been continuously used to challenge the operation of user-generated intermediaries, such as *YouTube* and *MySpace* (O'Brien, 2008, p. 233). This is due to the actions or omissions of such platforms during their normal operation, which may result in the infringement of the copyright of their users or third parties. In this regard, the advance licensing of UGC enables the operation of the metaverse without infringing the rights of the users to their UGC. However, it should be noted that *Second Life* also bestows analogous licences over UGC to other users of the metaverse. Under Section 2(4) of the TOS, the act of publication, uploading, or submission of UGC to a publicly accessible area constitutes a grant of a non-exclusive and cost-free **User Content Licence** to other users. Section 2(4) defines publicly accessible areas as “those areas that are accessible to other users of that aspect of the Service” (Linden Lab, 2017). This licence permits other users of the metaverse “to access the User Content through the Service, and to use, reproduce, distribute, prepare derivative works of, display, and perform the Content” (Linden Lab, 2017). Furthermore, other users are granted a non-exclusive and cost-free **Snapshot and Machinima Content Licence**, which encompasses the rights “to photograph, capture an image of, film, and record a video of the Content, and to use, reproduce, distribute, prepare derivative works of, display, and perform the resulting photograph, image, film, or video in any current or future media” (Linden Lab, 2017). Under Section 2(6) of the TOS, both licences remain in effect even after the removal of copies of UGC from account inventory (Linden Lab, 2017).

The **User Content and Snapshot** and **Machinima Licences** effectively reduce the number of users in the metaverse that the owner of UGC could otherwise exclude from using, reproducing, or distributing the content submitted to the publicly accessible area (Sheldon, 2007, p. 763). These licences serve to diminish the extent of the legal monopoly that the owner of UGC could otherwise leverage by entering into paid licences. This is because users are usually prevented from removing their UGC from the metaverse and distributing and monetising it in the real world or on other digital platforms. Although the **Service Content Licence** granted to Linden Lab can be justified by the technical necessities associated with operating the metaverse, some of the rights contained in the licences granted to other users lack a similar justification. For example, the **User Content Licence** permits other users to engage in the performance and preparation of derivative works of UGC. It is reasonable to conclude that the normal exposure of other users to UGC in a publicly accessible area would not necessitate the preparation of derivative works of the UGC or its public performance. The preparation of derivative works of UGC is essentially related to the reuse of the copyright-protected UGC, which can be prevented by the strict enforcement of copyright (Peukert and Windisch, 2023, p. 4). As the exploitation of these economic rights by other users is more likely to serve commercial purposes, the owner of the UGC may have benefited from such instances of reuse through licensing. Furthermore, the extensive licences granted to other users over UGC are also likely to serve the interests of the developer in enhancing the metaverse with added content. The bundle of rights granted to other users over UGC enables them to create new virtual objects and monetise them in the metaverse, thereby contributing to the virtual economy of *Second Life*. The reduction in copyright protection for UGC is intended to encourage follow-on innovation and creativity in the metaverse. Nevertheless, the increased overall creativity in the metaverse is achieved at the expense of the uncompensated creative labour of the owner of UGC.

The implications of placing UGC in a publicly accessible area of the metaverse differ significantly from those associated with the publication of works in a public space in the physical world. In the physical realm, the publication of a copyrighted work by an author or an authorised individual in a public area, such as a museum or social media platform, does not necessarily confer a non-exclusive and cost-free licence to other individuals. Furthermore, it can be argued that the scope of the **User Content and Snapshot** and **Machinima Content Licences** granted to other users as a result of the publication of UGC in a publicly accessible area surpasses the parameters of the doctrine of fair use. The rights are not licensed for a specific portion of UGC or for particular purposes that can be justified by the public interest. As illustrated in Figure 2, the metaverse possesses an idiosyncratic characteristic that is evidenced by the impact of UGC exposure in publicly accessible areas on its IP regime. This represents a critical aspect of the metaverse that is difficult to justify solely by technical necessities. Although copyright is not transferred to Linden Lab or other users through the publication of UGC in a publicly accessible area, the owner is still required to consent to the granting of a wide array of economic rights without the opportunity to negotiate the terms of these licences or to reap benefits.

In light of the aforementioned discussions, the owner of UGC has only two options to prevent the granting of disproportionate licences to other *Second Life* users. The first option is for the owner to refrain from publishing the content in any part of the metaverse. The second option is for the owner to publish the content in a restricted area, such as a virtual estate or island, while activating virtual land tools (VLTs). As stated in Section 1(4) of Linden Lab's UTCs:

If you do not wish to grant users of *Second Life* a User Content Licence, you agree that it is your obligation to avoid displaying or making available your Content to other users. For example, an island or estate holder may use Virtual Land tools to limit or

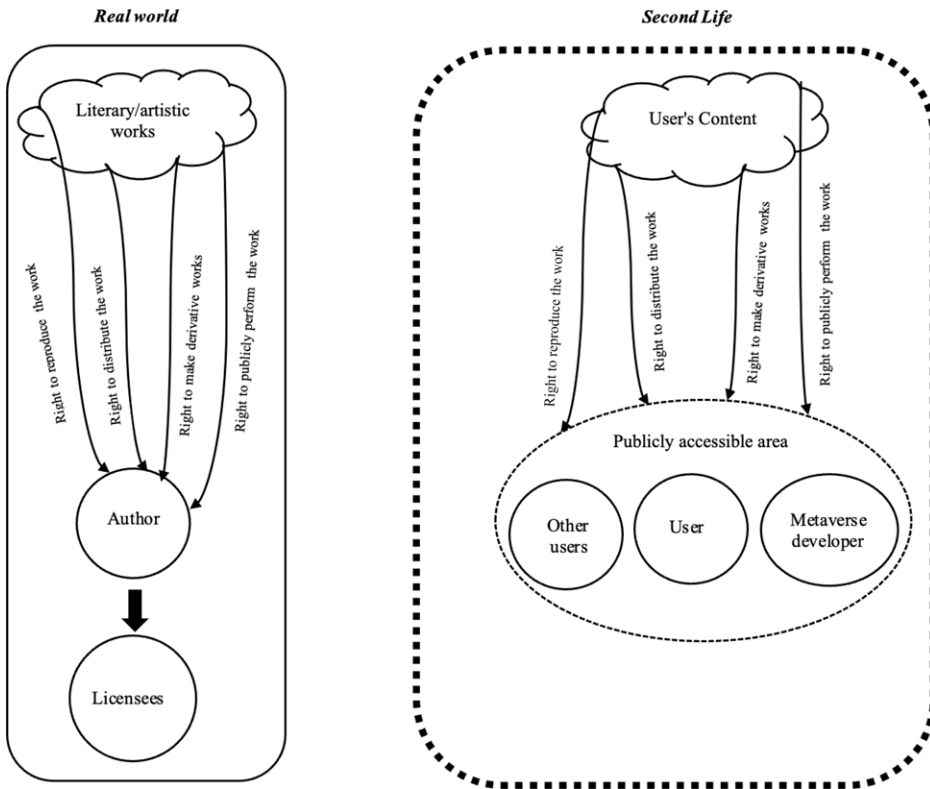


Figure 2. Comparison between the status of the use of copyright-protected work published in the real world and in a publicly accessible area of *Second Life*.

restrict other users' access to the Virtual Land and thus the Content on the Virtual Land (Linden Lab, 2022).

Of the two available options, the decision not to publish UGC in the metaverse may prove unfavourable for those users who seek to profit from the reuse of their UGC. Such users may then be inclined to publish their content in a restricted area. *Second Life* allows users who have purchased a virtual land area from the available grid to access VLTs. VLTs afford users the ability to control access to their privately owned land. The use of VLTs enables users to prohibit other users from entering the virtual private land, observing, taking snapshots of UGC exhibited thereon, or engaging in creative activities as a whole in the restricted area (Stoup, 2008, p. 316). The exclusive nature of virtual lands is reinforced by the fact that VLTs are only available to the owners of such lands.

The resulting access regime of copyright pertaining to UGC uploaded to a restricted area, reinforced by VLTs, resembles those in the real world. The use of VLTs serves to exclude other metaverse users from a bundle of economic rights that would otherwise be available under the terms of the **User Content Licence**. It is important to note, however, that even the stringent use of VLTs in a restricted area does not affect the perpetual and irrevocable **Service Content Licence** granted to Linden Lab. As illustrated in Figure 3, the impact of VLTs is limited to the licences granted to other users. Access to VLTs depends on the ownership of virtual land, real estate, or an island, which entails substantial financial commitment. It can, therefore, be surmised that *Second Life's* UTCs are advantageous to users who can activate VLTs through investment in virtual real estate. This treatment is

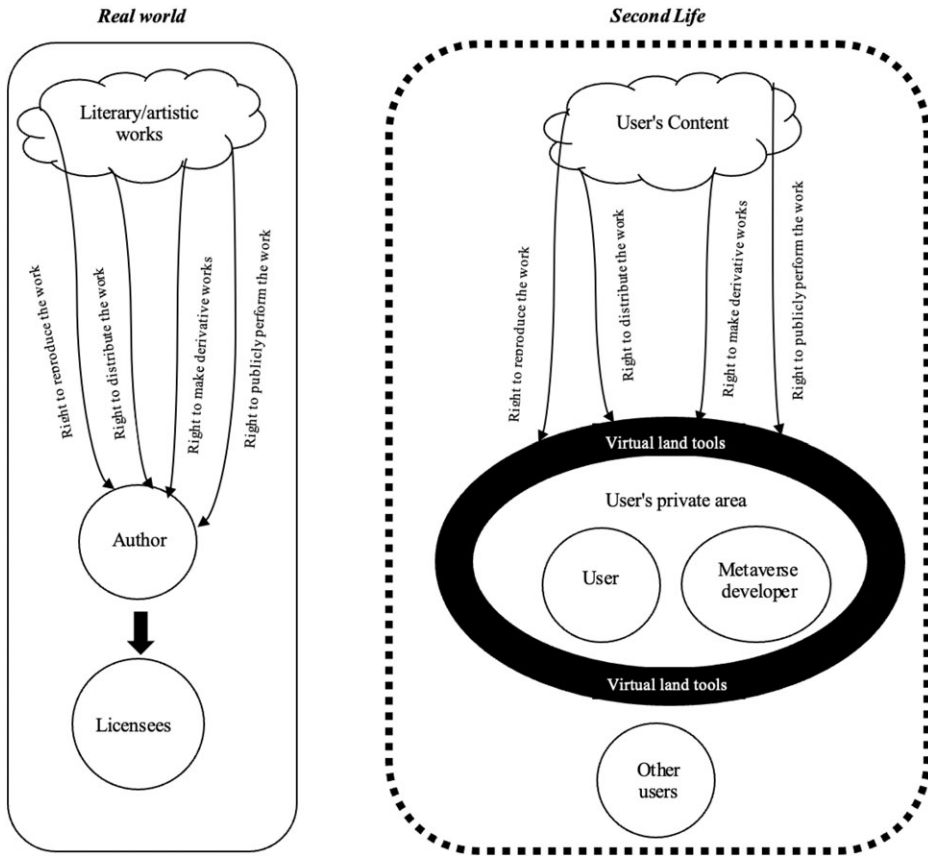


Figure 3. Comparison between the status of the use of copyright-protected work published in the real world and in a restricted area of *Second Life*.

disadvantageous to other users, who must accept the “risk of participating in the service” (Linden Lab, 2017) and the consequences of publishing their UGC in a publicly accessible area.

The critical examination of Linden Lab’s IP policies reveals the existence of an artificial layer between users and UGC. This structure disadvantages creative users who lack significant investment. The copyright ownership of users in the context of UGC in the metaverse is constrained and susceptible to potential disruption due to service interruptions and account termination. The economic rights to UGC are readily accessible to both developers and other users, without adequate compensation being paid to the owner of UGC. Those users who attempt to capitalise on their creative output in the digital market provided by the metaverse are effectively denied this opportunity due to such allocation of rights and licences. The broad licences granted by UTCs permit other users to enter the market freely, not only by copying and distributing UGC, but also by performing and preparing derivative works of UGC. The technological solutions, such as VLTs, that enable users to prevent other users from being granted the **User Content Licence** require investment in virtual lands. These circumstances of the metaverse, in terms of copyright ownership, are extremely disadvantageous for creative users and therefore require external regulation that targets the extent of power exercised by metaverse developers through UTCs.

In examining the implications of contractual clauses on the copyright ownership of users in the metaverse, it is important to acknowledge that users do not relinquish their

fundamental constitutional rights and freedoms by participating in the metaverse, regardless of the extent to which the terms of UTCs may be limiting (Zack, 2007, p. 253). The rights of users, in addition to any rights associated with their IP, remain enforceable on digital platforms, including the metaverse. The enforceability of contractual terms that restrict users' proprietary rights over their intellectual creations may be subject to judicial scrutiny. It is nevertheless important that a statutory framework be established to reinforce the position of users in the metaverse. This issue can be addressed within the framework of consumer protection legislation or as part of a separate legislative initiative focused on addressing the challenges and concerns related to the metaverse. It would be a mistake to assume that digital platforms offering the metaverse experience are no different from existing social media, music, and video streaming platforms. It is also important that a comprehensive overview of the technological capacity of the metaverse and the added layer placed by these platforms between users and their copyrights precede the establishment of those regulatory frameworks.

It is therefore recommended that states implement regulations enabling intervention in the UTCs of the metaverse in cases where users' fundamental rights and freedoms, including those of proprietary rights to original designs and other creations, are restricted or rendered ineffective by contractual means. These regulations should be based on the principle that users retain their freedom to create in the metaverse and the right to uninterrupted access to the fruits of their creative labour. Such rights and freedoms should not be constrained by metaverse developers through UTCs unless there is sufficient justification based on the technical necessities of the platform (Sheldon, 2007, pp. 786–787). With a focus on the emerging metaverse policies and regulations in East Asia, particularly in Japan, China, and South Korea, the following section emphasises the necessity for policymakers to address the regulation of user creativity in the metaverse. It also examines policymakers' awareness in these selected countries regarding the pressing matters of the metaverse and user creativity.

4.2. Intellectual property policies for the metaverse in East Asia

4.2.1. Japan

In comparison to other countries in East Asia, Japan exhibits the most favourable statistics for the predicted market size and the user website traffic of existing MMORPGs (Ministry of Internal Affairs and Communications of Japan, 2023, pp. 14–15). This is accompanied by a notable level of awareness within Japanese society and the government regarding the concept, potential, and limitations of the metaverse (Ministry of Internal Affairs and Communications of Japan, 2023). Japanese companies, including *Sony* and *Nintendo*, have already established a presence in this emerging market by offering their own customised versions of the metaverse (Ministry of Internal Affairs and Communications of Japan, 2023). In order to enhance the awareness of the metaverse, the Japan Patent Office recently hosted the G7 Heads of IP Offices Conversation in the virtual space of the Itsukushima shrine in Hiroshima. The directors of the respective IP offices participated in the event via their customised avatars (Japan Patent Office, 2023).

Furthermore, in addition to the growing awareness of the potential of the metaverse for the entertainment industry, Japan has taken consistent steps towards preparing for the legal risks associated with the use of the metaverse. While no specific legislation currently exists in Japan that addresses the metaverse, the IP Promotion Plan has explicitly acknowledged the urgent need to address the issue of legal protection of design and other content in the metaverse (Japan Intellectual Property Strategy Headquarters, 2023). It has been emphasised that collaboration between the public and private sectors is a key factor in ensuring legal protection in the metaverse of the IP belonging to third parties (Japan Intellectual Property Strategy Headquarters, 2023, pp. 12–13). The objective of the IP

Promotion Plan is to establish a creator-led content ecosystem on digital content distribution platforms, including the metaverse (Japan Intellectual Property Strategy Headquarters, 2023). Furthermore, it underlines the importance of compensating IP owners for infringements in the metaverse and recognises the advantages of co-creating new content with users from diverse cultural backgrounds (Japan Intellectual Property Strategy Headquarters, 2023, pp. 64–65). Despite the IP Promotion Plan successfully identifying some issues related to UGC in the metaverse, it does not propose concrete solutions beyond hinting at the possibility of copyright reform and suggestions of soft law measures. For example, it mentions the Act on Improving Transparency and Fairness of Digital Platforms, which obliges selected digital platform providers to disclose planned modifications to their UTCs to a central authority in advance. However, the IP Promotion Plan does not provide further clarification on the extent to which this legislation can be applied to metaverse platforms.

The collaboration among government bodies, legal experts, industry stakeholders, and academia in Japan has led to the establishment of a multi-stakeholder forum that discusses the IP-related implications of the metaverse. In November 2022, the Cabinet Office established the Public-Private Partnership Council on Dealing with New Legal Issues Concerning Content in the Metaverse (Ministry of Internal Affairs and Communications of Japan, 2023, p. 31). The council has, in turn, established a sub-committee to deal with the issue of the use of IP in the context of virtual and real spaces. The Public-Private Partnership Conference on the New Legal Issues Concerning Content in the Metaverse (PPC) has particularly addressed the status of UGC in the metaverse and acknowledged the limitations imposed by the UTCs on UGC (Public-Private Partnership Conference on the New Legal Issues Concerning Content in the Metaverse, 2023). Nevertheless, thus far, this discourse has not progressed beyond an exhortation for metaverse users to comply with the rules set forth in UTCs and to act in compliance with the granted copyright permissions for UGC (Public-Private Partnership Conference on the New Legal Issues Concerning Content in the Metaverse, 2023, pp. 22–23). The discussions held by the PPC have addressed the relationship between users and metaverse developers, with a focus on the allocation of IP rights through UTCs. The PPC has advised that developers ensure that users communicate the terms of use of their UGC to other users of the metaverse transparently and unambiguously (Public-Private Partnership Conference on the New Legal Issues Concerning Content in the Metaverse, 2023, p. 26). In addition, it has been strongly recommended that the owners of UGC in the metaverse determine the secondary use of their content on an individual basis and grant licences through an information system established for the management of rights (Public-Private Partnership Conference on the New Legal Issues Concerning Content in the Metaverse, 2023, p. 23).

The Ministry of Internal Affairs and Communications of Japan has published a policy paper that provides a comprehensive report on the metaverse (Ministry of Internal Affairs and Communications of Japan, 2023, p. 30). Although the report does not embrace the notion of users possessing ownership rights to virtual property, it acknowledges users' entitlement to access and utilise the digital data of virtual property in accordance with UTCs (Ministry of Internal Affairs and Communications of Japan, 2023, p. 31). The report does not propose immediate measures to intervene in UTCs, as it intends to continue monitoring the evolution of case law concerning disputes between users and metaverse developers in Japan and abroad before formulating a definitive government policy. The current state of emerging policies in Japan acknowledges UTCs as the sole governing rule of the metaverse. This approach recognises the broad discretion granted to metaverse developers, who can shape the structure and internal rules of their platforms. Furthermore, it recommends that developers establish user-led rules in the metaverse (Ministry of Internal Affairs and Communications of Japan, 2023, pp. 36–37). However, these policy reports lack an in-depth examination of the metaverse, failing to fully

comprehend the encroachment of users' moral and economic rights over their UGC through the data ownership and licensing clauses in UTCs.

4.2.2. China

China has gained a reputation for its rigorous technological controls and legal frameworks governing the operation of the Internet and the expanding influence of major telecommunications firms. From the construction of the "Great Firewall" to the implementation of sanctions for non-compliant platform providers (Chen et al., 2007–2008), China's approach to the metaverse can be characterised as an extension of the same rule-based approach to cyberspace. This approach prioritises the prevention and punishment of criminal activities on virtual platforms, including online gambling and fraud (Abramovitch and Cummings, 2007, p. 78).

Although on a relatively limited scale, the issue of IP in the metaverse has also been discussed in the context of extending current regulations to virtual worlds (Kalyvaki, 2023, p. 88). From the outset of the development of virtual worlds, China has been receptive to the concept of user ownership of virtual property. In the case of *Li Hong Chen v. Beijing Arctic Ice Technology Development Co.*, the Beijing Chaoyang District People's Court recognised the commercial value embedded in virtual property, taking into account the money, time, and labour spent by the claimant on the virtual items (Xinhua, 2003; see also Fairfield, 2005, p. 1084; Kayser, 2006, pp. 66–67; Roquilly, 2011, p. 661; Chao, 2010, p. 9; Glushko, 2007, pp. 518–519). The recognition of virtual property has gained momentum in China with attempts to regulate the metaverse at the municipal level, particularly in the municipalities of Shanghai and Beijing. The stance of the Chinese government was also influenced by this trend, which ultimately led to the establishment of the Metaverse Industry Committee (Ministry of Internal Affairs and Communications of Japan, 2023, p. 20). In addition, in March 2022, the National People's Congress and the Chinese People's Political Consultative Conference convened two political sessions in order to discuss and examine the opportunities and challenges offered by the metaverse (Katterbauer, 2023).

Despite the early recognition of the concept of virtual property, China has yet to implement comprehensive regulations targeted at the metaverse. Currently, there is no specific legislation dealing with the metaverse. The Three-Year Action Plan for Metaverse Industry Development is one of the most recent policy documents on the subject, which simply emphasises the need for enhanced IP protection in the metaverse (Ministry of Industry and Information Technology Office, 2023). The goal of the three-year plan is to develop the metaverse with structured IP protection that aligns with international standards (Interesse, 2023). In general, China aims to create a content-creation ecosystem and user-friendly IP protection in the metaverse by involving large enterprises, small innovative communities, and artists (Ministry of Industry and Information Technology Office, 2023). However, China's attempts to regulate digital platforms mostly target the unintended use of algorithms by platform providers to the detriment of users (Katterbauer, 2023). The current state of regulation and policy overlooks the impact of UTCs on users' copyright in the metaverse. The UTCs of metaverse developers deserve the same rigorous scrutiny as the algorithms used by these platform providers to manage user behaviour. Therefore, there is an imminent need for further legal measures to monitor and regulate the impact of UTCs on user creativity.

4.2.3. South Korea

South Korea has demonstrated a long-standing interest in the concept and potential of the metaverse. The country has gradually augmented investment in digital twin city projects, including the flagship project *Metaverse Seoul*, which is scheduled for release in 2026

(Stephens, 2022, p. 9). Furthermore, South Korea is a prominent global hub for metaverse-related technology, with significant technological contributions from Samsung Electronics and LG Electronics in the field of VR and AR technologies (Kyoung-mi, 2023). These contributions have also been reflected in the considerable number of patent applications for metaverse-related content, display, and other technologies (Kyoung-mi, 2023).

South Korea has previously faced criticism for the lack of regulations designed to safeguard and promote the domestic gaming industry (Jin and Chee, 2008, p. 55). The critical observations have urged the government to prevent large corporations from monopolising proprietary rights to game products (Jin and Chee, 2008, p. 55). This is because game developers have not recognised the ownership of virtual property by users, and, as a result, they have successfully refuted allegations of anti-competitive practices concerning the prohibition of user ownership of virtual property (Fairfield, 2005, p. 1088). Notwithstanding this criticism concerning the failure to safeguard the interests of the domestic game industry, the amendments to Article 13 of the 2007 Game Industry Promotion Act have resulted in enhanced IP protection of game products, which has been beneficial to the interests of MMORPG developers. Article 14, while acknowledging the rights and interests of users in the gaming industry to a limited extent, such as in the prevention and rectification of damages incurred by users of gaming products, fails to address the IP rights of users over UGC (Fairfield, 2005, p. 1088).

Similar to the lack of regulation on the recognition and enforcement of virtual property rights, the regulation of the metaverse in South Korea has primarily relied on existing norms of criminal law, which are used to prevent and punish criminal activities in the metaverse (Fairfield, 2008, p. 430). It is nevertheless noteworthy that South Korea is currently the only country in East Asia to have developed a national strategy and ethical principles for the metaverse. The Metaverse New Business Leading Strategy promotes the ethical principles of equity, inclusion, and diversity for the metaverse and advocates for the establishment of self-regulatory standards in the metaverse to govern user behaviour (The Ministry of Science and ICT, 2022). Furthermore, the strategy has prompted the discussion of regulatory frameworks by indicating the formation of a pan-governmental consultative body based on self-regulation, minimum regulation, and pre-emptive regulation of users' virtual property (The Ministry of Science and ICT, 2022). However, the current focus of metaverse regulation remains limited to users' safety and privacy.

5. Conclusion

Today, the metaverse is positioned as a potential major source of creativity in the near future. Yet, our analysis indicates that the existing version of the metaverse, represented by the self-proclaimed user creativity-friendly MMORPG, *Second Life*, is highly likely to stifle user creativity. This is due to the introduction of an extra layer by UTCs of the metaverse, which creates an artificial barrier between users and their copyrights. The artificial metaverse layer has a particularly detrimental impact on the ownership of UGC by users. Firstly, the structure of copyright ownership imposed by the UTCs presents a significant disadvantage to those users engaged in creative activities without significant investment in virtual land and other assets. Notwithstanding the recognition of user copyright ownership in the context of UGC, it is nevertheless substantially constrained and susceptible to potential disruption due to the occurrence of service interruptions and account termination. Although service interruptions or termination may sometimes be justified by objective reasons, the metaverse developer is afforded considerable discretion by UTCs in closing user accounts without prior notice or justification. Additionally, the waiver of moral rights to UGC in the metaverse lacks the applicability of the justifications raised by other digital platforms. The current state of the metaverse demonstrates a pervasive and simplistic approach to users' moral rights, failing to consider the technological features of the platform

and the perception of the public within the metaverse. Furthermore, the economic rights to UGC retained by the owner of the UGC are readily accessible to both developers and other users, without adequate compensation being paid to the owner of the UGC. Those users who attempt to monetise their creative output in the digital market provided by the metaverse are effectively denied this opportunity due to the manner in which rights and licences are allocated. The comprehensive licences granted by UTCs permit other users to enter the market freely, not only by copying and distributing UGC but also by performing and preparing derivative works of UGC. In light of these circumstances, it is evident that external regulation is necessary to address the extent of power exercised by metaverse developers through UTCs.

Metaverse-specific regulations in the region remain in their infancy as policymakers endeavour to identify priority areas for regulation. Therefore, forecasting the precise trajectory of these regulations is a challenging task at present. The nascent metaverse policies in Japan, South Korea, and China often employ colourful terminology, such as a creator-led IP ecosystem, user-led rules, or self-regulation of the metaverse. These rules may be devised to shield users' copyrights against potentially destructive provisions of UTCs. However, it is regrettable that the emerging regulatory frameworks in East Asia do not yet address the potential risks associated with the metaverse as a conduit between users and their copyright. The ramifications of the artificial metaverse layer and its impact on users' copyright-protected works have been largely disregarded in policy reports and other preparatory documents. Japan's policy documents appear to be relatively more promising in the region with regard to their comprehensive approach to IP issues in the metaverse, including the status of UGC. Nevertheless, while the Japanese approach demonstrates a certain level of awareness of the implications of UTCs, it is overly focused on the so-called "internal matters" of the metaverse.

The dominant approach to emerging metaverse policies in East Asia entails several risks. First, it limits the metaverse and IP discourse to the protection of real-world IP in the metaverse, such as trademarks and designs of real businesses. Second, it leaves the destiny of UGC to UTCs, which may not be the most optimal approach given the high bargaining power of metaverse developers. Third, it over-relies on regulating algorithms for user privacy and safety, which may be ineffective in preventing the negative impacts of UTCs on UGC. In light of these risks, it is incumbent upon policymakers to give close attention to studies that highlight the issues of UTCs and their impact on copyright and competition in such digital markets. While excessive regulation of UTCs may function as a deterrent for developers in terms of releasing their platforms in specific metaverse-unfriendly countries, inadequate legal intervention in the metaverse could result in users being deprived of protection for the products of their creative labour. Emerging policies should consider the extent to which the specific provisions of UTCs collectively deprive users of their copyright and control over UGC. The waiver of the non-enforceability of moral rights to UGC should be declared invalid unless the metaverse developer can substantiate it by demonstrating that it is technically necessary for the normal operation of the platform. In the event of service interruptions, terminations, or account closures that result in the loss of UGC, the metaverse developer must be required to provide monetary or non-monetary relief to the user. The licences granted by users to the metaverse developer and other users through UTCs should be subject to scrutiny by an external regulatory framework to ensure that they align with the technical necessities of the platform and do not disadvantage the owner of UGC. It is recommended that VLTs be made available to all owners of UGC who wish to avoid licensing their creations to other users on the platform. In all cases, the external regulation should be based on the core principle that users retain their freedom to create in the metaverse and the right to uninterrupted access to the fruits of their creative labour.

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