

Beyond Pixels and Profiles: Unveiling the Legal Identity of Avatars in the Metaverse

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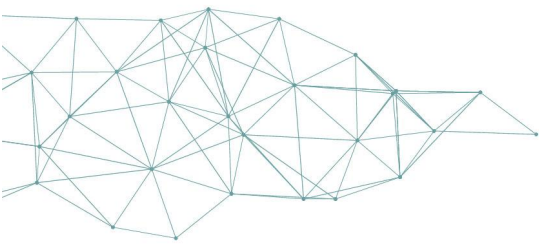
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Abstract

This paper delves into the complex legal landscape surrounding digital avatars, particularly focusing on their legal status within the existing legal framework, which lacks specific norms tailored to their unique characteristics. This analysis will explore how existing legal concepts can be reinterpreted and applied to avatars, examining their potential to be recognized as extensions of human users or legal entities. By proposing a structured approach to redefining legal norms for avatars, this paper aims to contribute significantly to the legal discourse on digital identities in virtual spaces. The goal is to establish a clear legal framework to ensure that the ongoing development of digital identities is supported by a robust and adaptable legal structure. This framework needs to be strong and flexible enough to address the complexities presented by digital avatars and artificial intelligence.

Keywords: Avatars, artificial intelligence, legal status, IP rights, privacy, property rights, metaverse

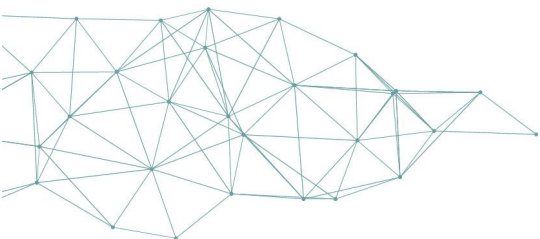
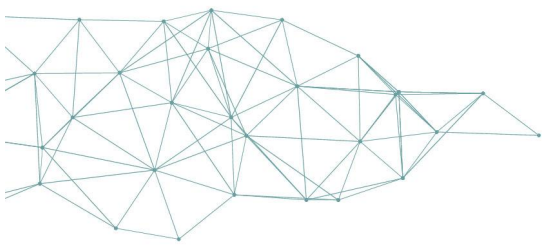


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1. Introduction

This paper will explore the complex legal issues surrounding digital avatars, focusing specifically on their legal status. Currently, the legal framework lacks specific norms tailored to the unique characteristics and challenges posed by digital avatars. As a result, there is a pressing need to adapt existing legal norms, originally designed for different contexts, to suit the specificities of avatars within virtual environments.

The core of this research will examine the potential of avatars to qualify for legal recognition and eventually legal rights, drawing parallels with legal entities and natural persons, while acknowledging the distinct differences that avatars present due to their digital nature and the degree of autonomy provided by AI technologies. In the first part of this paper, I will analyse the implications of granting legal status to avatars, considering both the potential benefits and the ethical, social, and legal risks. This discussion will help in framing a balanced view of how the law might evolve to incorporate avatars as either extensions of human users or independent legal entities, ensuring that rights and responsibilities are appropriately assigned and managed. In the second part, the paper will address the challenges of enforcing legal norms in the digital domain, particularly concerning identity verification, ownership disputes, and the management of intellectual property. By reviewing and critiquing how existing laws handle similar issues in other domains, my aim is to propose a set of legal adaptations that could provide clearer and more effective governance of avatars. The goal is to assess how traditional legal concepts - such as personhood, property and accountability - can be reinterpreted and applied to avatars.

Ultimately, this paper seeks to contribute to the ongoing legal discourse by offering a structured approach to understanding and developing the legal norms needed to effectively regulate digital avatars in various virtual settings. This will not only aid in legal clarity but also ensure that the evolution of digital identities is supported by a robust and adaptable legal framework.

2. Avatars

2.1. Avatars, past and present

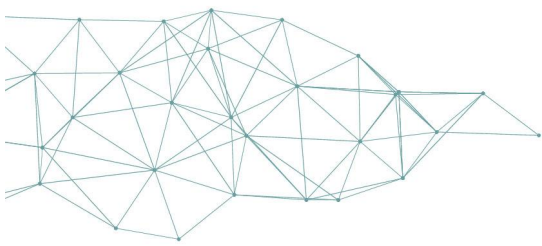
The term 'avatar' originates from the Sanskrit word 'avatāra', which in Hinduism signifies the earthly manifestation of a deity.¹ This concept has evolved beyond its religious origins to symbolise the physical representation or embodiment of a person or idea.

In modern digital settings, an avatar typically refers to the digital representation that individuals select to personify themselves on various online platforms, including video games, social media, and forums.² An avatar can be a virtual image or character, like those seen in video games that a user controls, or it may represent an alter ego created by a user to interact within a digital environment.

Avatars play diverse roles across the digital landscape. In gaming, for example, avatars often resemble characters in a theatrical play, allowing players to 'wear' these digital personas temporarily, much like costumes. In these instances, the connection

¹ S Scerri, 'The Real Meaning and Evolution of Avatars: From Deities to Digital Identities', October 27, 2023, <https://www.csai.io/the-real-meaning-and-evolution-of-avatars-from-deities-to-digital-identities/>.

² N Sheth, 'Hindu Avatāra and Christian Incarnation: A Comparison' (2022) *Philosophy East and West*, 52(1), 98.



between the user and the avatar is generally superficial, mirroring the role-playing elements of traditional tabletop games such as Dungeons & Dragons.

Conversely, there are emerging types of avatars that are still gaining a foothold in the intricate social networks of virtual spaces. These newer avatars often depict a stronger link between their creators and the digital world. The evolution and integration of such avatars into digital societies remain ongoing, showing that they are still new in the vast world of virtual interactions.

2.2. Realistic AI avatars

The development of lifelike avatars has greatly benefited from advancements in two innovative technologies: neural networks and genetic algorithms.³ These technologies play a crucial role in creating avatars that not only resemble humans closely but also display complex behaviours, such as accurately mimicking human expressions and postures.⁴

Neural networks, which are a type of machine learning algorithm inspired by the human brain's structure, involve layers of nodes or neurons connected in a network.⁵ Each node processes information and passes it on, building up to a final decision output. This learning process is enhanced by adjusting the connections, or weights, between nodes based on the data received.⁶ In avatar creation, this capability allows neural networks to replicate human facial expressions and reactions, enabling digital personas to exhibit authentic emotional responses.⁷ This can result in avatars that better understand and respond to user input, anticipate user needs, and provide personalized experiences.

Additionally, neural networks can improve the realism and naturalness of avatar movements, expressions, and speech, enhancing immersion and engagement in virtual environments. Overall, integrating neural networks into avatars can significantly enhance their functionality and effectiveness in various applications, from virtual assistants to gaming and entertainment experiences.

Genetic algorithms provide a different benefit by employing the principles of evolution and genetics to optimize solutions to complex problems.⁸ These algorithms simulate natural selection by evolving solutions over generations, refining traits to adapt to specified criteria.⁹ This is particularly useful in customizing avatars, allowing for detailed personalization of physical appearance and behaviours to match human nuances more closely.

In essence, neural networks contribute the analytical power to capture and replicate intricate human behaviours and expressions, while genetic algorithms offer the adaptive capabilities to fine-tune avatars for more personalized and varied

³ K Shen, C Guo, M Kaufmann, et al., 'Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) (2023) 16911.

⁴ *Idem.*

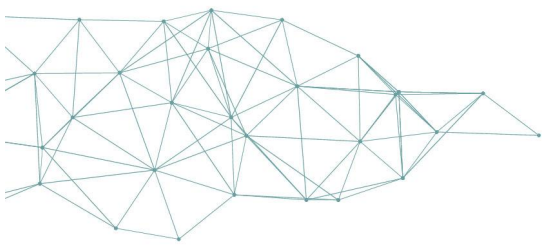
⁵ KO Stanley, J Clune, J Lehman, et al., 'Designing neural networks through neuroevolution' (2019) *Nature Machine Intelligence* 1(1) 24.

⁶ *Idem.*

⁷ E Lushnikov, 'Neural Network that generates Photorealistic Avatars', Feb 22, 2024, Medium, <https://pub.aimind.so/neural-network-that-generates-photorealistic-avatars-c9cd1112ee5b>.

⁸ JA Diego-Mas and J Alcaide-Marzal, 'A computer based system to design expressive avatars' (2015) *Computers in Human Behavior*, 44, 1, <https://doi.org/10.1016/j.chb.2014.11.027>.

⁹ A Sohail, 'Genetic algorithms in the fields of artificial intelligence and data sciences' (2023) *Annals of Data Science* 10(4), 1007.



representations. Together, these technologies are transforming avatar design, enhancing the realism and engagement of virtual characters by mimicking the subtleties of human interaction and appearance.

A compelling example of a realistic AI avatar engaging in human-like conversation can be observed in a video where a journalist interacts with a Sensorium Avatar.¹⁰ Sensorium Galaxy is a platform set to launch a ground-breaking virtual universe where AI-driven and human characters exist side by side, fostering real-time interactions. This platform has already introduced several AI personalities, featuring human-like physical features and behaviours, effectively narrowing the distinction between real and virtual worlds.

Additionally, during a notable interview on the Lex Fridman podcast, Mark Zuckerberg presented Meta's latest development in virtual reality avatars, named Codec.¹¹ Utilising advanced scanning technology, these new avatars provide highly accurate 3D facial representations,¹² a significant improvement over previous versions of Meta's avatars that faced criticism for their lack of realism. These new Codec avatars are strikingly lifelike,¹³ illustrating Meta's commitment to enhancing the realism of virtual interactions.

2.3. Case study: The virtual influencers

Virtual influencers, created using advanced technologies such as 3D modelling, animation, and artificial intelligence (AI), have successfully established a unique space for themselves in the realm of social media engagement. These digital characters vary from creatively stylized to hyper-realistic forms, effectively diminishing the boundaries between the imaginary and the real. Behind these captivating avatars are entities ranging from technology firms to creative content studios and public relations agencies. These creators endow the virtual influencers with distinctive personalities, elaborate backstories, and specific traits, thereby making them more relatable and appealing to targeted audience segments.¹⁴

These virtual personas engage with their followers through a carefully curated mix of scripted content and AI-enhanced interactions, including posts, videos, and live events.¹⁵ This approach not only captures the audience's attention but also builds a foundation of trust and relatability, essential for sustained engagement. Regular

¹⁰More information can be found at <https://www.uploadvr.com/discover-sensorium-galaxys-carl-cox-intermundium-show/>.

During a demonstration, a journalist engaged in a chat with Katherine, a virtual character who dreams of becoming a makeup artist while 'living' in Amsterdam. Despite Katherine not being real, the interaction was surprisingly engaging, often surpassing conversations with actual humans in fluidity and depth. Cf. <https://venturebeat.com/games/sensorium-demos-ai-driven-avatars-as-latest-virtual-beings/>.

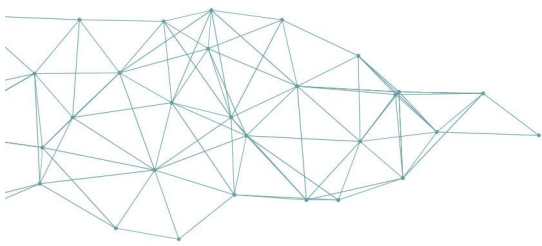
¹¹ <https://www.youtube.com/watch?v=EohlA7QPmmE>

¹² H Kennington, 'Pixel Codec Avatars: One Step Closer to the Singularity?', Wrong Speak Publishing, Oct 2, 2023, <https://www.wrongspeakpublishing.com/p/pixel-codec-avatars-one-step-closer>.

¹³ Shen, Guo, Kaufmann, et al., note 3.

¹⁴ MJ De Brito Silva, L. de Oliveira Ramos Delfino, K Alves Cerqueira, et al., 'Avatar marketing: a study on the engagement and authenticity of virtual influencers on Instagram' (2022) Soc. Netw. Anal. Min. 12, 130, <https://doi.org/10.1007/s13278-022-00966-w>.

¹⁵ For example, the virtual fashion icon Noonouri shares content that showcases 'her' alongside real-world celebrities, creating an immersive and seemingly authentic experience for her followers (Z Shen, 'Shall brands create their own virtual influencers? A comprehensive study of 33 virtual influencers on Instagram' (2024) Humanit Soc Sci Commun 11, 177, <https://doi.org/10.1057/s41599-024-02698-y>)



interactions, whether through updates, sharing photos, or participating in digital gatherings, ensure that followers remain connected and invested in the virtual influencers' lives.

The interaction is further enriched by AI systems that simulate personal engagement through responses to comments and participation in real-time activities such as Q&As and live streams. While these interactions are automated, they are intricately designed to mimic genuine human interactions, significantly influencing the followers' perceptions and buying behaviours.

Examples of such influencers include Lil Miquela, who has collected a following of three million on Instagram and secured endorsements from luxury brands like Prada and Off-White, demonstrating the considerable marketing power of these avatars.¹⁶ In Brazil, Lu do Magalu has become a household name on Facebook, engaging over 14.7 million followers and collaborating with major brands such as Adidas.¹⁷ These influencers showcase the wide-reaching influence and commercial viability of virtual personas in modern marketing strategies.

Through these expertly designed and managed digital identities, virtual influencers have become pivotal players in digital marketing, reshaping how brands connect with and captivate their audiences online. Their ability to maintain a continuous, interactive presence on social media platforms makes them invaluable assets in the evolving landscape of digital engagement and consumer influence.¹⁸

3. The legal status of the avatar: present and future

The legal status of avatars is a complex issue emerging with the advent of the metaverse, sparking debates about their identity and autonomy within legal frameworks. A key question centres on whether avatars should be viewed merely as digital proxies for the humans or entities controlling them, or if they should be considered autonomous legal entities with their own set of rights and responsibilities.¹⁹

If avatars are seen simply as extensions of human users, they do not possess independent legal status. In this view, avatars would be covered under intellectual property laws as creations of their users, but any legal claims or protections would ultimately pertain to the human or corporate entity behind the avatar, not the avatar itself. This perspective conditions the legal implications in issues like defamation, privacy, or IP rights infringements, where the human user would be directly accountable, without 'refractions' to the avatar.

On the other hand, considering avatars as separate legal entities introduces a novel concept in law. This would position avatars as a *tertium genus*, a third nature of sorts that exists somewhere between persons and objects.²⁰ Such a categorization could even lead

¹⁶P. Parsani, 'The AI Behind Virtual Influencer Lil Miquela', November 22, 2023, <https://www.cut-the-saas.com/ai/the-ai-behind-virtual-influencer-lil-miquela>.

¹⁷W. Geysler, 'The State of Influencer Marketing 2024: Benchmark Report', February 1, 2024, <https://influencermarketinghub.com/influencer-marketing-benchmark-report/>.

¹⁸B. Koles, A Audrezet, JG Moulard, et al., 'The authentic virtual influencer: Authenticity manifestations in the metaverse' (2024) *Journal of Business Research*, 114325.

¹⁹On this issue see BC Cheong, 'Avatars in the Metaverse: Potential Legal Issues and Remedies' (2022) *International Cybersecurity Law Review* 3(2), 467, <https://doi.org/10.1365/s43439-022-00056-9>.

²⁰Discussing the application of the 'tertium genus' concept to AI see TG García-Micó, 'Electronic Personhood: A *Tertium Genus* for Smart Autonomous Surgical Robots?', in M Ebers and M Cantero Gamito (eds) *Algorithmic*

to the creation of a new legal category termed 'MetaPerson'.²¹ In this scenario, avatars could potentially bear legal responsibility for their actions and could also possess rights, potentially mirroring those afforded to humans, such as fundamental rights recognized under the existing law.²²

3.1. 'Persons' under the law

In contemporary legal frameworks, entities are generally classified into two distinct categories: natural persons and legal persons.²³ Natural persons are individuals with inherent legal rights and responsibilities, whereas legal persons - which can include corporations, foundations, associations, and even state bodies - gain their legal personality through specific legal provisions.²⁴ These entities are structured around individuals and/or assets and require a formal legal acknowledgement to operate and participate in legal relationships.

Historically, the concept of legal personality has evolved. There were times when certain human groups, such as women and slaves, were denied legal personhood, highlighting the adaptability of legal systems to societal changes and ethical understandings.²⁵ Interestingly, the scope of what can be considered a legal entity has expanded in some jurisdictions. For example, in New Zealand, significant natural features like national parks and rivers have been granted legal personality, recognizing them as legal entities due to their cultural significance to the Maori people.²⁶

Despite these advancements, modern legal systems have yet to recognize avatars as entities with legal personhood. The challenge in legally recognizing avatars as a person under the law lies in their inherent nature as extensions of human will, without independent desires or intentions. Currently, avatars primarily function as digital representations controlled by humans or corporations for various interactions within virtual environments.²⁷ They lack the autonomy that characterizes entities capable of bearing legal rights and obligations. Thus, under the existing scenario, the legal framework does

Governance and Governance of Algorithms. Data Science, Machine Intelligence, and Law, (Springer, Cham, 2021), https://doi.org/10.1007/978-3-030-50559-2_5

²¹ Cheong, note 19, 477-479.

²² A Adrian, *Law and Order in Virtual Worlds: Exploring Avatars, Their Ownership and Rights* (IGI Global, 2010), 49-88.

²³ M Wolff, 'On the Nature of Legal Persons' (1938) *Law Quarterly Review*, 54(4), 494.

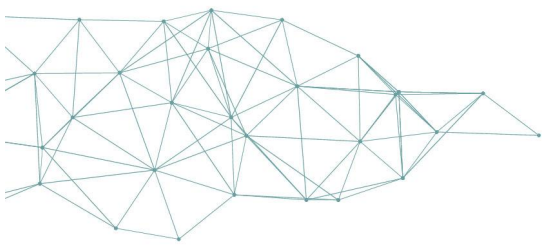
Formally, legal personality denotes the capacity to hold rights and obligations. This definition remains consistent across different legal systems, with the ability to exercise these rights and obligations not necessarily tied to legal capacity. Legal personality extends to infants, profoundly mentally disabled individuals, and those in comatose states, who lack the capacity to exercise rights and obligations. This gap underscores the distinction between legal personality and legal capacity (C Novelli, G Bongiovanni and G Sartor, 'A conceptual framework for legal personality and its application to AI' (2022) *Jurisprudence* 13(2)194, 198, Doi:[10.1080/20403313.2021.2010936](https://doi.org/10.1080/20403313.2021.2010936); JW Walters, *What is a person?: An ethical exploration* (University of Illinois Press, 1997).

²⁴ Cf. JR Trahan, 'The distinction between persons &(and) things: an historical perspective' (2008) *Journal of Civil Law Studies* 1(1), 9.

²⁵ See AJ Kurki, *A Theory of Legal Personhood* (Oxford University, 2019).

²⁶ B. Williams, 'Reconceptualizing Entrenched Notions of Common Law Property Regimes: Maori Self-Determination and Environmental Protection Through Legal Personality for Natural Objects' (2019) *Buffalo Environmental Law Journal* 26(1), 157-181.

²⁷ P Parks, R Cruz, and SJG Ahn, 'Don't hurt my Avatar: the use and potential of digital self-representation in risk communication' (2014) *International Journal of Robots, Education and Art* 4(2)10, 10-11.



not support the notion of avatars having legal personality,²⁸ and I contend that there is no compelling justification for such recognition at this time. Avatars, as they exist now, depend entirely on human input and act under the control of their users and there is no compelling legal (or ethical) reason to ‘separate’ avatars from their users and/or creators.

3.2. Legal personality of avatars

However, the landscape could shift dramatically with the further development of AI technology. Should the legal system choose to grant legal personality or equivalent status to AI systems,²⁹ this status should logically extend to AI-driven avatars.³⁰

AI-driven avatars, which could potentially operate independently of direct human oversight,³¹ present a fascinating legal conundrum. If avatars driven by sophisticated AI systems can make decisions and interact autonomously, they might blur the lines between traditional legal categories. Such avatars could theoretically act more like agents than mere tools, challenging existing legal definitions and possibly requiring a new category of personhood for AI-driven entities. This prospective shift raises critical questions about the allocation of rights and responsibilities, the nature of autonomy, and the definition of agency within both legal and ethical domains. As AI continues to advance, legal systems may need to evolve significantly to accommodate these new forms of digital beings, potentially leading to ground-breaking changes in the way the law interprets the concept of a ‘person’.³²

If avatars powered by sophisticated AI begin to learn independently from their human interactions, make autonomous decisions, engage in contracts, and manage activities within virtual environments like the metaverse, then the argument for recognizing them as independent legal entities becomes stronger.³³ If the situation evolves to that scenario, the notion of AI-driven avatars acquiring legal personality might move from a theoretical discussion to a potential necessity.³⁴

Such a development would fundamentally change the nature of avatars from mere digital proxies to entities with their own rights and responsibilities.³⁵ This transformation would not only recognize their operational autonomy but also require the assignment of legal accountability and rights similar to those enjoyed by natural and – even with higher similarities – legal persons.

²⁸ E Michalkiewicz-Kądziała and E Milczarek, ‘Legal boundaries of digital identity creation’ (2022) *Internet Policy Review* 11(1), DOI: 10.14763/2022.1.1614.

²⁹ In general about this issue see Raposo, note 29.

³⁰ For this discussion see Cheong, note 19, 471-478; MD Garasic, ‘Shouldn’t Our Virtual Avatars Be Granted Human Rights Too?’ (2022) *AJOB Neuroscience* 13(3), 160, <https://doi.org/10.1080/21507740.2022.2082583>; S Kozuka, ‘The avatar law and (cyber) transnational contracts’ (2024) *Uniform Law Review*, <https://doi.org/10.1093/ulr/unae008>.

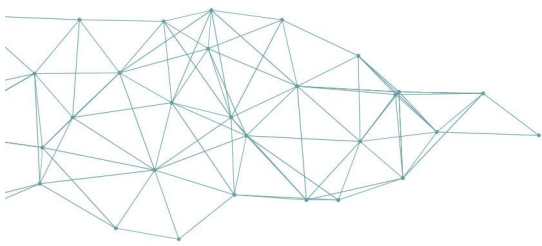
³¹ Sensorium Arc, ‘What Are AI Avatars: A Guide to Intelligent Virtual Beings’, June 29, 2022, <https://sensoriumarc.com/articles/what-are-ai-avatars>.

³² This idea also in Raposo, note 29, 1045.

³³ J Doomen, ‘The Artificial Intelligence Entity as a Legal Person’ (2023) *Information & Communications Technology Law* 32(3), 277, <https://doi.org/10.1080/13600834.2023.2196827>.

³⁴ LA Mengual, ‘A legal status for Avatars in the Metaverse from a Private Law perspective’ (2024) *InDret* 2, 102, 112-117.

³⁵ Garasic, note 30.



The potential recognition of avatars as legal entities would involve significant legal considerations, including how rights and duties are assigned to a non-human entity and the implications for the human users behind them.

3.3. Avatars and legal persons: how similar are they?

This shift would challenge existing legal norms and require a re-evaluation of what constitutes a 'person' in the eyes of the law, marking a transformative shift in legal theory and practice influenced by technological advancement in AI.

Even though a similar discussion was already held to recognise legal personhood to legal persons, namely corporations, there is no complete parallelism between a legal person and an avatar in terms of legal personhood.

Corporations operate through the collective decision-making processes of their governing bodies, such as boards of directors, which act on behalf of the corporation's interests. These decisions are informed by the corporation's legal and ethical obligations.³⁶ Avatars, however, lack true autonomy and decision-making capabilities. They function based on algorithms and user commands, without the ability to independently assess situations or make judgments.³⁷

Moreover, corporations have a continuous legal identity that persists regardless of changes in ownership or management. This continuity is essential for maintaining long-term legal and business activities.³⁸ Avatars, however, can be easily altered, replicated, or deleted, raising questions about their identity and the persistence of any legal status they might be assigned.³⁹

The recognition of corporations as legal persons under the law is based on established legal frameworks that define and regulate corporate entities, which are designed to address the complexities of corporate governance, accountability, and rights. In contrast, avatars are digital constructs without intrinsic legal status. As relatively new and evolving digital entities, do not fit neatly into these existing legal categories. Developing new legal principles or adapting current ones to effectively govern avatars poses significant challenges and requires careful consideration. They operate as extensions of their human creators or controlling entities and do not possess independent legal recognition.

3.4. Rights of avatars

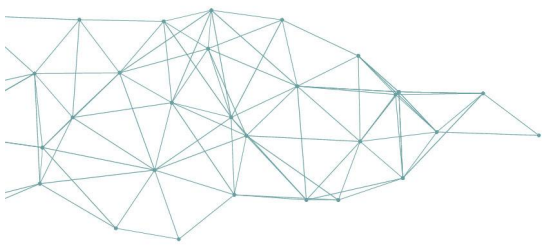
Avatars, as digital constructs, are composed of datasets, algorithms, and visual components, positioning them similarly to software in terms of their structural makeup. Given this similarity, avatars might be eligible for legal protections comparable to those

³⁶ SM Bainbridge, 'Why board group decisionmaking in corporate governance?' (2002) *Vanderbilt Law Review*, 55(1)1.

³⁷ Mengual, note 34, 113.

³⁸ ME Diamantis, 'Corporate essence and identity in criminal law' (2019) *Journal of Business Ethics* 154(4), 955 (the papers deal with the maintenance of the corporation's identity for criminal purposes but the same is valid for other domains).

³⁹ J Lin and ME Latoschik, 'Digital body, identity and privacy in social virtual reality: A systematic review' (2022) *Frontiers in Virtual Reality* 3, 974652, <https://doi.org/10.3389/frvir.2022.974652>.



afforded to software, images, and trademarks.⁴⁰ However, the distinctiveness of intelligent avatars, as those driven by AI, introduces unique legal intricacies due to their ability to diverge from initial programming and exhibit autonomous behaviours.

This capability of AI-based avatars to act independently from their creators suggests potential grounds for them to be considered for legal personality, a status that allows for the attribution of certain rights and responsibilities. It is important to note that the lack of human characteristics doesn't necessarily hinder the assignment of legal rights, as evident in the recognition granted to corporate entities and other legal persons. However, these rights are not universally applicable as seen with human individuals, some of whom may also require legal representation to exercise certain rights.

The question then arises: What rights should avatars have, and how should these be recognized and enforced? This challenge becomes particularly relevant when considering scenarios such as an intelligent avatar creating an original work that qualifies for copyright protection. If the resulting work meets all the established criteria for copyright, the legal system may need to consider extending IP rights to be held by these digital entities, acknowledging their creative contributions as worthy of protection.⁴¹

This evolving landscape presents fundamental rights theorists with the task of defining the extent and nature of rights that avatars could – or should – possess. As the capabilities of avatars grow, and as they increasingly participate in creative and economic activities, it becomes imperative to consider how the legal framework can adapt to recognize and regulate these new forms of digital personhood. This would not only redefine our understanding of creativity and authorship but also reshape the legal responsibilities and ethical considerations within virtual environments.

3.5. Civil and criminal liability of avatars

Addressing online misconduct, particularly within the metaverse, poses significant challenges due to the reliance on forensic evidence and IP addresses to pinpoint the responsible parties. These traditional methods can fall short, especially when individuals behind avatars undertake extensive measures to conceal their real identities. This often renders legal actions ineffective when concrete evidence linking a specific individual to an avatar is lacking.⁴²

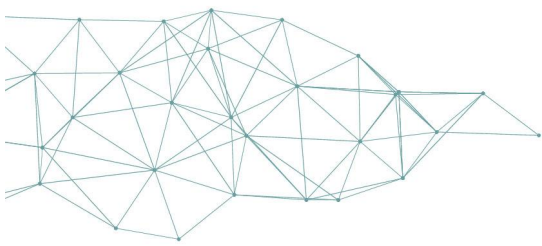
One innovative solution to circumvent the identification challenge is to confer legal personhood on avatars through incorporation.⁴³ By recognizing avatars as legal entities, they can be held civilly and criminally responsible for actions performed within virtual spaces. This shift would alleviate the need for arduous preliminary discovery processes aimed at identifying the human user behind the avatar, processes which frequently yield inconclusive results. Moreover, such complex discoveries can only lead to effective results if courts retain the authority to discern and address the connection between avatars and their real-life operators to ensure justice is served effectively.

⁴⁰ A Adrian, '?: Avatars as trade marks' (2007) *Computer Law & Security Report* 23(5), 436.

⁴¹ This question lies at the heart of ongoing legal debates, exemplified by cases like DABUS, the AI inventor, sparking discussions in courts and patent offices worldwide. Cf. W Lindsey, 'When the Invented Becomes the Inventor: Can, and Should AI Systems be Granted Inventorship Status for Patent Applications?' (2020) *Legal Issues in the Digital Age* 2, 3.

⁴² A significant downside to this solution is that it could allow real-world individuals or entities to abuse this legal shield by incorporating multiple avatars, thus dodging liability.

⁴³ Cheong, note 19, 488–489.



Nonetheless, if granting avatars directly liable for their acts solves some issues, it also raises many others, including the question of defining adequate penalties. Should avatars be endowed with legal personhood, a range of punitive measures would have to be applied directly to the avatars themselves. These could include revocation of their legal status, imposition of restrictions on their virtual activities, or even their deletion in severe cases.⁴⁴

For that to happen, however, it is necessary to establish a robust accountability system within the metaverse, taking into account the nuances of digital identity and personal responsibility.⁴⁵ While theoretically feasible, the practical implementation of such penalties within the existing legal frameworks presents its own set of challenges. Adjustments would be necessary to recognize avatars as legal personalities, and the enforcement of penalties would need to be operationalized effectively within virtual environments. This approach requires careful consideration and possibly significant legal reforms to ensure that the rights and responsibilities assigned to avatars align with both justice and practical enforceability.

4. Legal issues arising from the current status of avatars

Currently, avatars within the metaverse do not possess any independent legal status, rights, or obligations. They are considered extensions of their human users rather than distinct entities. This lack of legal recognition means that any actions performed by avatars are attributed directly to their human operators. Consequently, legal responsibility, liability, and rights remain with the users rather than the avatars themselves.

It is under this reasoning that this paper will develop answers to the currently debated issues surrounding the use of avatars in the metaverse. The analysis and conclusions drawn will be based strictly on existing laws and regulations and would change if the current landscape also evolves, for instance, by granting to avatars some kind of proper legal status.

4.1. Chatbots avatars

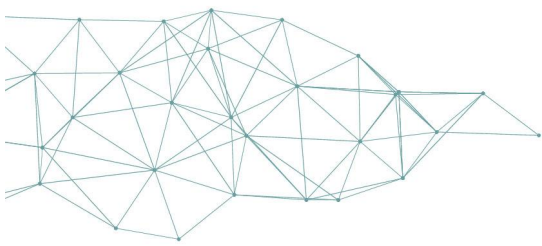
The proposed EU regulation for artificial intelligence (AI) – the AI Regulation, also known as the AI Act (AIA)⁴⁶ – will introduce a legal framework designed to address transparency in AI interactions, specifically with chatbots.⁴⁷ Article 50(1) of the AIA mandates that AI systems designed for direct interaction with humans must clearly inform users when they are

⁴⁴ Idem, 489.

⁴⁵ HX Qin, Y Wang and P Hui, 'Identity, crimes, and law enforcement in the metaverse' (2022) arXiv preprint arXiv:2210.06134

⁴⁶ European Parliament legislative resolution of 13 March 2024 on the proposal for a regulation of the European Parliament and of the Council on laying down harmonised rules on Artificial Intelligence (Artificial Intelligence Act) and amending certain Union Legislative Acts (COM(2021)0206 – C9-0146/2021 – 2021/0106(COD)), https://www.europarl.europa.eu/doceo/document/TA-9-2024-0138_EN.html

⁴⁷ F Fitsilis and PG Rêgo de Almeida, Chapter 9: Artificial intelligence and its regulation in representative institutions', in Y Charalabidis, R Medaglia and C Van Noordt (eds.) *Research Handbook on Public Management and Artificial Intelligence* (Cheltenham, UK, Edward Elgar Publishing, 2024), <https://doi.org/10.4337/9781802207347.00019>



interacting with an AI, unless it is evident to a well-informed and observant person, given the context and circumstances of the interaction.⁴⁸

Under the AIA, the responsibility for ensuring transparency lies primarily with the AI providers, not the end-users or deployers. For example, if a company develops an AI-driven chatbot to be used on another company's website, it is the developer's responsibility to ensure that the chatbot meets the transparency requirements.⁴⁹

Transparency is crucial as AI entities, especially virtual avatars that mimic human behaviour, become more sophisticated and lifelike. The distinction between human and AI-driven interactions is blurring,⁵⁰ raising significant ethical and social questions about their influence on human behaviour and decision-making in both virtual and real-world settings.

The requirements become particularly demanding for generative AI models, like those similar to ChatGPT, which use advanced machine learning and natural language processing technologies to generate human-like text responses. The regulation specifies that providers of generative AI systems must adhere to stringent transparency norms.⁵¹ These systems must be trained and developed with robust safeguards to prevent violations of EU laws, such as the unauthorized use of copyrighted material or the creation of deceptive or manipulative digital content like deep fakes. Furthermore, providers must disclose detailed information about the datasets used for training these systems, ensuring that they are biases are reduced to the possible minimum and comply with data protection standards.⁵²

Beyond these particular requirements, all AI systems are subject to general obligations that are determined by their level of risk. These obligations cover a spectrum of standards designed to guarantee the safety, reliability, and ethical deployment of AI technology in diverse applications.⁵³

4.2. Identity disclosure versus privacy

The ongoing discourse on the disclosure of avatar identities faces with finding an equilibrium between maintaining anonymity and upholding accountability.⁵⁴ The central

⁴⁸ Providers shall ensure that AI systems intended to interact directly with natural persons are designed and developed in such a way that the natural persons concerned are informed that they are interacting with an AI system, unless this is obvious from the point of view of a natural person who is reasonably well-informed, observant and circumspect, taking into account the circumstances and the context of use. This obligation shall not apply to AI systems authorised by law to detect, prevent, investigate or prosecute criminal offences, subject to appropriate safeguards for the rights and freedoms of third parties, unless those systems are available for the public to report a criminal offence'.

⁴⁹ For instance, if company A develops a chatbot application, it is company A's responsibility to ensure that the transparency requirements are met, not the responsibility of company B that purchases and uses the chatbot.

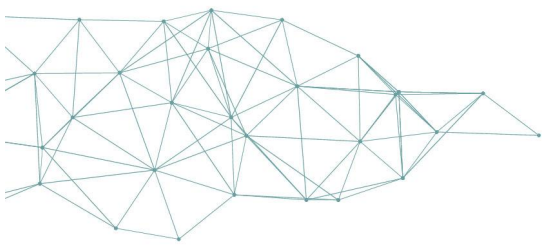
⁵⁰ One suggestion to address this challenge is to require digital cues to differentiate between avatars representing real people and those generated by AI. Cf. E Craig, 'Sensorium's AI-driven Avatars – Another Step Toward the Metaverse', *Digital Bodies*, August 5, 2021, <https://www.digitalbodies.net/sensoriums-ai-driven-avatars-another-step-toward-the-metaverse/>

⁵¹ E Loh, 'ChatGPT and generative AI chatbots: challenges and opportunities for science, medicine and medical leaders' (2023) *BMJ*, Doi:10.1136/leader-2023-000797.

⁵² C Novelli, F Casolari, P Hacker, et al., 'Generative AI in EU Law: Liability, Privacy, Intellectual Property, and Cybersecurity' (2024) *ArXiv*. /abs/2401.07348.

⁵³ Raposo, note 29.

⁵⁴ Cheong, note 19, 487-488.



issue focuses on protecting individual freedom while ensuring responsibility, especially in commercial contexts.⁵⁵

When an individual uses an avatar with the intention of keeping it distinct from their real-life identity, their anonymity is generally upheld unless serious legal issues arise. This stance supports users in freely engaging with their digital personas without fear of real-world consequences.⁵⁶

However, the answer changes when corporations use avatars for commercial gains, such as marketing and revenue generation. In these instances, the anonymity of the individual controlling the avatar is brought into question and ultimately their identity might have to be disclosed by court's order. The commercial objectives and the potential influences on consumers demand a higher level of transparency and accountability. This ensures that the corporate use of avatars adheres to ethical standards, protecting consumer interests while fostering trust in digital interactions.⁵⁷

4.3. Similarity between an avatar and an existing person

Avatars come in a variety of forms, from accurate depictions of a user's real-life appearance to completely imaginative characters or mythical creatures that bear no resemblance to their actual identity.⁵⁸ The creation of avatars that resemble recognizable public figures without their consent presents considerable legal challenges, particularly when these representations are leveraged for commercial gains. Engaging in such unauthorized commercial usage of a person's likeness infringes upon the right to privacy and other personality rights, which could result in legal actions against the creators of these avatars.⁵⁹ This issue is especially pertinent in virtual reality (VR), where the distinction between real and virtual can often blur, raising both legal and ethical dilemmas.

4.3.1. The legal framework in the United States: The right of publicity

In the United States, this area of concern is governed by the 'right of publicity', which allows individuals to control how their identity, including their name, image, and likeness, is commercially utilized.⁶⁰ This right is intricately linked to intellectual rights and aims to protect an individual's economic interests against unauthorized exploitation.⁶¹ When it comes to legal disputes involving the unlicensed use of someone's likeness, courts typically evaluate whether the usage was transformative enough to outweigh the individual's publicity rights, considering the context and potential commercial benefits derived from such use.

⁵⁵ *Idem*, 480.

⁵⁶ Cheong, 2022, p. 480.

⁵⁷ Cheong, 2022, p. 480.

⁵⁸ This customization capability gives users a degree of control and self-expression in virtual spaces. Additionally, users frequently adapt their avatars to fit various contexts and scenarios, enhancing their virtual interactions. See S Wu, L Xu, Z Dai et al., 'Factors Affecting Avatar Customization Behavior in Virtual Environments' (2023) *Electronics* 12(10), 2286, <https://doi.org/10.3390/electronics12102286>.

⁵⁹ Davidson and RW Saubert, 'Help! An Avatar Stole My Right Of Publicity' (2015) *Southern Law Journal* 25(1), 123.

⁶⁰ Leaffer, 'The right of publicity: A comparative perspective' (2006) *Alb. L. Rev.* 70, 1357.

⁶¹ A Curren, 'Digital Replicas: Harm Caused by Actors' Digital Twins and Hope Provided by the Right of Publicity' (2023) *Texas Law Review* 102(1): 155, 156 M-177.

Overall, the tension between rights from both sides raises complex issues. Freedom of expression is essential for fostering creativity and innovation within the arts and technology sectors. It allows artists and developers to explore and experiment without the constant fear of legal repercussions, thereby contributing to cultural and technological advancement. While the First Amendment provides broad protections for expressive works, including avatar creation, the right of publicity cannot be undermined.⁶² Balancing these rights requires a nuanced approach that respects the need for artistic and technological expression while also protecting individuals from exploitation. Legal frameworks and judicial decisions often focus on factors such as the transformative value of the work, the newsworthiness or public interest surrounding the use, and the degree to which an individual's likeness is used for commercial purposes. Courts may look at whether the avatar creation adds significant creative elements to distinguish it from the actual person or merely attempts to capitalize on an individual's existing fame.⁶³

The issue becomes even more complex when the depicted individual is already dead. The ethical and legal ramifications of digitally recreating deceased public figures or celebrities are increasingly being scrutinized. For instance, New York has set a precedent by enacting a law that extends the right of publicity post-mortem, specifically to 'digital replicas' of deceased performers.⁶⁴ This law underscores the evolving nature of publicity rights, which not only protect living individuals but also extend certain controls to the estates of the deceased over their digital likenesses. However, the application of post-mortem publicity rights varies significantly by state. States like California, New York, Florida, Hawaii, Nevada, and Texas have statutes or common law provisions recognizing these rights.⁶⁵ This patchwork of state laws creates a complex legal landscape for content creators in the metaverse and the specific scope of post-mortem rights needs careful navigation to avoid legal pitfalls.⁶⁶

Significant legal cases such as *Kirby v. Sega*⁶⁷ and *Keller v. Electronic Arts*⁶⁸ further illustrate the intricate legal issues surrounding the use of a person's likeness in virtual environments and video games. These cases highlight the ongoing debate between creative freedom and the rights of individuals to control their public image, particularly in increasingly immersive digital platforms where the line between reality and virtual representation continues to fade.

4.3.1.1. The Kirby case

In the notable Kirby case, the dispute centred around the character Ulala in Sega's video game, who bore a resemblance to Kierin Kirby, a vibrant member of the famed music group Deee-Lite. Kirby was well-known for her eye-catching costumes and the catchy phrase,

⁶²About the tension between these two rights, EK Thomas, 'Fumbling the First Amendment: The Right of Publicity Goes 2-0 against Freedom of Expression' (2014) *Michigan Law Review* 112(8) 1519.

⁶³ Cf. RK Weisbord, 'A copyright right of publicity' (2015) *Fordham L. Rev.* 84, 2803.

⁶⁴ G Cohen, 'Digital Purgatory and the Rights of the Dead: Protecting against Digital Disinterment in the Age of Artificial Intelligence' (2023) *Cardozo Law Review De-Novo*, 121, 133.

⁶⁵K.Townsend, 'Raising the Dead: Understanding Post-Mortem Rights of Publicity', April 2, 2022, <https://www.documentary.org/column/raising-dead-understanding-post-mortem-rights-publicity>.

⁶⁶ Cohen, note 64, 148-151.

⁶⁷ *Kirby v. Sega of America, Inc.* 144 Cal.App.4th 47, 50 Cal.Rptr.3d 607, 81 U.S.P.Q.2d (BNA). 1172 (2d Dist. 2006). About this case in Davidson and Saubert, 2015, pp. 132-133; Farber, 2008, pp. 464

⁶⁸ *Keller v. Electronic Arts Inc.*, 724 F.3d 1268 (9th Cir. 2013). A comment to this case in Kuester, 2015, pp. 117-135. A comment to this case in Davidson and Saubert, 2015, pp. 131-132.

'oooh la la'.⁶⁹ In the game, Ulala is portrayed as an alien reporter from the 25th century, whose dance moves players can control, adding a dynamic layer to the gameplay.⁷⁰

The court, in its deliberation, concluded that Ulala was not a direct imitation of Kirby. This decision was based on several distinctive attributes of the character Ulala, including her exaggerated, computer-generated physique, her unique futuristic outfit, and her elaborate dance sequences. Additionally, Ulala's role as a reporter in a futuristic setting contributed to her being seen as a highly original and imaginative figure rather than a mere replica of Kirby.

The court highlighted that the portrayal of Ulala was a creative and transformative act, establishing her as an original entity within the game's imaginative universe rather than a straightforward mimicry of Kirby. This decision underscored the game's ability to craft a unique character that transcended simple imitation, thereby reinforcing the notion of creative freedom in character design within video games. The ruling ultimately recognized Ulala as an innovative contribution to the game's world, highlighting the importance of artistic expression and originality in the domain of digital entertainment.

4.3.1.2. The Keller case

In 2011, Sam Keller initiated legal proceedings against Electronic Arts, Inc. (EA), accusing the video game publisher of infringing on his right of publicity with their portrayal of him in the NCAA Football series produced by EA Sports. Keller based his lawsuit on California's Civil Code §3344 and common law, which safeguard individuals against the unauthorized commercial use of their likeness.⁷¹

The district court found that EA could not claim a First Amendment defence - specifically freedom of speech - to counter Keller's right of publicity claims. This judgment was affirmed by the Ninth Circuit Court of Appeals. Central to this decision was the 'transformative use' test as outlined by the California Supreme Court, which assesses whether a creative work significantly alters the original likeness for artistic purposes. The court determined that EA's representation of Keller, which replicated his appearance and role within the exact context he was famous for (college football) was not sufficiently transformative. As such, it did not merit First Amendment protection.

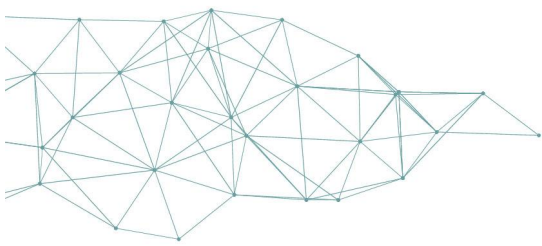
This legal precedent highlights the necessity for clarity and respect for personal rights in the increasingly digital interactions and representations in today's media landscapes. The verdict underscored the fine balance between protecting freedom of expression and upholding an individual's right to control the commercial use of their identity. The court's ruling reinforced the legal principle that using someone's image for commercial gain without permission constitutes a breach of his/her exclusive rights to capitalize on their own persona.

This is particularly relevant in environments like the metaverse, where creators might create avatars that resemble public figures or celebrities to enhance their business or influence. In cases where it is apparent or can be objectively proven that an avatar is a direct representation of a real person, the creators of the avatar could be held liable if they did not secure the individual's consent beforehand.

⁶⁹ <https://www.youtube.com/watch?v=etviGf1uWlg>

⁷⁰ <https://www.youtube.com/watch?v=b0A5smrzVaA>

⁷¹ Cf. RT Arsuaga, 'Freedom of Speech vs. the Right of Publicity in Today's Gaming World' (2012) *Revista Juridica Universidad de Puerto Rico* 81, 245.



4.3.2. The legal framework in Europe: the dominance of personal rights

In Europe, the approach to safeguarding individuals' images and likeness differs significantly across jurisdictions. The legal frameworks vary, with some countries offering protection based on the right of privacy or personality rights, while others lack specific legislation addressing this issue.⁷² While there is a broad agreement on the importance of protecting the commercial value of an individual's image, the adoption of a right similar to the US's right of publicity is not uniformly accepted.⁷³

There is a lively debate within the legal community about whether to establish a new property right to prevent the unauthorized commercial use of a person's image.⁷⁴ Some legal scholars suggest recognizing a tort of appropriation of personality as an alternative to establishing a new exclusive property right.⁷⁵ Despite these discussions, a distinct lack of protection against unauthorized commercial exploitation of individuals' images persists, particularly in terms of a defined publicity right.

At the European level, Article 8(1) of the European Convention on Human Rights (ECHR)⁷⁶ guarantees the right to a private life, which extends to protecting personal images from unauthorized public exposure or commercial usage without consent.⁷⁷ The landmark case of *von Hannover v. Germany* highlighted this issue when the court ruled that publishing photographs of Princess Caroline without her consent infringed on her privacy rights under Article 8(1) of the ECHR, emphasizing the necessity for individuals to control the use of their images, especially in commercial settings.⁷⁸

The protection of the image rights of deceased individuals introduces further complexity and varies considerably among EU member states.

In Germany, personality rights are protected under Articles 1(1) and 2(1) of the German Basic Law.⁷⁹ This framework was historically established following intrusive actions by journalists who photographed Chancellor Otto von Bismarck's corpse in 1898. Without specific legal provisions for such cases, courts initially used trespass laws to offer some level of protection.⁸⁰ A notable case reflecting the significance of personality rights involved Marlene Dietrich, where protection was extended posthumously to honour both non-commercial and commercial interests, including the use of her name, voice, or image for financial gain.⁸¹

⁷² T Synodinou, 'Image Right and Copyright Law in Europe: Divergences and Convergences' (2014) *Laws*, 3(2), 181, <https://doi.org/10.3390/laws3020181>.

⁷³ *Ibid.*, 183-189.

⁷⁴ *Ibid.*, 181-207.

⁷⁵ *Ibid.*, 183-189.

⁷⁶ European Convention on Human Rights is an international convention to protect human rights and political freedoms in Europe.

⁷⁷ Article 8 ECHR - Right to respect for private and family life

1. Everyone has the right to respect for his private and family life, his home and his correspondence.
2. There shall be no interference by a public authority with the exercise of this right except such as is in accordance with the law and is necessary in a democratic society in the interests of national security, public safety or the economic well-being of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others.

⁷⁸ Case of *Von Hannover V. Germany*, Application no. 59320/00, 24 June 2004, ECHR.

⁷⁹ RN Nwabueze and H Hancock, What's wrong with death images? Privacy protection of photographic images of the dead' (2022) *Computer Law & Security Review*, 47, 105715, <https://doi.org/10.1016/j.clsr.2022.105715>

⁸⁰ *Idem.*

⁸¹ *Idem.*

In France there is a huge discussion on posthumous privacy rights differs. The French Court of Cassation has ruled that privacy rights cease upon an individual's death, thus nullifying any post-mortem privacy claims. However, the European Court of Human Rights, in *Editions Plon v France*, indirectly protected the privacy of the deceased through medical confidentiality principles.⁸² The death of Princess Diana and the resulting media frenzy underscored the tension between privacy rights and press freedom, leading to legal repercussions for photographers who crossed ethical lines.⁸³

In Portugal, a 2021 decision from the Lisbon Court of Appeal reinforced the stance that the holder of an image, or their heirs, retains the exclusive right to economically exploit their likeness, regardless of their fame.⁸⁴ This ruling underlines that notoriety does not justify bypassing consent for the commercial use of one's image.

These varied approaches across Europe illustrate the complex and evolving nature of laws concerning image rights, highlighting the need for careful navigation of these legal territories by individuals and entities engaging in image-related commercial activities.

4.4. Reputation attacks using avatars

Avatars often act as digital proxies or alter egos for their controllers, which makes them central to potential legal actions such as defamation claims. Since avatars themselves do not possess independent consciousness, recognizing that they are merely extensions through which individuals interact within the Metaverse solidifies the basis for the controllers' legal accountability.

Consider a situation where someone creates an avatar that closely mimics a public figure - be it a celebrity, politician, or even a neighbour - and uses it to engage in defamatory behaviour. If the Metaverse community recognizes the connection between the avatar and its real-life counterpart, this could establish grounds for a defamation claim in the physical world. This is grounded on the understanding that the avatar acts as a direct extension of its creator.⁸⁵

The challenge then revolves around determining whether, despite physical differences between the avatar and the person it represents, they are regarded as essentially the same entity when investigating defamation claims. Furthermore, it raises the question of whether defamatory attacks against an avatar in the Metaverse cause tangible harm to the real individuals or entities they represent.⁸⁶

Another challenge is how to 'reach' the person 'underneath' the avatar. The Metaverse, much like social media platforms, offers vast freedoms that can sometimes empower negative behaviours, notably from users commonly known as 'internet trolls'. These individuals can exploit the anonymity provided by the Metaverse to disseminate false and harmful content about others, potentially damaging reputations. To mitigate these risks, it is essential to strip away the cloak of anonymity by linking avatars directly to

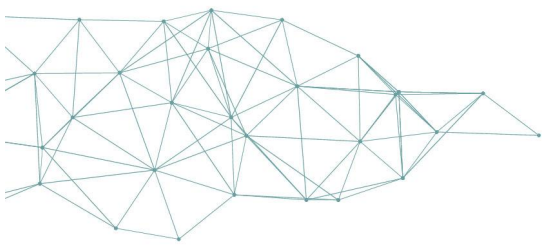
⁸² Case of *Éditions Plon V. France*, Application No. 58148/00, 18.05.2004, ECHR. This case concerned the imposition of a temporary injunction against the distribution of a book detailing the medical history of François Mitterrand, the former President of France.

⁸³ Nwabueze and Hancock, note 78.

⁸⁴ Lisbon Court of Appeal, 06/07/2021, process n. 1939/20.2T8AMD.L1-7 (translation from the author).

⁸⁵ A. Adrian, 'No one knows you are a dog: Identity and reputation in virtual worlds' (2008) *Computer Law & Security Review* 24(4): 366.

⁸⁶ Cheong, note 19, 487.



their real-world users, similar to how a sole shareholder is accountable for a corporate entity.⁸⁷

Addressing these issues requires a nuanced understanding of identity and responsibility within digital spaces, ensuring that the freedoms of virtual worlds do not lead to real-world harm. This balance is crucial for maintaining the integrity and safety of both digital and physical interactions.

4.5. Property of an avatar

Leeroy Jenkins became an iconic figure in internet and gaming culture, not through the design of a gaming company, but through the spontaneous actions of a player named Ben Schulz during a World of Warcraft session.⁸⁸ His fame spread virally, with his name and persona being adopted in memes, digital card games like Hearthstone, and even films such as Wreck-It Ralph. This spontaneous player creation has sparked significant discussion regarding the ownership and copyright of such avatars created within gaming environments.

At the centre of this debate is whether avatars like Leeroy Jenkins can be classified as copyrightable works of authorship, a status that depends on their originality and the creative input from both the game's developers and the player. Originality in this context requires that the work be independently created and possess at least some minimal degree of creativity, focusing more on the expression of an idea rather than the idea itself.

Understanding the legal landscape starts with the game's End-User License Agreement (EULA) or Terms of Use (ToU), which typically assert the developer's ownership over game code and any content produced during gameplay.⁸⁹ However, the enforceability of these documents can be contested, particularly if they are found to be overreaching or in conflict with established copyright laws.

Ownership issues become even more complex with modern video games, which often allow extensive customization of avatars. This blurring of lines between developer and player contributions can make avatars potentially eligible as joint works, implying shared authorship. As games evolve to offer more profound customization options, the role of the player as a co-creator becomes more pronounced, possibly viewing them as joint authors if their customization significantly contributes to the avatar's unique identity.⁹⁰

This raises broader questions under copyright law's rationales, namely whether players shall be granted rights over their avatars. From a utilitarian perspective, copyright aims to spur creative endeavours which typically support developers, given the substantial investment required to build games. However, from a natural rights standpoint, players who contribute creatively to their avatars may have a moral right to ownership and potential profits derived from their creations.⁹¹

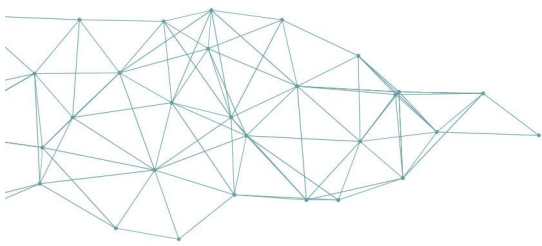
⁸⁷E Slavin, 'Modern Application of The Right of Publicity To Virtual Avatars?' (2010) https://scholarship.shu.edu/cgi/viewcontent.cgi?article=1078&context=student_scholarship.

⁸⁸Dickey, M. D. 2011. 'World of Warcraft and the impact of game culture and play in an undergraduate game design course', *Computers & Education*, 56(1): 200-209. <https://doi.org/10.1016/j.compedu.2010.08.005>.

⁸⁹JJ Kayser, 'The new new-world: virtual property and the end user license agreement' (2006) *Loyola of Los Angeles Entertainment Law Review* 27(1): 59.

⁹⁰TT Ochoa and J Banks, 'Licensing & Law Who Owns an Avatar?' (2018) <https://digitalcommons.law.scu.edu/facpubs/960>.

⁹¹Ibis,



Considering avatars as compilations, where players select and arrange pre-provided components in unique ways, underscores the potential for player copyright. While developers would retain ownership over the underlying game software and audiovisual content, players could arguably claim rights over the creative assembly of their avatars.⁹² Recognizing avatars as joint works with shared ownership between developers and players not only acknowledges the creative contributions of gamers but also aligns with principles of fairness and moral rights within creative industries. This dual ownership model ensures that both parties are fairly compensated and incentivized, supporting the ongoing evolution and richness of interactive game design.

4.6. Identity thefts and the stealing of someone's avatar

Malevolent actors in the digital world can pose significant threats by hijacking someone's avatar through account takeovers, effectively impersonating the individual. This not only endangers the victim's reputation but can also expose them to real-world legal liabilities.⁹² The sense of impunity enjoyed by these perpetrators is amplified by the anonymity provided within the metaverse, where they frequently operate without fear of facing real-world consequences.⁹³

To counteract these threats, several measures have been suggested that go beyond merely stripping away users' anonymity. One effective approach is the registration of avatars, linking them to their real-world identities to foster accountability in the virtual environment. This method directly connects online actions to an identifiable individual, thereby discouraging malicious behaviour due to the increased risk of detection and consequences.

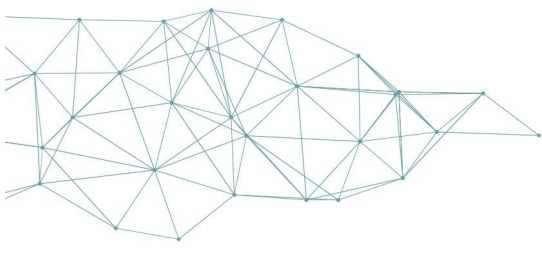
However, preserving user anonymity while ensuring responsible behaviour is also feasible. For instance, Massively Multiplayer Online Role-Playing Games (MMORPGs) enforce robust terms of service that define acceptable conduct within their virtual worlds. These terms provide clear guidelines and include enforcement mechanisms for violations, such as platform bans or the forfeiture of virtual assets. The latter can be particularly impactful as many virtual assets hold real-world value, making their loss a significant deterrent. Platforms like Fortnite and Roblox exemplify this approach by requiring users to agree to these terms before accessing their services. This contractual governance serves as a foundation for regulating behaviour, maintaining order and protecting users within these expansive virtual landscapes.

An innovative method to prevent identity theft in the metaverse involves eliminating the storage of personal data and using instead a decentralized, peer-to-peer network for authentication purposes. When users access the metaverse, this network verifies their identities by analysing their historical activities across various online platforms, such as ride-sharing services, video streaming platforms, and gaming networks. This method offers a comprehensive view of a user's behaviour, enabling a more accurate authentication of their identity.⁹⁴ This decentralized authentication strategy, unlike traditional single-point verification methods, employs a consensus-based approach

⁹² H Wu and W Zhang, 'Digital identity, privacy security, and their legal safeguards in the Metaverse' (2023) *Security and Safety* 2, 2023011.

⁹³ Cheong, note 19, 486.

⁹⁴ Wu and Zhang, note 92; MS Almadani, S Alotaibi, H Alsobhi, et al., 'Blockchain-based multi-factor authentication: A systematic literature review' (2013) *Internet of Things*, 23, 100844, <https://doi.org/10.1016/j.iot.2023.100844>.



that enhances the robustness of identity checks. By aggregating and comparing data from multiple sources, it reduces reliance on any single point of failure, thereby minimizing the potential for unauthorized access and enhancing overall security. The framework for this system is built on distributed consensus models, which are inherently resistant to many of the vulnerabilities that plague centralized data repositories. Centralized systems can be attractive targets for cyber-attacks, but a decentralized network distributes the data across numerous nodes, making it significantly harder for malicious actors to compromise the system.

4.7. The destruction of someone's avatar

In 2008, an intriguing incident in the virtual world made headlines, involving a Japanese woman who was accused of deleting her virtual husband's character in the online game *Maple Story*.⁹⁵ Distraught over their virtual breakup, she used the login details she had acquired during their digital marriage to access his account and delete his avatar. This act of digital vengeance led to her arrest on charges of unauthorized computer access and data manipulation.

This event sparked a significant debate on the implications of actions within virtual realities and how they are governed by real-world laws.⁹⁶ What makes this case particularly notable is the method of the avatar's deletion. Unlike typical in-game scenarios where characters might be killed as part of the gameplay - such as battles in *World of Warcraft* or conflicts in *Second Life* - the deliberate removal of the avatar's data from outside the game's regular interaction rules crosses into a different legal territory. This breach of the game's norms moves beyond mere virtual misconduct to a tangible infringement involving unauthorized data manipulation. This incident served as a paradigmatic example of how virtual worlds are increasingly intersecting with real-world legal frameworks, necessitating adaptive legal responses to manage the complexities of digital interactions.

Moreover, the deletion of an avatar, which might represent considerable emotional, time, and even financial investment, raises questions about the moral and economic impacts of such actions. This incident highlighted the complex relationship between virtual behaviours and applicable legal standards, underscoring the need for clear regulations that address the evolving dynamics of virtual worlds.

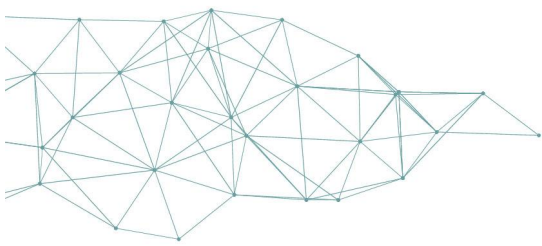
Furthermore, this case sheds light on the emotional attachments players can develop with their digital personas, illustrating how virtual experiences can evoke real emotions and lead to significant real-world consequences.⁹⁷ It also prompted broader considerations about the future of law enforcement in digital spaces.⁹⁸ As online environments become more immersive, the likelihood of virtual crimes increases,

⁹⁵ <https://www.nytimes.com/2008/10/24/world/asia/24iht-virtual.1.17223730.html>

⁹⁶ G Yadin, 'Virtual reality exceptionalism' (2018) *Vanderbilt Journal of Entertainment & Technology Law* 20(3), 839.

⁹⁷ In this regard, see the intriguing case pictured in a South Korean documentary, called 'Meeting You', which shows a poignant moment when a Korean mother, using virtual reality (VR) goggles, is moved to tears upon seeing an avatar of her seven-year-old daughter, who tragically died (<https://www.youtube.com/watch?v=0p8HZVCZSkc>). This powerful scene not only resonates deeply with our emotions but also showcases the expanding potential of VR technology beyond its traditional gaming applications

⁹⁸ More details in Interpol, 'Metaverse - A Law Enforcement Perspective (Use Cases, Crime, Forensics, Investigation, and Governance)' White Paper, January 2024, [file:///Users/apple/Downloads/Metaverse%20-%20a%20law%20enforcement%20perspective.pdf](http://Users/apple/Downloads/Metaverse%20-%20a%20law%20enforcement%20perspective.pdf).



presenting new challenges for legal systems and law enforcement agencies tasked with navigating this uncharted territory.

5. Brief conclusive notes

Avatars present a myriad of legal challenges that stretch from privacy concerns to intellectual property and property rights. Given the current absence of specific laws tailored to the complexities of avatars and the broader metaverse, we find ourselves relying on existing legal frameworks designed for tangible, real-world interactions. Central to these legal challenges is the fundamental question of the legal status of avatars: Are they merely objects through which rights are exercised by human individuals, or should they themselves be recognized as subjects of rights, potentially warranting the attribution of legal personality, or at least a status akin to it?

Under present legal frameworks, avatars are not recognized as independent rights holders. However, this paradigm may shift as technological advancements, particularly in AI, continue to evolve. If avatars powered by AI begin to operate autonomously, a compelling case could be made for reevaluating their legal status. Assuming that autonomous AI systems might one day be granted a form of legal personhood, it stands to reason that avatars, as manifestations of such AI systems, could similarly be recognized as independent legal entities.

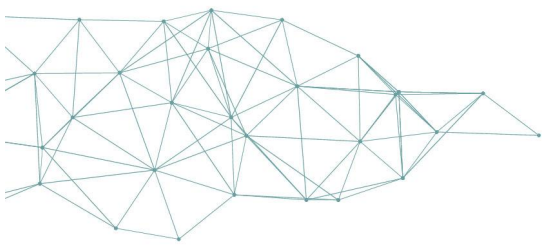
This potential shift would not only redefine the role and function of avatars within virtual spaces but also implies a substantial reassessment of how legal principles are applied in increasingly digital contexts. Such a development would call for significant legal innovation, ensuring that the laws evolve in step with the rapid advancements in virtual technologies.

'The law must be stable, but it must not stand still'. (Roscoe Pound).



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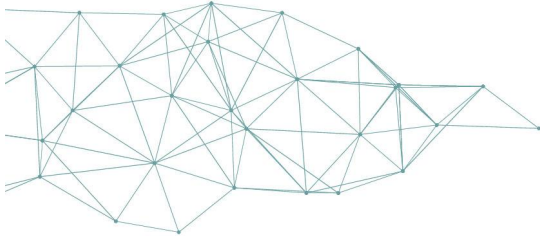
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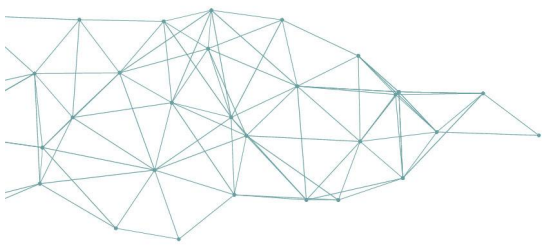
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