MetaverseUA Chair

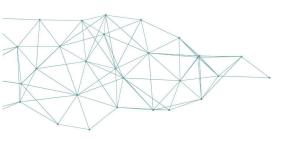
Academic Chair for the Responsible Development of the Metaverse

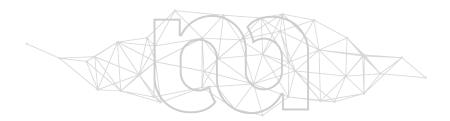
Avatars and the Protection of Digital Identities in the Metaverse

MetaverseUA Chair Research Paper #3









The Chair for the Responsible Development of the Metaverse (MetaverseUA Chair) was created by the University of Alicante (Spain) and financed by Meta Platforms under its <u>XR</u> <u>Program and Research Funds</u>. The Program aims at supporting academic and independent research across Europe into metaverse issues and opportunities. The MetaverseUA Chair is a member of the <u>European Metaverse Research Network</u>. Like all our work, this report has been produced completely independently. The ideas expressed in this paper are the sole responsibility of the author.

How to cite this paper:

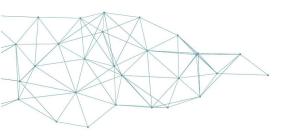
Ebers, M., 'Avatars and the Protection of Digital Identities in the Metaverse', (2024) MetaverseUA Research Paper #3, <u>https://metaversechair.ua.es/working-papers/</u>

<u>Martin Ebers</u> is President of the Robotics & AI Law Society (RAILS) and Professor of IT Law at the University of Tartu, Estonia.

The author would like to thank the participants of the webinar "Avatars and the Protection of Digital Identities in the Metaverse", held on 26 June 2023, for their valuable contributions, especially the discussants Cristina Poncibò (University of Turin), Julija Kalpokiené (Vytautas Magnus University), Paul de Heert (Vrije Universiteit Brussels) and the moderator Paul Polanski (Kozminski University, Warsaw).









Abstract

Avatars allow users to create (digital) identities in virtual worlds - including the Metaverse; to express themselves, communicate, and interact with others. But how does the law protect these digital identities? What are the legal implications if an avatar is insulted, defamed, assaulted, harassed, or copied by other users (or their avatars)? What if a Metaverse platform provider restricts or even fully blocks an avatar's ability to communicate and operate in the virtual space? This research paper addresses these questions from a comparative law perspective, examining users' rights related to their avatars. To this end, it analyzes the contractual relationships governing avatars, with a focus on the rights and obligations derived from platform terms and conditions, as well as the relevance of property and copyright law to digital identities, assessing both the possibilities and limitations of these frameworks. At its core, the paper argues for recognizing a new fundamental right to digital identities for users with regards to their avatars, based on Article 8 of the European Convention on Human Rights (ECHR). Given the increasing convergence of real and virtual identities, the paper concludes that virtual harm inflicted on users through their avatars should be recognized as morally and legally significant under Article 8 of the ECHR. Accordingly, personality rights already established in private law should extend to virtual identities in a manner analogous to their application to real-world identities.

Keywords: Avatars, Metaverse, IP Rights, Contractual Rights, Digital Identity, Fundamental Rights







Table of Contents

1. I	ntroduction	1
	1.1. Me, Myself and My Avatar – How to Protect Our Digital Selves in the Metaverse	1
	1.2. The Notion of Identity	. 2
	1.3. Real-World and Digital Identity	. 3
2.	Avatars in the Metaverse	.4
	2.1. What are Avatars?	. 4
	2.2. The Creation of Avatars	. 5
	2.3. Types of Avatars	. 5
	2.4. Avatars as Non-Fungible Tokens (NFTs)	. 6
	2.5. Avatar Interaction	. 6
	2.6. Avatar Markets	. 7
3.	Wrongs vis-à-vis the Avatar	. 8
	3.1. What can Happen to My Avatar?	. 8
	3.2. Context and Custom in the Metaverse	. 9
	3.3. Party Identification and Actionable Harm	10
4.	Contractual Rights on Avatars	11
	4.1. The Architecture of the Metaverse: Encoded "Rules"	. 11
	4.2. Terms and Conditions of Major Metaverse Platforms	12
	4.2.1. Transaction Rules and Rules of Conduct	12
	4.2.3. Termination Clauses	13
	4.2.4. Liability Rules	14
	4.3. Due Diligence Obligations for Terms and Conditions under Art. 14 DSA	14
	4.3.1. Applicability of the DSA to Metaverse Providers	15
	4.3.2. Transparency Obligations, Art. 14(1) DSA	15
	4.3.3. Application and Enforcement of Fundamental Rights via T&Cs, Art. 14(4) DSA	16
	4.4. Third-Party Effect of Platform Rules?	16
5.	(Intellectual) Property Rights on Avatars	18
	5.1. (Virtual) Property Rights?	18
	5.2. Copyrights on Avatars	19
	5.2.1. The Human Authorship Requirement	19
	5.2.2. Who is the Author?	21
	5.2.3. Legal Ramifications	21





6. Towards a (New) Fundamental Right to Digital Identities on Avatars226.1. In Search of a Right to Digital Identities226.2. The Right to Identity According to Art. 8 ECHR236.3. Digital Identity as a Human Right?256.3.1. The Case for Recognizing Digital Identities256.3.2. Fleshing Out the Right to Digital Identities276.4. Horizontal Effect of Art. 8 ECHR and Its Impact on Contracts and Torts297. Summary of the Main Findings30	5.3. Interim Results	22
 6.2. The Right to Identity According to Art. 8 ECHR	6. Towards a (New) Fundamental Right to Digital Identities on Avatars	22
 6.3. Digital Identity as a Human Right?	6.1. In Search of a Right to Digital Identities	22
 6.3.1. The Case for Recognizing Digital Identities	6.2. The Right to Identity According to Art. 8 ECHR	23
6.3.2. Fleshing Out the Right to Digital Identities27 6.4. Horizontal Effect of Art. 8 ECHR and Its Impact on Contracts and Torts	6.3. Digital Identity as a Human Right?	25
6.4. Horizontal Effect of Art. 8 ECHR and Its Impact on Contracts and Torts	6.3.1. The Case for Recognizing Digital Identities	25
· ·	6.3.2. Fleshing Out the Right to Digital Identities	27
7. Summary of the Main Findings	6.4. Horizontal Effect of Art. 8 ECHR and Its Impact on Contracts and Torts	29
	7. Summary of the Main Findings	30
Bibliography	Bibliography	32





1. Introduction

1.1. Me, Myself and My Avatar – How to Protect Our Digital Selves in the Metaverse

Avatars are a foundation element of the metaverse. When users enter the metaverse, they usually need a digital representation to communicate and act in the virtual world. For this, avatars provide a way for users to create digital identities – to express themselves, to communicate and interact with others. In virtual game worlds such as *Second Life*, *World of Warcraft* and *Everquest* – which can be seen as the first steps towards the emerging metaverse – typical players devote hundreds of hours and a substantial amount of money to develop their avatar.

Yet, how does the law protect the digital identities of avatars? What happens if an avatar gets insulted, defamed, assaulted, harassed or copied by other users (or their avatars)? What happens if the Metaverse platform provider restricts or even completely blocks the avatar's means of communicating and operating in the online world?

Clearly, one way to deal with these issues would be to confer (certain) rights and obligations on the avatar itself. However, this is not a viable option, as it would require legal systems to ascribe some sort of legal personality to avatars and accord them with rights and obligations – an option which is not only complicated to implement,¹ but has also been fiercely debated (with regard to artificial intelligence) and unanimously rejected in 2021 by 193 state signatories to the UNESCO "Recommendation on the ethics of artificial intelligence."²

Accordingly, what is actually at stake, is not the *rights of the avatar* per se, but rather the *rights of users with regard to* the avatar. In this respect, (at least) two different perspectives are to be considered. On one hand, there are cases where the actions taken against an avatar violate (directly or indirectly) the rights of an *identifiable* user behind the avatar. On the other hand, there may be also situations where the user behind the avatar is *not identifiable* to others in the virtual word. Arguably, these cases are likely to be very significant within the metaverse. Avatars allow users to become someone or something else. Human users have the possibility to present themselves differently, separating themselves from who they really are and behaving and communicating in ways they never would in real life. Does the law protect human users in these constellations as well? If so, what rights do users enjoy with regard to an (anonymous) avatar and, under what conditions? Should we recognize a right to digital identities in virtual worlds?

The following considerations address these questions (from the perspective of comparative law) by, first, exploring avatars and their significance for digital identities in the metaverse from a practical perspective (2.). Subsequently, the paper gives an overview of possible wrongs that can be committed against an avatar, showing that in many cases the rights of users – and especially their personality rights – are only violated if they are identifiable (3.). Against this background, subsequent sections will discuss what rights are accruable where the avatar does not embody the user, but assumes a new digital identity. In doing so, I will argue that such digital identities can be protected not only by contractual



¹Cf. there to Martin Ebers, in: Martin Ebers and Susana Navas (eds.), *Algorithms and Law* (Cambridge University Press 2020), pp. 60 et seq.

² UNESCO, Recommendation on the ethics of artificial intelligence' (SHS/BIO/REC-AIETHICS/2021 No. 68), <<u>https://unesdoc.unesco.org/ark:/48223/pf0000380455</u>> accessed October 2024: "Furthermore, when developing regulatory frameworks, Member States should, in particular, take into account that ultimate responsibility and accountability must always lie with natural or legal persons and that AI systems should not be given legal personality themselves."



rights(4.)and intellectual property rights(5.), but also by a (new) fundamental right to digital identities derived from Art. 8 of the European Convention on Human Rights (ECHR), which would be relevant to consider in both contract law and tort law (6.).

1.2. The Notion of Identity

Before these questions can be addressed in detail, it is first necessary to clarify the meaning of (digital) identity. This notion has been understood in various ways across disciplines such as social science,³ psychoanalysis, psychology, political science, law and others, and even within the same discipline there are divergent opinions about the definition, meaning and scope of "identity".

On a fundamental level, according to *Paul Ricoeur*⁴ and *Mireille Hildebrandt*,⁵ we can distinguish *ipse identity* from *idem identity*. *Ipse (or self) identity* refers to the irreducible sense of self of a human person, i.e. oneself as a reflexive structure, as a self that exists by relating to itself. *Idem identity (or sameness)*, on the other hand, is the objectification of the self that stems from comparative categorization. Idem identity involves "an appeal to objective criteria of identification".⁶ Elements of *idem* identity are, according to *Paul de Hert*,⁷ social identity, cultural and legal or administrative identity ("identité civile") as the objectified, external part of a person that interacts with and in society.

In legal contexts, "identity" is often defined as "sameness", i.e. the fact that a subject, person or thing is the same as it is represented, claimed or charged to be.⁸ In a similar vein, computer scientists and international standardization organizations define identity as "a set of attributes related to an entity" and identification as "the process of recognizing an entity in a particular domain as distinct from other entities",⁹ or as "a representation of an entity in the form of one or more attributes that allow the entity or entities to be sufficiently distinguished within context".¹⁰ These attributes can be divided into categories such as birth-related information (name, pace of birth, date of birth, etc.), descriptive information (height, weight, physical traits, etc.), personal identifiers (e.g. social security number), biometric data (e.g. fingerprints), and so on. Based on these attributes, identity holders can prove who they are for legal interactions and transactions. Such legal identity is a necessary precondition to the exercise of most rights and to accessing public services.



³ George Hebert Mead and Charles Walter Morris, *Mind*, *Self*, *and Society from the Standpoint of a Social Behaviorist* (The University of Chicago Press 2009).

⁴ Paul Ricoeur, *Oneself as Another* (Kathleen Blamey tr, University of Chicago Press 1992).

⁵ Mireille Hildebrandt, 'Profiling and the Identity of the European Citizen' in Mireille Hildebrandt and Serge Gutwirth (eds), *Profiling the European Citizen: Cross-Disciplinary Perspectives* (Springer 2008) 303, 312 et seq.

⁶ Calvin O. Schrag, The Self after Postmodernity (Yale University Press 1997), p. 35.

⁷Paul De Hert, 'A Right to Identity to Face the Internet of Things?' (UNESCO 2008) <<u>http://portal.unesco.org/ci/fr/files/25857/12021328273de_Hert-Paul.pdf/de%2BHert-Paul.pdf/</u>> accessed October 2024.

⁸The Law Dictionary, featuring *Black's Law Dictionary*, 2nd ed, <<u>https://thelawdictionary.org/identity/</u>>accessed 30 October 2024.

⁹ International Organization for Standardization, *IT Security and Privacy – A Framework for Identity Management – Part 1: Terminology and Concepts ISO/IEC 24760-1:2019-05* (International Organization for Standardization, 2019).

¹⁰ International Telecommunication Union (ITU), *Digital Identity Roadmap Guide* (Geneva 2018), p.4.



Beyond just being a process of authentication, identity can also refer (in a broader sense) to social identity – including personal autonomy and development, reputation, gender identification, sexual orientation and much more. On this, the European Court of Human Rights (ECtHR) established in its case-law that the right to respect for private life enshrined in Art. 8 ECHR protects a right to identity in that it secures to individuals a sphere within which they can freely pursue the development and fulfilment of their personality.¹¹ This includes the right to establish and develop relationships with other human beings and the outside world,¹² the right to gender and ethnic identity¹³ as well as personal choices to an individual's desired appearance.¹⁴

1.3. Real-World and Digital Identity

Identity appears both as a "real-world" conceptualization and a digital artefact.¹⁵ Digital identity can be understood as an identity mediated or experienced through the involvement and use of information technology. As with real-world identity, digital identity can refer to the process of authentication or in a broader sense to the social expression and perception of individuals in the society.

In the EU, the eIDAS Regulation 910/2014¹⁶ (as amended by Regulation 2024/1183¹⁷) does not provide a formal definition of "digital identity". Instead, it refers - in its Art. 3 - to "electronic identification" as a process and to "electronic identification means" as "a material and/or immaterial unit containing person identification data and which is used for authentication for an online service". Similarly, Art. 12(19) DMA¹⁸ defines "identification services" as "a type of service provided together with or in support of core platform services that enables any type of verification of the identity of end users or business users, regardless of the technology used". Accordingly, digital identity can be defined as a digital representation of a natural or a legal person which allows the identity holder to prove who they are during online or offline interactions and transactions.



¹¹ Case ECtHR 53251/13, A.-M.V. v. Finland [2017], para 76; Case Brüggemann and Scheuten v. Germany [1976] Commission Decision 6959/75; Case ECtHR 48151/11 and 77769/13, National Federation of Sportspersons' Associations and Unions (FNASS) and Others v. France [2018], para 153. ¹² Case ECtHR 3710/88, Niemietz v. Germany [1992], para 29; Pretty v. the United Kingdom ECtHR 2346/02[2002], paras 61 and 67; Case ECtHR 21722/11 Oleksandr Volkov v. Ukraine [2013], paras 165-

^{167;} Case ECtHR 39630/09, El Masri v. the former Yugoslav Republic of Macedonia [2012], paras 248-250.

¹³ As to the former cf. Case ECtHR 28957/95 Christine Goodwin v. the United Kingdom [2002]; as to the latter cf. Case ECtHR 15379/16 Abdi Ibrahim v. Norway App [2021].

¹⁴ Case ECtHR 53176/99 Mikulić v. Croatia [2002].

¹⁵ OECD, 'At a Crossroads: "Personhood" and Digital Identity in the Information Society', *STI Working Paper* 2007/7, DSTI/DOC(2007)7, 7.

¹⁶ Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC [2014] OJ L257, 73.

¹⁷ Regulation (EU) 2024/1183 of the European Parliament and of the Council of 11 April 2024 amending Regulation (EU) No 910/2014 as regards establishing the European Digital Identity Framework [2024] 30 April 2024.

¹⁸ Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828 (Digital Markets Act)[2022] OJ L265/1.



Also, digital identity can also be understood as "a digital representation of a set of claims made by one party about itself or another data subject".¹⁹ Here, an OECD STI Working Paper on "Personhood" and Digital Identity in the Information Society points out that it encompasses both the role one assumes or displays in public or society and the profiles others develop about this person.²⁰

Digital identities can come in various shapes, such as account names, biometric data, identity cars or tokens, IP addresses, RFID, and also avatars. A person can have identities, which are either same or different (embodying the characteristics of the identity subject or not), authentic or fictious (confirmed as true in relation to a subject or not), unitary or multiple, temporary or permanent, fixed (unchanging) or flexible (dynamic), local or universal, owned or only possessed (whereas the ownership lies elsewhere), assigned or assumed (i.e. a given by others or what the individual choose to be), public or private, anonymous or pseudonymous.²¹

2. Avatars in the Metaverse

2.1. What are Avatars?

In the Metaverse, avatars are the embodiment of user identities. There, users can create one or more digital representations of themselves through avatars.

Originally, the term "Avatar" comes from the ancient Sanskrit word *avatara* meaning "descent", with its 18th century English derivation used to refer to an appearance of Vishnu and other Hindu gods on earth.²² In contemporary contexts and metaverse environments, however, an avatar more closely represents ascension – the digital image that represents the user's presence in the virtual world.

When a user creates an account on a virtual platform, they typically need to design an avatar to access that virtual world, whether it is a video game, social network or VR environment. Avatars can vary in terms of their realism, customization and interactivity depending on their purpose and design in relation to that virtual environment, ranging from simple graphical representations up to highly complex three-dimensional models that represent their user in virtual spaces such as video games or social networks.²³

Analysts predict that, in the future, avatars may be developed and used without physical devices for virtual and augmented reality experiences, for example by implanting wireless chips or interfaces in temples to establish two-way neural connections with them.²⁴ Often, avatars are used to express users' personality traits or preferences in style



¹⁹ OECD DSTI Working Paper, "Personhood" and Digital Identity in the Information Society, (2007) 7. ²⁰ Ibid.

²¹ Rowena Edwardina Rodrigues, *Revisiting the Legal Regulation of Digital Identity in the Light of Global Implementation and Local Difference* (PhD thesis, University of Edinburgh 2011) 25 et seq.

²² Merriam-Webster Dictionary, 'Avatar' (Merriam Webster, 23 October 2024) < <u>https://www.merriam-webster.com/dictionary/avatar</u> > accessed 30 October 2024.

²³ Blockchain Research Lab, Avatars: Shaping digital identity in the metaverse. (n.d.) <<u>https://www.blockchainresearchlab.org/wp-content/uploads/2020/05/Avatars-Shaping-Digital-Identity-in-the-Metaverse-Report-March-2023-Blockchain-Research-Lab.pdf</u>> accessed 30 October 2024.

²⁴ Ben Chester Cheong, 'Avatars in the Metaverse: Potential Legal Issues and Remedies' (2022) 3 International Cybersecurity Law Review, 467, 469 et seq.



and interests.²⁵ As such, avatars should not be thought of simply as pictures or cartoons, but as a means of communicating vital characteristics of their creator. Avatars can take many forms, ranging from two-dimensional profile photos used in social media environments – such as Facebook, to complex three-dimensional representations – such as those found in Roblox, Second Life or Spatial platforms.

2.2. The Creation of Avatars

Typically, users have several methods of creating avatars.

The first option is to use **predefined avatars** that are already provided by the Metaverse platform and are usually available upon registration or account creation. Users often access with a variety of predefined avatars that they can customize – by selecting clothing and other accessories. Although predefined avatars provide a quick and easy way to get involved in the Metaverse, they tend to have limited customization options, so their representation may not accurately reflect the user's self-presentation.

Custom avatars allow users to design avatars specifically tailored for themselves in the Metaverse with much more precision and care, often using avatar creation tools provided by Metaverse platforms or third-party developers. With these tools, users can design custom avatars from scratch; selecting various features such as appearance, body type and clothing to create unique representations of themselves within the Metaverse.

Finally, avatars can also be **imported from external sources** to certain platforms. These avatars may have already been created – in another virtual world or game, or designed – sing 3D modeling software. Importation can be an efficient way for users to bring existing avatars into the Metaverse without expending additional time or effort. It allows them to use the same avatar in multiple virtual realities, if desired. One must note, however, that this feature may not be available on all Metaverse platforms.

2.3. Types of Avatars

There are several types of avatars, and their individual characteristics depend on how and where they are used.²⁶ Some common types include:

- **Customizable avatars**: Users can personalize their avatars by choosing from a variety of clothing, hairstyles and facial features to create an accurate representation of themselves.²⁷
- **Non-customizable Avatars**: Avatars that represent specific characters, personas or roles within interactive media such as video games. Users can neither modify nor alter these types of avatars.
- **Self-representing avatars**: These avatars closely resemble their users in terms of physical appearance, personality traits or other characteristics, and can provide a more immersive virtual or augmented reality experience.²⁸





²⁵ Blockchain Research Lab (2024) 9.

²⁶ See generally, the differentiations in: Blockchain Research Lab.

²⁷ Rabindra Ratan and Young June Sah, 'Leveling up on Stereotype Threat: The Role of Avatar Customization and Avatar Embodiment' (2015) 50 *Computers in Human Behavior* 367–374.

²⁸ Alison McMahan, 'Immersion, Engagement, and Presence: A Method for Analyzing 3-D Video Games' in Mark J.P. Wolf and Bernard Perron (eds), *The Video Game Theory Reader* (Routledge, Taylor & Francis Group 2003) 67-86.



- **Non-human avatars**: In video games and other interactive media, some avatars are designed to represent non-human entities animals, robots or mythological creatures. They often present as non-human characters such as animals or robots.²⁹
- **Abstract avatars**: Abstract avatars are just symbols. They are not intended to represent specific people or characters, but rather are more abstract or symbolic in nature. They may be used in virtual or augmented reality environments to provide a more immersive experience or to represent certain concepts or ideas.³⁰

2.4. Avatars as Non-Fungible Tokens (NFTs)

Avatars can also be created in the form of non-fungible tokens (NFTs), to ensure that only their "owners" can control and shape their behavior, history, development, appearance and reputation.

NFTs are blockchain-enabled cryptographic assets that serve as proof of ownership for digital items.³¹ Within the context of the metaverse, digital asset transactions—such as the acquisition of avatars, avatar clothing, or virtual decorations—are recorded on a blockchain. This blockchain, a decentralized digital ledger,³² provides secure storage for transaction records and ensures that transaction records cannot be deleted or altered.

By restricting participation based on avatar (or NFT) ownership, organizers can ensure that only those who "own" NFTs can participate – thus creating scarcity and exclusivity in industries as diverse as gaming, finance, art and music, where NFTs can provide special access to in-game items, collectible artwork or ticketed events – among many others.

2.5. Avatar Interaction

Depending on the platform, avatars can engage in a variety of interactions within virtual worlds.³³ These interactions include communication with other avatars, how information is



²⁹ Zhi-Hong Chen and others, 'The Effects of Human Factors on the Use of Avatars in Game-Based Learning: Customization vs. Non-Customization' (2019) 35 International Journal of Human-Computer Interaction 384.

³⁰ Nick Yee and others, 'The Unbearable Likeness of Being Digital: The Persistence of Nonverbal Social Norms in Online Virtual Environments' (2007) 10 *CyberPsychology & Behavior* 115.

³¹ See: Tambiama Madiega and others, *Metaverse: Opportunities, Risks and Policy Implications* (European Parliamentary Research Service, Members' Research Service, PE 733.557, 2022).

³² Marny Lopez, 'The Role of Blockchain in Secure Online Transactions' (*Devlane*, 13 May 2024)
<<u>https://www.devlane.com/blog/the-role-of-blockchain-in-secure-online-</u>

transactions#:~:text=lt%20is%20a%20decentralized%20digital,tamper%20with%20the%20reco rded%20data.&text=This%20makes%20blockchain%20an%20ideal,tamper%2Dproof%20record %2Dkeeping> accessed 30 October 2023.

³³ Jonathan Steuer, 'Defining Virtual Reality: Dimensions Determining Telepresence' (1992) 42 Journal of Communication 73; Mathew Lombard and Theresa Ditton, 'At the Heart of It All: The Concept of Presence' (1997) 3(2) Journal of Computer-Mediated Communication JCMC321 <<u>https://doi.org/10.1111/j.1083-6101.1997.tb00072.x</u>> accessed 30 October 2023.



presented, and the types of decisions and actions that can be taken.³⁴ Channels for avatar communication and interaction include text chat, audio-based voice chat, and visual perception – where avatars perceive each other's static appearance, transient features (such as clothing), and even emotions. The wealth of possible forms of interaction contributes significantly to immersive virtual experiences.

However, the ability of avatars to be used for communication and self-expression can also be limited by the design of the avatar and/or by the architecture of the platform in a number of ways:

- For example, an avatar may lack control over certain facial expressions, body language cues, sounds or gestures.
- In addition, the avatar's ability to communicate and express itself may be limited by the technical capabilities of the platform that hosts the virtual world. For example, low bandwidth or computing power may prevent certain avatar features from functioning effectively on such platforms.
- Finally, the rules of the virtual environment may limit the ways in which avatars can communicate. For example, some virtual worlds or games impose limits on acceptable behavior because their moderation systems prevent certain types of communication or expression.

2.6. Avatar Markets

Market research institutes have predicted a significant growth in the market for avatars. A recent report indicates that the global market for digital human avatars will reach \$527 billion by 2030.³⁵ It has been further projected that the market for 3D avatar solutions will grow to \$544.87 million by 2028, with a compound annual growth rate of 31.3% during this period.³⁶

3D body scanners in various industries – from healthcare to fashion to modern art – are particularly contributing to the growth of the 3D avatar solutions market, as they are used to create 3D replicas of the human body for various purposes such as measurement, treatment plans and art development.³⁷

Creators in the metaverse have sold their works for prices as high as 116,651 USD³⁸ as floor price, and these have exchanged hands for among 5791 buyers between August 2022 and March 2023. For instance, Steve Aoki's native avatar is selling for 52 USD and had 2574 owners between July 2022 and March 2023.³⁹ "The Doggies" was released in February 2022. Since then, avatars worth 7,654 ETH have been traded on the OpenSea platform.



³⁴ Lombard and others (n 33) *ibid.*; Ronald E. Rice, 'Task Analyzability, Use of New Media, and Effectiveness: A Multi-Site Expegloration of Media Richness' (1992) 3 *Organization Science* 475.

³⁵ Emergen Research, Digital Human Avatar Market by Product Type, By Industry Vertical, and By Region Forecast to 2030 (2022). <<u>https://www.emergenresearch.com/industry-report/digital-human-avatar-market</u>> accessed 30 October 2024.

³⁶ ReportLinker, 3D Avatar Solution Market Forecast to 2028 - COVID-19 Impact and Global Analysis by Component, Model, and End User (2022).

³⁷ Insights PM, '3D Avatar Solution Market Size, Share: Emerging Technologies, Sales Revenue, Development Status: Key Players Analysis: IN3D Inc; TG3D Studio Inc; Itseez3D INC; 3D Generation GmbH' (*openPR.com*, 22 February 2023) <<u>https://www.openpr.com/news/2943848/3d-avatar-</u> <u>solution-market-size-share-emerging-technologies</u>> accessed 30 October 2024.

 ³⁸ The Bored Ape Yacht Club is valued at 1.1 billion USD. See also: Blockchain Research Lab. (n 23) 36.
 ³⁹ Ibid.





Based on 5% creator fees, The Sandbox Collections generated approximately 382 ETH in fees; equivalent to approximately \$670,000 at March 2023 prices of Ethereum. Most of this volume and fees were generated just on the launch day.⁴⁰

3. Wrongs vis-à-vis the Avatar

3.1. What can Happen to My Avatar?

When users interact through their avatars, many situations can arise that would constitute a violation of the law if they occurred in the real world.

Examples include:

- Tricking an avatar into transferring bitcoin or other virtual currencies to other users, who can then convert those bitcoins into money in the real world;
- harassing avatars, by repeatedly punching them in the face or by intentionally violating their sense of personal space in a virtual environment, including through inappropriate actions that simulate sexual harassment or assault;
- creating pornographic content using another person's likeness without their consent, such as by creating an avatar that has their face and body shape or using sensitive video footage;
- insulting or defaming an avatar by damaging the avatar's reputation;
- processing the avatar's data to analyze the user's behavior without his/her consent, or
- stealing or copying an avatar's identity.

Such incidents are not mere fiction. In fact, a number of incidents in virtual worlds prove that these and other events have already occurred.

One often cited example is the "Ugandan Knuckles" incident, in which some users on the social VR platform VRChat used a 3D model of a cartoon character to harass other users by physically blocking space and making offensive and racist comments.⁴¹ Another incident occurred on the popular online multiplayer game Fortnite, which introduced a "Party Royale" mode, a non-combat multiplayer environment where participants could socialize and attend events: When the platform hosted a panel discussion about race in America, some participants used an in-game feature to throw virtual tomatoes at the black panelists on screen as well as at other avatars.⁴² There have been even "rapes" in virtual worlds, such as in 1993 on the video game platform LambdaMOO, where an avatar named

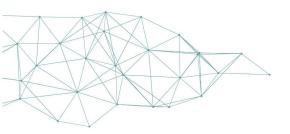


⁴⁰ Ibid, p.37.

⁴¹Julia Alexander, "'Ugandan Knuckles" Is Overtaking VRChat' (*Polygon*, 8 January 2018) <<u>https://www.polygon.com/2018/1/8/16863932/ugandan-knuckles-meme-vrchat</u>> accessed 30 October 2024.

⁴² Patrick Klepek, 'Fortnite Streams Panel on Race, While Some Players Throw Tomatoes' (*Vice*, 8 July 2020) <<u>https://www.vice.com/en/article/dyzdkq/fortnite-streams-panel-on-race-while-some-players-throw-tomatoes</u>> accessed 30 October 2024.





Mr. Bungle raped another avatar,⁴³ and in 2018 on Roblox, where a hack allowed a child's avatar to be raped in the game.⁴⁴

There are also cases where a player has lost his or her avatar as a result of a pirate attack on the game's database – such as the Red Moon case, which was brought before the Chinese courts.⁴⁵ In addition, avatars are also subject to penalties imposed by platform providers, ranging from a warning with accelerated suspensions to a final warning, and then account closure as the ultimate sanction.⁴⁶ This can have serious repercussions as users could lose everything in the virtual world.

3.2. Context and Custom in the Metaverse

Arguably, not all types of harm that occur in the metaverse can (and should) be sanctioned, even if such harms (in real world scenarios) would constitute a violation of the law.

Virtual worlds are governed by their own rules, which are determined by the purpose of the created world, the embedded code (the architecture), the terms of service as well as the rules of conduct, the context of use, and much more. Accordingly, if the user's avatar visits spaces of the metaverse where "killing" is part of the game, no sanctions are accrued if the avatar is killed.

This does not mean, however, that real-world legislations should never interfere with virtual worlds.⁴⁷ Even if the harm occurs in the virtual world, it may have a significant impact on the user in the real world. However, given that virtual worlds are artificially constructed, context and custom are particularly important. Just as different social settings in the real world have their own norms of behavior, the same holds true for different virtual spaces. Accordingly, what is acceptable behavior and content depends on the context of the Metaverse' user-generated experiences. For example, whether the avatar enters a multiplayer gaming environment, a professional meeting, a collaborative space or a more private virtual environment – all provide different contexts. What may be acceptable or expected in one context may be inappropriate or even dangerous in another.

Therefore, understanding the context of use and effectively communicating those expectations to individual users, is essential to assessing whether real-world legal remedies and sanctions accrue.



⁴³ Julian Dibbell, 'A Rape in Cyberspace' (1993) vol XXXVIII/ 51 *Village Voice* 38. Later, the player of the affected avatar attempted to have the player responsible for the avatar Mr. Bungle condemned to death, but was, however, not successful.

⁴⁴ Sarah Perez, 'Roblox Responds to the Hack That Allowed a Child's Avatar to Be Raped in Its Game' (*TechCrunch*, 19 July 2018) <<u>https://techcrunch.com/2018/07/18/roblox-responds-to-the-hack-that-allowed-a-childs-avatar-to-be-raped-in-its-game/</u>> accessed 30 October 2024.

 ⁴⁵ Jay Lyman, 'Gamer Wins Lawsuit in Chinese Court over Stolen Virtual Winnings' (*TechNewsWorld*,
 19 December 2003) <<u>https://www.technewsworld.com/story/gamer-wins-lawsuit-in-chinese-court-over-stolen-virtual-winnings-32441.html</u>> accessed 30 October 2024.

⁴⁶ See the terms of service of some platform providers, discussed later in this work.

⁴⁷ In this sense, see: Jack M. Balkin, 'Law and Liberty in Virtual Worlds' in Jack M. Balkin and Beth Simone Noveck (eds), *The State of Play: Law, Games, and Virtual Worlds* (New York University Press 2006) 86-118 <<u>https://doi.org/10.18574/nyu/9780814739075.003.0008</u>>.



3.3. Party Identification and Actionable Harm

In assessing whether there is an actionable harm, it is important to distinguish between situations where the avatar itself is the only "victim", and those where the user behind the avatar has suffered a personal harm.

Arguably, as long as digital tools are a simple *means* of violating the rights of a real person *behind* the avatar, there seems to be no complication in interpreting the scenario. The rights of a person are the same, regardless of whether they are violated offline or online. For example, if an avatar steals virtual currency from another avatar and that currency can be converted into real-word-money, that money has been stolen from the real user. Similarly, if the avatar is a copy of what the user looks like in real life, then the user's likeness would be protected by the right to privacy, and related derivative privacy rights, such as the right to publicity.⁴⁸ European users are moreover protected by the GDPR. If the user is identifiable via the avatar, then the avatar itself constitutes personal data under Art. 4 No. 1 GDPR, making European data protection law applicable. The same goes for cases of defamation. Where someone damages the reputation of an avatar by making a false statement to a third party, such a statement will give rise to a defamation action, if the avatar is akin to the identity of the user.

Much more problematic, on the other hand, are cases where the avatar does not share sufficiently characteristics with the user's actual identity. In practice, this will often be the case. Studies show that users tend to choose an avatar that does not correspond to their appearance.

In such cases, it will be difficult to establish any actionable harm. Since the avatar itself is not capable of having dignity, a right to reputation or some other rights of personality, only a sufficient link between the defamatory statement and the human user can give rise to a claim for defamation. Accordingly, a defamed plaintiff must show that a reasonable person would understand that the statement refers to him or her (the so-called "of and concerning" requirement). In some countries, this requirement is interpreted quite strictly. For example, the California Court of Appeals has held that "mere similarity or even identity of names is insufficient to establish a work of fiction is of and concerning a real person".⁴⁹ Similarly, German law requires for a defamation claim that the defamatory statement is not only directed at the avatar, but at the actual user behind the avatar.⁵⁰

Arguably, the user may still be protected under contract law (cf. below, Section 4.) and intellectual property law (cf. below, Section 5.). However, as we discuss later in this paper, both areas of law can only provide limited protection, raising the question of whether there is a case for recognizing a (*new*) fundamental right to digital identities - one which would be relevant to both contract law and tort law (cf. below, Section 6.).



 ⁴⁸ Jesse Lake, 'Hey, You Stole My Avatar!: Virtual Reality and Its Risks to Identity Protection' (2020)
 69(4) Emory Law Journal 848.

⁴⁹ Case Aguilar v Universal City Studios, Inc (1985) 219 Cal Rptr 891, 892. The plaintiff failed to meet the "of and concerning" requirement because no reasonable audience would understand the film character to be plaintiff.

⁵⁰ Jan Felix Dein, *Die Repräsentation in Onlinewelten* (Nomos 2014), 119 and pp. 242 et seq. According to Dein, this depends on whether the person making the statement was referring to the behavior of the user or just the appearance of the avatar.



4. Contractual Rights on Avatars

How an avatar can interact with others in the Metaverse depends mainly on the architecture of the virtual world, i.e. on the encoded rules. However, these encoded rules are not (yet) subject to any specific legal obligations or even judicial control (4.1). Accordingly, the rights of a user over his or her avatar are primarily determined by the (preformulated) terms and conditions (T&Cs) of the platform (4.2.). This raises the question of whether (*and to what extent*) the law limits the power of platforms to determine their "house rules" vis-à-vis users and, in particular, which legal requirements platforms must observe with regard to the formulation of their T&Cs. In the EU, platform providers are subject to Art. 14 Digital Services Act (DSA),⁵¹ which sets out new rules on how platforms can enforce their T&Cs(4.3.). Finally, we will analyze whether platform T&Cs can have an effect not only on the relationship between user and provider, but also between users (4.4.).

4.1. The Architecture of the Metaverse: Encoded "Rules"

The rules of virtual communities are not only contained in written legal documents such as terms of service, community standards and privacy policies. An important part of the rules is embodied in the technological architecture and in the design of virtual communities. This includes rules of conduct and the question of what users can do with their avatars.

For example, avatar movements can be automatically restricted, such as by limiting the hand gestures that are displayed or preventing avatars from standing too close to one another. A prominent example of this is the virtual reality platform AltspaceVR, which changed how avatars physically interact with each other, after some users harassed others by repeatedly punching them in the face.⁵²

An important, yet unresolved legal question is whether encoded rules - written rules - can be subjected to legal review. Unlike traditional private rules - such as standard contract terms - encoded rules are not written in natural language, but are embodied in technology. Under current laws, providers are not required to describe the operation of codes in natural language and make that description available to the public.

Encoded rules are not (yet) subject to any legal obligations. Neither the DSA nor the Unfair Contract Terms Directive (UCTD) 93/13⁵³ provide for such obligations. The DSA refers to "terms and conditions", which are defined in Art. 2(u) as "all clauses, irrespective of their



⁵¹ Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828 (Digital Markets Act) [2022] OJ L265/1. In addition, the Unfair Contract Terms Directive (UCTD) 93/13 provides for a review of not individually negotiated contract terms with regard to their fairness (Art. 3 UCTD) and transparency (Art. 5 UCTD). Recital (10) DSA clarifies that the UCTD applies alongside the DSA. However, the UCTD lags behind the DSA in terms of its effect (only a directive, while the DSA is a regulation), its scope of application (only business-to-business relations, while the DSA protects all service recipients) and its content (general principle of fairness, while the DSA explicitly refers to fundamental rights). For these reasons, the following discussion will focus primarily on the DSA.

 ⁵² Alexander Lee, 'Why Metaverse Builders Want to Create Safe, Consensual Virtual Worlds' (*Digiday*, 17 November 2021) <<u>https://digiday.com/marketing/metaverse-builders-want-to-create-safe-consensual-virtual-worlds/</u>> accessed 30 October 2024.

⁵³ Council Directive 93/13/EEC of 5 April 1993 on unfair terms in consumer contracts [1993] OJ L95/29.



name or form, which govern the contractual relationship between the provider of intermediary services and the recipients of the service". The scope of the UCTD 93/13 is even narrower. According to Article 2(a) – when read in conjunction with Art. 3(1) of the Directive – only contract terms which have not been individually negotiated are subject to the UCTD.

As a consequence, encoded "rules" are not subject to specific obligations. They do not "regulate" contractual relationships in a legal sense, but rather define the virtual world as such and the features available in it.

4.2. Terms and Conditions of Major Metaverse Platforms

4.2.1. Transaction Rules and Rules of Conduct

Usually, virtual community rules regulate both the bilateral relationship between providers and users (transaction rules) as well as the behavior of users in the community (rules of conduct).⁵⁴ Typical transaction rules consist of intellectual property clauses, privacy provisions; modification clauses, and liability clauses. These rules are specifically tailored to the provider-user relationship.

Rules of conduct, on the other hand, govern user behavior in communities composed of millions and sometimes billions of people. While some of these rules regulate user behavior and interaction, others determine the modalities of access to and exclusion from virtual communities.

In the following section, focus is placed mainly on those rules that have the greatest impact on the user's contractual rights on avatars (except for intellectual property rights which are analyzed under Section 5.). To this end, we have analyzed the T&Cs of ten platforms, viz; Spatial, Decentraland, Roblox, Somnium Space, Sandbox, Second Life, Epic Games, Axie infinity, Rec Room and Meta.

4.2.2. Behaviour and Interaction Clauses

Behavior and interaction clauses include policies that prohibit any content or activity that could cause harm to others, such as violence, harassment, hate speech, illegal or dangerous activities or impersonation. Platforms reserve the right to take immediate action against any content or account that violates their community guidelines or applicable laws. Users are expected to respect each other and refrain from engaging in harmful or offensive behavior.

Second Life,⁵⁵ for instance, has certain policies that prohibit any content or activity that may cause harm to others, such as violence, harassment, hate speech, illegal or dangerous activities, or impersonation.



⁵⁴ Louis Jakob Rolfes, 'The Legitimacy of Rules of Virtual Communities' (PhD thesis, Humboldt University Berlin 2020) <<u>https://edoc.hu-berlin.de/handle/18452/24607</u>> accessed 30 October 2024.

⁵⁵ Linden Lab, 'Terms of Service' (Linden Lab, 31 July 2017) <<u>https://www.lindenlab.com/tos#tos8</u>> accessed 30 October 2024.



*Sandbox*⁵⁶ prohibits, amongst others, the display of any content that is violent or that could encourage the commission of a crime. While there is no definition of what constitutes violent content, subsequent sections of the Terms of Service prohibit activities like interfering with other users' enjoyment of the service, promoting illegal activities, distributing viruses, displaying illegal content, and others.⁵⁷

*Meta*⁵⁸ describes such activities as "advocating, engaging in or promoting violence, human exploitation, human trafficking or human smuggling. Supporting or representing groups or individuals involved in terrorism, hate-based organisations or criminal groups; promoting or coordinating acts of physical harm, such as sexual or physical assault, or suicide or self-harm" to fall within his group.

*Lindenlab*⁵⁹ prohibits illegal acts, harassments or other acts the violates the rights of others. Such acts are further listed to include violating privacy rights, stalking, engaging in inappropriate conduct with minors, posting defamatory, libelous, false content, etc.

*Rec Room*⁶⁰ extends the responsibility to maintain good conduct to the creators of rooms. Such creators would be held responsible for illegal or abusive behavior in their publicly accessible rooms. Activities involving "sexist, racist, discriminatory or harassing language, behavior, or content" are strictly prohibited and may result in expulsion from the platform.

4.2.3. Termination Clauses

Usually, the Terms of Service also govern the access, use, and exclusion from the platforms and their services. Some platforms grant their users a limited, revocable, non-exclusive, non-transferable license to use the services provided on them for personal and non-commercial purposes only.⁶¹ However, some also impose certain conditions and restrictions on the use of their services, such as requiring registration, verification, payment or compliance with applicable laws and regulations.

In the event of a violation, platforms may suspend or terminate an individual user's account or access.⁶² Users are required to accept and abide by these terms and conditions in order to effectively use the platform and its services. They may be sanctioned by either a suspension or termination of their accounts; depending on the nature of the violation of the platform's terms of service.

*Meta*⁶³ reserves the right to terminate accounts for serious clear, or repeated violations of its terms. There does not appear to be a dichotomy as to which violations are



⁵⁶'Sandbox, 'Premium NFT terms of use' (*The Sandbox*, October 2024)
<<u>https://www.sandbox.game/en/premium-nft-terms-of-use/</u>> accessed 30 October 2024.
⁵⁷ Ibid, Section 4C.

⁵⁸ Meta, 'Code of conduct for virtual experiences' (*Meta*, 2024) <<u>https://www.meta.com/en-gb/help/quest/articles/accounts/privacy-information-and-settings/code-of-conduct-for-virtual-experiences/</u>> accessed 30 October 2024.

⁵⁹ Sandbox (n 56).

⁶⁰ Ibid, Section 6.

⁶¹ Meta, 'Supplemental Meta Platforms Technologies Terms of Service: Meta Quest' (*Meta*, 23 September 2024) <<u>https://www.meta.com/de/en/legal/supplemental-terms-of-service/</u>> accessed 30 October 2024.

⁶² Epic games, 'Terms of service' (*Meta*, 16 August 2024) <<u>https://www.epicgames.com/site/en-US/tos</u>> accessed 30 October 2024.

⁶³ <u>Meta</u> (n 61) Section 5.2.



serious and which are not (although some platforms simply categorize them).⁶⁴ In addition, the platform may completely delete a user's account if it remains unconfirmed, unused or suspicious for a period of time.⁶⁵ Rec Room may either terminate or suspend a user's account for similarly serious or unserious infractions.⁶⁶ The discretion to do so rests solely on the platform. The terms of service of most platforms give them an unlimited right to sanctioning decisions. Axie⁶⁷, Sandbox⁶⁸, Second Life⁶⁹ and others, all retain the sole discretion to terminate or suspend accounts for misconduct, without warning and without any liability whatsoever.

In most cases, there is neither procedure nor opportunity to appeal decisions other than affected users being file a report. Finally, upon termination, the user permanently loses everything; data, content, even licenses, etc.⁷⁰ In some cases, the user can even be prohibited from registering other accounts, either under the same name or through another person.⁷¹ IP addresses can be blocked accordingly.⁷² However, the rights of the platform against the user; including indemnities, disclaimers, limitations of liability, all survive the termination.⁷³ If a user is indebted to the platform, such indebtedness survives the termination or suspension.74

4.2.4. Liability Rules

Usually, platforms impose disclaimers, limitations and exclusions of liability that exclude damages or losses to users arising from the use of their platform and services.⁷⁵ Users indemnify platforms against any claims or disputes arising from the use of their (the platforms') platform and services. Also, they assume all risks associated with their use, including any reliance on the accuracy, completeness or usefulness of the content presented, as well as disclosure of personal data that could identify themselves or others, and complying with all relevant laws and regulations while using them.⁷⁶

4.3. Due Diligence Obligations for Terms and Conditions under Art. 14 DSA

⁷⁴ Linden Lab (n 55) Section 5.5.



http://catedrametaverso.ua.es catedrametaverso@ua.es

⁶⁴Sandbox 'Premium NFT terms of use' (The Sandbox, October 2024) https://www.sandbox.game/en/premium-nft-terms-of-use/ accessed 30 October 2024.

⁶⁵ Meta (n 61).

⁶⁶ Rec Room, 'Terms of Service' (*Rec Room*, 22 August 2024) <<u>https://recroom.com/terms-of-</u> service> accessed 30 October 2024.

⁶⁷ Axie Infinity, 'Terms of Service' (*Rec Room*, 22 August 2024) <<u>https://axieinfinity.com/terms-of-</u> <u>use</u>> accessed 30 October 2024, Section 9.

⁶⁸ Sandbox (n 56) Section 4.

⁶⁹ Linden Lab (n 55) Section 5.1.

⁷⁰ Ibid, Section 5.5.

⁷¹ Axie Infinity (n 67).

⁷² Ibid, Section 9.

⁷³ Rec Room (n 66).

⁷⁵ See for instance, Axie Infinity's Terms of Service; Axie Infinity (n 67).

⁷⁶ Linden Lab (n 55) Sections 9.5 and 9.6.



4.3.1. Applicability of the DSA to Metaverse Providers

Since the relationship between the avatar user and the Metaverse platform is primarily governed by the contract entered into by both parties, the question arises as to the extent to which users are protected with respect to their contractual rights over avatars and what legal requirements a platform provider must observe with respect to the formation and execution of its T&Cs.

In the EU, platform providers are subject to the DSA, which applies to "intermediary services" offered to recipients who have their place of establishment or are located in the EU, regardless of where the providers of those intermediary services are established, Art. 2(1) DSA. Although not explicitly mentioned in the DSA, metaverse platforms regularly qualify as "hosting services" because they consist of "the storage of information provided by, and at the request of, a recipient of the service" within the meaning of Art. 3(g)(iii) DSA.⁷⁷

Particularly important in this context is Art. 14 Digital Services Act (DSA), which aims to "set certain rules on the content, application and enforcement of the terms and conditions" of platform providers in the interests of "transparency, the protection of recipients of the service and the avoidance of unfair or arbitrary outcomes" (recital 45 DSA).

4.3.2. Transparency Obligations, Art. 14(1) DSA

To this end, the DSA imposes extensive transparency obligations on intermediary service providers to ensure that their T&Cs are transparent and clear as to how, when and on what basis user-generated content (here: the actions of an avatar) can be restricted.

According to Art. 14(1) DSA, service providers are expected to include in their T&Cs, clear, plain, intelligible, user-friendly and unambiguous information "on any restrictions that they impose in relation to the use of their service" with respect to information provided by the recipients of the service", including "information on any policies, procedures, measures and tools used for the purpose of content moderation, including algorithmic decision-making and human review, as well as the rules of procedure of their internal complaint handling system". The term "content moderation", is defined in Art. 3(t) DSA (*very broadly so*) to include any automated or non-automated activity aimed at "detecting, identifying and addressing illegal content or information incompatible with their terms and conditions", including measures that affect the "availability, visibility, and accessibility of that illegal content or that information, such as demotion, demonetisation, disabling of access to, or removal thereof".



⁷⁷ Cristina Poncibò and Luigi Cantisani, 'E-commerce in Virtual Worlds: Digital Services Act' in Larry diMatteo and Michel Cannarsa (eds), *Research Handbook Metaverse and Law* (Edward Elgar Publishing 2024) 244-258, 251. Likewise, Thierry Breton, Commissioner of the Internal Market, mentions the DSA as a tool to regulate the Metaverse; Thierry Breton, Blogpost 'Europe's plan to thrive in the metaverse', (*European Commission*, 14 September 2022) - *European Commission*, 'Press Corner'<<u>https://digital-strategy.ec.europa.eu/de/library/europes-plan-thrive-metaverse</u>>

accessed 30 October 2024. Also assuming the applicability of the DSA: Markus Kaulartz and others, 'Das Metaverse – eine rechtliche Einführung' (2022) *RechtDigital (RDi)* 521, 529; Leonie Bender-Paukens and Susanne Werry, Datenschutz im Metaverse (2023) *Zeitschrift für Datenschutz (ZD)* 127, 130. The European Parliamentary Research Service (EPRS), on the other hand, 'is of the opinion that it is currently unclear whether the rules of the DSA on content moderation would also apply to illegal or harmful content in the metaverse – see Madiega et al (n 31).



The T&Cs of major Metaverse providers discussed above are unlikely to meet these requirements, since they do not specify in detail what behaviors and interactions of the avatar are prohibited and under what conditions platforms may restrict, suspend or terminate an individual user's account or access.

4.3.3. Application and Enforcement of Fundamental Rights via T&Cs, Art. 14(4) DSA

While Art. 14(1) DSA requires platform providers to phrase their T&Cs sufficiently clearly and precise - so that users understand how, when and on what basis their content can be restricted, Art. 14(4) DSA goes even further. Crucially, this provision lays down new rules on how platforms can enforce their T&Cs. According to Art. 14(4) DSA, providers of intermediary services shall "act in a diligent, objective and proportionate manner" in applying and enforcing T&Cs that restrict user-generated content. In doing so, platforms must have "due regard to the rights and legitimate interests of all parties involved".

Specifically, platforms are required to consider "the fundamental rights of the recipient of the service, such as the freedom of expression, freedom and pluralism of the media, and other fundamental rights and freedoms" as enshrined in the Charter of Fundamental Rights of the EU – which, according to the case-law of the CJEU regarding the freedom of expression established in Art. 11 CFR, should be given "the same meaning and the same scope" as Art. 10 ECHR, "as interpreted by the case-law of the European Court of Human Rights."⁷⁸

Accordingly, Art. 14(4) DSA makes it possible to establish an indirect horizontal effect of fundamental rights in the contractual relationship between online platforms and their users.⁷⁹ Particularly, the provision requires (Metaverse) platforms to consider the fundamental rights of users (on their avatars) in their content moderation decisions, especially, when issuing statements of reasons for content restrictions (Art. 17 DSA) and when establishing internal complaint handling systems (Art. 20(1) DSA). Arguably, Art. 20(4) DSA seems to imply that users can lay direct complaints about the way in which a platform has considered their fundamental rights. Furthermore, Art. 53 DSA provides that individuals or representative organizations should be able to lodge any complaint relating to the compliance with the DSA. Thus, a user can also lodge a complaint with the Digital Services Coordinator on the grounds that a platform has violated Art. 14(4) DSA by failing to adequately apply fundamental rights in a content moderation decision.⁸⁰

All these instruments provide users with powerful tools to protect their avatars from the Metaverse provider – as long as the platform has breached the user's fundamental rights with respect to their avatar.⁸¹

4.4. Third-Party Effect of Platform Rules?



⁷⁸ Case C-345/17 Sergejs Buivids v. Datu valsts inspekcija ECLI:EU:C:2019:122, para 65.

⁷⁹ Joao Pedro Quintais and others, 'Using Terms and Conditions to Apply Fundamental Rights to Content Moderation' (2022) 24 *German Law Journal* 881-911.

⁸⁰ Ibid, 904.

⁸¹ Cf. more in detail below, section 6.2.



In principle, a platform's T&Cs can only create rights and obligations between the parties to the contract, i.e. the platform and its users. In civil law countries, this principle is known as "relativity of contract" (effet relatif du contrat, relatività degli effetti del contratto, Relativität von Forderungsrechten),⁸² while in common law countries it is termed "privity of contract".⁸³

In the Metaverse, many situations arise in which one user's avatar harms another user's avatar- often in violation of the platforms T&Cs - for example by harassing, insulting or defaming an avatar. Against this background, the question arises whether platform rules can have third-party effects⁸⁴ so that a user's breach of T&Cs of one contract affects other contracts, thereby making a user liable to users in different contracts for which the breaching party is not privy to?

One possible solution would be to establish a third party effect of platform rules on the basis of a *framework contract*. Indeed, some scholars argue that the user's consent to the T&Cs upon registration on the platform, beyond creating a contract between the registering user and the platform, also constitutes an offer (express or implied) to all current and future users of the platform to enter into a master or framework contract on the terms and conditions.⁸⁵ The consent given by the user upon registration would simultaneously constitute acceptance of the validity of the framework agreement, with the platform acting as the receiving agent in each case. However, this solution clearly overtaxes the interpretation of the declarations of intent of the user, who do not necessarily want to conclude contracts with a large number of future users of the platform unknown to them.⁸⁶ Additional problems arise in the event of a subsequent amendment of the T&Cs, which would inevitably require an amendment of all framework agreements concluded between the users of the platform.

A different solution was favored by the German Federal Supreme Court (Bundesgerichtshof, BGH) in cases where users conclude a contract with both the platform



⁸² For France see Alex Weill, 'La relativité des conventions en droit privé français' (Dalloz 1939) preface by Marcel Nast; Jean-Louis Goutal, *Essai sur le principe de l'effet relatif du contrat* (vol 171, Bibliothèque de droit privé, Librairie générale de droit et de jurisprudence 1981); for Germany cf. Michael Hassemer, *Heteronomie und Relativität in Schuldverhältnissen: Zur Haftung des Herstellers im europäischen Verbrauchsgüterkaufrecht* (Jus Privatum 118, Mohr Siebeck 2007). The concept has been incorporated in the civil codes of many countries belonging to the Roman legal tradition; for France, Belgium and Luxembourg cf. respectively Art. 1165 CC, for Italy cf. Art. 1372 CC, for Spain Art. 1257 CC.

⁸³ Patrick Selim Atiyah, An Introduction to the Law of Contract (5th edn, Oxford University Press 1995) 355 et seq. For the historical background see V Palmer, *The Paths to Privity: The History of Third-Party Beneficiary Contracts at English Law* (Austin and Winfield 1992).

⁸⁴ In Germany, the question of whether platform conditions have a third-party effect, is the subject of lively debate. Cf. Marvin Glogowski, *Plattformbedingungen. Zur Wirkung von Dritt-AGB im Marktverhältnis* (Mohr Siebeck 2022); Lea Katharina Kumkar, 'Plattform-Recht revisited: Umgang mit den Marktordnungen digitaler Plattformen de lege lata et ferenda' (2022) Zeitschrift für *Europäisches Privatrecht* (*ZEuP*)530, 543 et seq.

⁸⁵ Peter Sester, 'Vertragsabschluss bei Internet-Auktionen' (2001) CR 98, 107; Gerald Spindler, 'Vertragsabschluss und Inhaltskontrolle bei Internet-Auktionen' (2001) ZIP 809, 812; Bernhard Ulrici, 'Zum Vertragsschluss bei Internetauktionen' (2001) NJW 112.

⁸⁶ Bettina Heiderhoff, 'Die Wirkung der AGB des Internetauktionators auf die Kaufverträge zwischen den Nutzern' (2006) *ZIP* 793, 794; Robert Koch, 'Geltungsbereich von Internet-Auktionsbedingungen' (2005) *CR* 502, 504 et seq. Tobias Wagner and Ralph Zenger, 'Vertragsschluss bei eBay und Angebotsrücknahme. Besteht ein "Loslösungsrecht" vom Vertrag contra legem?' (2013) *MMR* 343, 347.



provider and also among themselves. Although the T&Cs of the platform do not become part of the contract that users conclude with each other, the Court ruled that they can be taken into consideration when *interpreting the contractual relationship between the users*.⁸⁷ However, this solution is only convincing if the platform uses uniform T&Cs for all participants. Otherwise (in the case of different terms) there is a lack of common knowledge and expectations regarding the T&Cs in order to use them for the interpretation of contracts between users. Furthermore, the theory developed by the BGH can only be used for the interpretation of contracts concluded between users, but not for establishing contractual liability between users who merely socialize within the Metaverse without concluding any contracts with each other.

Finally, another option is to understand the metaverse as a *network of contracts*.⁸⁸ EU consumer law recognizes exceptions to the principle of privity of contract in threeparty cases by presuming a linked contract when contracts concluded by a consumer with different companies are connected in such a manner that they form an economic unit; specifically, when a (purchase) contract is financed by a credit contract. However, these are narrowly defined exceptions that apply only to three-party cases and do not lead to a general recognition of a "network of contracts" for cases with more than three parties. Proposals to recognize even more exceptions to the doctrine of privity of contract and to extend these exceptions to larger networks of contracts are rightly rejected, as both the conditions and the consequences of such an extension are unclear.

As a result, we can conclude that the digital identities of users are protected under the contractual relationship with the platform provider, who even has to respect the user's fundamental rights. However, the platform's T&Cs do not have any effect on third parties. Therefore, a user cannot claim contractual damages from another user for breach of the platforms T&Cs if there is no contract between them.

5. (Intellectual) Property Rights on Avatars

Another avenue for users to protect their avatars is through (intellectual) property rights.

5.1. (Virtual) Property Rights?

Avatars are digital creations in the metaverse that have no physical presence. Hence, the question arises as to whether property law can be applied to them, with the consequence that avatars can be used, possessed, owned, transferred and disposed of. In the absence of harmonization of property law around the world – including in the EU – different jurisdictions will necessarily come up with very different answers.

In some jurisdictions, particularly those following the German legal tradition, property is traditionally associated with physical objects. Under German civil law, for example, digital assets cannot be the subject of ownership which can only be established in relation to





 ⁸⁷ BGH NJW 2002, 363, 364; cf. also BGH 3.11.2004 - VIII ZR 375/03, NJW 2005, 53 (54); BGH 11.5.2011
 - VIII ZR 289/09, NJW 2011, 2421 (2423); BGH 23.9.2015 - VIII ZR 284/14, NJW 2016, 395 (396); BGH 15.2.2017 - VIII ZR 59/16, NJW 2017, 1660 (1661).

⁸⁸ In favor of such an approach; Erick Tjon Tjin Tai and Danielle Op Heij, 'Metaverse as a Network of Contracts' in Larry Alan diMatteo and others (eds) *Research Handbook of Metaverse and Law* (Edward Elgar Publishing 2024) 26-48.



"things", which are defined in section 90 of the German Civil Code as "corporeal objects". The strict *numerus clausus* of property law also prohibits an analogous application to noncorporeal things. Accordingly, the Higher Regional Court of Frankfurt⁸⁹ recently ruled that it is not possible under German law, to recognize any ownership on digital assets, such as digital tokens. In the same vein, Art. 85 of the Japanese Civil Code defines "things" as *tangible* and restricts the right of ownership to things.⁹⁰

Other legal systems have less strict definitions of what can be the subject of the right of ownership. In particular, many civil law jurisdictions recognize property rights in rights, under the category of *res incorporales*. Accordingly, digital assets representing rights in other assets or claims against a person may be more easily recognized.⁹¹

Common law jurisdictions appear to be even more open to the idea of protecting digital assets as "property". In the UK, the Law Commission of England and Wales concluded in its 2023 final report on "Digital Assets"⁹² that, under the law of England and Wales, certain types of digital assets are capable of being things to which personal property rights can relate, even though they do not easily fit within the traditional categories of personal property and are better regarded as belonging to a separate category. In this sense, a UK High Court has already recognized certain property rights in its case law where it ruled in 2019, that "crypto currencies are a form of property capable of being the subject of a proprietary injunction".⁹³ Later, in 2022, the UK High Court found that NFTs are "legal property".⁹⁴ Similar trends have been noticed in other common law jurisdictions.⁹⁵

5.2. Copyrights on Avatars

5.2.1. The Human Authorship Requirement

Avatars can also be classified as copyrightable works of authorship, provided that they are "works", i.e. a product of human creativity. Since most avatars are computer-generated – with many of them created by (generative) AI – the question arises as to whether they can be copyrighted at all.



⁸⁹ Case OLG Frankfurt, *BeckRS* 2023, 9319.

⁹⁰ Jason Grant Allen and others, Legal and Regulatory Considerations for Digital Assets (Cambridge Centre for Alternative Finance 2020) 23 <<u>https://www.jbs.cam.ac.uk/wp-</u> <u>content/uploads/2020/10/2020-ccaf-legal-regulatory-considerations-report.pdf</u>> accessed 30 October 2024.

⁹¹ Ibid.

⁹² Law Commission, *Digital Assets: Final Report* (2023) 2 <<u>https://s3-eu-west-</u> <u>2.amazonaws.com/cloud-platform-</u>

<u>e218f50a4812967ba1215eaecede923f/uploads/sites/30/2023/06/Final-digital-assets-report-FOR-</u> <u>WEBSITE-2.pdf</u>> accessed 30 October 2024.

⁹³ Case AA v Persons Unknown & Ors, Re Bitcoin [2019] EWHC 3556 (Comm), para 61.

⁹⁴ Case Osbourne v Persons Unknown & Ors [2022] EWHC 1021 (Comm).

⁹⁵ For an overview see Luke Lee, 'Examining the Legal Status of Digital Assets as Property: A Comparative Analysis of Jurisdictional Approaches' (25 April 2024) <<u>https://ssrn.com/abstract=4807135</u>> accessed 30 October 2024.



Historically, the foundation of copyright law (and IP law in general) around the world has been based on the notion of human authorship.⁹⁶ Although the Berne Convention⁹⁷ does not explicitly define the author as a human being, it is widely understood that the concept of authorship is centered on human involvement.⁹⁸ Similarly, the US Supreme Court, in interpretating the Copyright Act of 1976, has consistently held that copyright protection is limited to works created by human authors.⁹⁹ As a consequence, the US Copyright Office's registration guidance has long required that works be the product of human authorship.¹⁰⁰ Likewise, in the EU – although copyright law is not fully harmonized across Member States – it is settled case law that the notion of "work" is a concept of EU law, requiring "originality" as the author's own intellectual creation.¹⁰¹ Although some jurisdictions – including the UK, Ireland, New Zealand and India – have since amended their statutes to allow for the copyright protection of works that contain computer-generated elements and human intervention, these laws do not fully cover scenarios where a computer creates a work with minimal or indirect human intervention.¹⁰²

As a result, most countries are struggling with the question of where to draw the line between Al-*aided* works that are protected by copyright and those that are not.

According to the US Copyright Office's registration guidance on "Works Containing Material Generated by Artificial Intelligence", the question of whether works containing Algenerated material are copyrightable depends on the circumstances, particularly how the Al tool operates and how it was used to create the final work.¹⁰³ Where an Al technology determines the expressive elements of its output, the material generated is not the product of human authorship. Consequently, if a user creates an avatar simply by giving a prompt, the avatar generated cannot be considered to be the product of human authorship, because in such a case the user does not exercise ultimate creative control over how the Al system interprets the prompts and generates the avatar. On the other hand, if a human user provides the Al system with sufficient creative input to determine the output (regarding the visual appearance, for instance), the avatar created could be recognized as an original work of authorship. As a result, the avatar is protected by copyright. Similarly, if a user modifies an avatar originally created by Al technology to the extent that the modifications meet the standard for copyright.



http://catedrametaverso.ua.es catedrametaverso@ua.es

⁹⁶ Haffiz Gaffar and Saleh Albarashdi, 'Copyright Protection for Al-Generated Works: Exploring Originality and Ownership in a Digital Landscape' (2024) *Asian Journal of International Law* 1–24.

⁹⁷ Berne Convention for the Protection of Literary and Artistic Works (adopted 4 May 1896, entered into force 29 January 1970) 828 UNTS 221.

⁹⁸ Sam Ricketson, 'The 1992 Horace S. Manges Lecture - People or Machines: The Berne Convention and the Changing Concept of Authorship' (1991) 16 *Colum VLA J L Arts* 1, 37; Jane Carol Ginsburg, 'People Not Machines: Authorship and What It Means in the Berne Convention' (2018) 49 *IIC* 131–135 <<u>https://doi.org/10.1007/s40319-018-0670-x</u>> accessed 30 October 2024.

⁹⁹ Case Burrow-Giles Lithographic Co. v Sarony, 111 U.S. 53 (1884); Case Feist Publications Inc., v Rural Telephone Service Co., 499 U.S. 340 (1991).

¹⁰⁰ US Copyright Office, Copyright Registration Guidance: Works Containing Material Generated by Artificial Intelligence 16190 Federal Register, vol 88, no 51 <<u>https://www.govinfo.gov/content/pkg/FR-2023-03-16/pdf/2023-05321.pdf</u>> accessed 30 October 2024.

¹⁰¹ Case Infopaq International v Danske Dagblades Forening (2009) C-5/08, ECR I-6569; Case Levola Hengelo BV v Smilde Foods BV (2018) C-310/17, ECLI:EU:C:2018:899; Case Eva-Maria Painer v Standard Verlags GmbH and Others (2011) C-145/10, ECR I-12533.

¹⁰² Gaffar and Albarashdi (n 96).

¹⁰³ US Copyright Office (n 100).



5.2.2. Who is the Author?

If an avatar qualifies as a copyrightable work of authorship, the next troubling question is who should be considered the author: The platform owner such as virtual world provider and/or the user? Typically, the End-User License Agreements (EULAs) and Terms of Service contain provisions that grant ownership of avatars to the platform or its licensors.¹⁰⁴ However, such agreements or terms may be unenforceable or void if a court finds them to be overreaching or in conflict with existing copyright laws.¹⁰⁵

Determining the ownership of avatars is a complex challenge due to the collaborative process by which avatars are typically created. Often, Metaverse platforms provide the user with templates or an Al system to create the avatar. However, users also play a vital role in shaping the appearance and attributes of an avatar, for example by providing the Al system with their preferences, facial recognition data or other input. In these cases, avatars could be recognized as joined works with shared ownership between developers and users¹⁰⁶ – provided, of course, that they are a product of human creativity.

5.2.3. Legal Ramifications

Granting authors copyrights on avatars bestows on them two distinct set of rights.¹⁰⁷ First, economic rights – which allow right owners to authorize or prohibit the use and/or reproduction of their avatar and to reap the financial rewards, such as selling copyrights. Second, moral rights – allowing authors to take certain actions towards the preservation and protection of their link to their work – this includes the right of paternity – where authors are recognized by name, or choose to use pseudonyms, and remain anonymous; and the right to integrity – which empowers authors to refuse modifications that could harm their reputation.

Although copyrights provide their owners with such a bundle of exclusive rights, they do not protect a person's *identity* itself, even when it is incorporated into a work of authorship. According to the US Court of Appeals (Ninth Circuit) in *Downing v. Abercrombie & Fitch*, a "person's name or likeness is not a work of authorship within the meaning of 17 U.S.C. § 102."¹⁰⁸ In the same vein, *McCarthy & Schechter* point out that while a recorded aspect of certain features (such as a facial photograph or a video) is protected by federal copyright law, "the human identity that they identify is not protected by copyright".¹⁰⁹ Consequently, typical harms that can occur to the avatar and would – in the real world – qualify as a violation of personality rights, cannot be remedied by copyright law.



¹⁰⁴ Jamie Kayser, 'The New New-World: Virtual Property and the End User License Agreement' (2006) 27(1) Loyola of Los Angeles Entertainment Law Review 59.

 ¹⁰⁵ Tyler T. Ochoa and Jaime Banks, 'Licensing & Law: Who Owns an Avatar?' (2018) Santa Clara Law Digital Commons <<u>https://digitalcommons.law.scu.edu/facpubs/960</u>> accessed 30 October 2024.
 ¹⁰⁶ Vera Lucia Raposo, 'Beyond Pixels and Profiles: Unveiling the Legal Identity of Avatars in the Metaverse', Proceedings of the International Congress Towards a Responsible Development of the Metaverse, (Alicante, 13-14 June 2024), 2, 17.

¹⁰⁷ WIPO, Understanding Copyright and Related Rights (2016).

¹⁰⁸ Case Downing v. Abercrombie & Fitch, 265 F.3d 994, 1004 (9th Cir 2001). Cf. also Case Midler v. Ford Motor Co., 849 F.2d 460, 462 (9th Cir 1988).

¹⁰⁹ John Thomas McCarthy and Ronald Schechter, *The Rights of Publicity & Privacy*, 2nd ed (Clark Boardman Callaghan 2024).



5.3. Interim Results

(Virtual) property rights and copyrights in avatars provide users with exclusive rights. However, due to the virtual nature of avatars, many legal systems struggle to acknowledge these rights. Moreover, such rights – if recognized – provide only limited protection against the typical harms that avatars experience in the metaverse. In particular, (intellectual) property rights do not protect a person's (digital) identity itself.

6. Towards a (New) Fundamental Right to Digital Identities on Avatars

6.1. In Search of a Right to Digital Identities

The foregone analysis showed that users are most of the time protected, as in the offline world, when digital tools are a simple *means* of violating the rights of a real person *behind* the avatar. In such cases, a person's rights are the same, regardless of whether they are violated offline or online. However, the situation is different when the avatar does not share sufficient characteristics with the real identity of the user. In such cases, it is difficult to establish any actionable harm. Arguably, the user may still be protected under contract law and intellectual property law. However, as shown above, both areas of law only provide limited protection.

This raises the question of whether the rights that people enjoy in the offline world, in particular personality rights, should also be granted in relation to the digital persona. One way to achieve this is by recognizing an overarching, fundamental right to digital identity. Against this backdrop, the following considerations analyze whether such a (new) right to digital identities can be derived from Art. 8 ECHR,¹¹⁰ and how such a right would be relevant for consideration in both contract and tort law, as well as in many other areas of law.

Notwithstanding the importance of other legal frameworks, there are several reasons why the following analysis focuses mainly on the ECHR, rather than other international treaties, national constitutions and/or private law. First, the ECHR is one of the most important international agreements adopted by 46 European states, including all EU Member States, with a global reach.¹¹¹ Secondly, the ECtHR has concretized the right to personal identity in a large number of decisions. As a result, the right to personal identity – although recognized in many other conventions and constitutions around the world – is much more developed through case law than elsewhere. Finally, focusing on a human right to (digital) identity rather than discussing the protection of personal identity and other personality rights through private law, offers the advantage of developing an overarching, comprehensive perspective regardless of the great differences that exist between national legal systems in the protection of personality rights. Indeed, these differences are



¹¹⁰ In addition, a right to digital identities could also be (partially) derived from the right to freedom of expression (Art. 10 ECHR), since the choice and exercise of a digital identity can be considered as expression. However, considering that the ECtHR developed the right to (express) real-world identities under Art. 8 ECHR, the following analysis focuses only on this article.

¹¹¹ In the last 20 years, the extra-territorial jurisdiction of the Convention has been invoked by individuals far beyond European borders; cf. Anne-Isabelle Richard, 'The European Convention of Human Rights' Colonial Clause and the End of Empire' (*VerfBlog*, 26 January 2022) <<u>https://verfassungsblog.de/the-european-convention-of-human-rights-colonial-clause-and-the-end-of-empire/</u>>DOI: 10.17176/20220127-060144-0, accessed 30 October 2024.



considerable.¹¹² Whereas some countries (such as Germany) recognize a general right to personality, other legal systems recognize only specific personality rights on the basis of their general delictual provisions of the civil code (such as France) or on the basis of specific torts (such as in England and in the U.S.).¹¹³ Moreover, both the scope of protection of personality rights and the classification of specific personality rights (such as the right to life, physical-psychological integrity, physical liberty, dignity, reputation, and privacy) vary widely among legal systems.

To focus instead on a human right to (digital) identity – as a necessary condition for the exercise of already established rights – has the advantage of acknowledging these existing differences. Consequently, the question of this section is *not* whether legal systems should recognize certain personality rights with respect to avatars, but whether personality rights *already established in a particular legal system* should be protected with respect to virtual identities in a similar way as with respect to real-world identities. By the same token, the human right to identity that we discuss below should be distinguished from a right to identity under private law. While private laws around the world recognize various facets of identity (such as the right to one's name, physical image [likeness], voice, life history, character, etc.), a human right to digital identity would provide the necessary human rights basis for extending these rights to avatars. Thus, if there is a case for recognizing a right to digital identity in avatars, then such a right has far-reaching implications for many areas of law, including private law.

6.2. The Right to Identity According to Art. 8 ECHR

Pursuant to settled ECtHR case law, the right to identity is an integral part of the concept of private life as guaranteed by Art. 8 ECHR.¹¹⁴ Under this provision, "[e]veryone has the right to respect for his private and family life, his home and his correspondence." As the Court has made clear, private life is a broad concept covering the physical and psychological integrity of a person which may "embrace multiple aspects of the person's physical and social identity",¹¹⁵ such as gender identification and sexual orientation, name or elements relating to a person's right to their image.¹¹⁶

As the concept of "private life" covers a very wide range of issues, cases falling under Art. 8 ECHR can be grouped into three (sometimes overlapping) broad categories, viz: (i) the physical, psychological or moral integrity of a person, (ii) privacy and (iii) identity and autonomy."¹¹⁷ With regard to the latter, the ECtHR in *Christine Goodwin v the United Kingdom*¹¹⁸ emphasized that under Art. 8 ECHR, "the notion of personal autonomy is an important principle underlying the interpretation of its guarantees, protection is given to



¹¹² Cf. Christian von Bar, The Common European Law of Torts, vol 2 (Clarendon Press/Oxford 2000) 48 et seq, 93 et seq.; Johann Neethling, 'Personality Rights: A Comparative Overview' (2005) 38 Comparative and International Law Journal of Southern Africa, 210–245.
¹¹³ Ibid.

¹¹⁴ Cf. for the following ECtHR, *Guide on Article 8 of the European Convention on Human Rights* (last updated 9 April 2024) <<u>https://ks.echr.coe.int/documents/d/echr-ks/guide_art_8_eng</u>> accessed 30 October 2024.

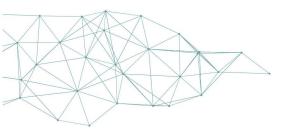
¹¹⁵ Case Denisov v Ukraine (2018) ECtHR 76639/11, para 95; Case S. and Marper v the United Kingdom (2008) ECtHR 30562/04 and 30566/04, para 66.

¹¹⁶ ECtHR (n 114) 52.

¹¹⁷ ECtHR (n 114) 31.

¹¹⁸ Case Christine Goodwin v. the United Kingdom (n 13).





the personal sphere of each individual, including the right to establish details of their identity as individual human beings." To this end, Art. 8 ECHR protects a right to personal development, and the right to establish and develop relationships with other human beings and with the outside world.¹¹⁹

In its jurisprudence, the ECtHR has recognized, inter alia, the following rights as part of the right to identity:

- The right to a name,¹²⁰ which includes issues relating to a person's first name and surname; in particular, the Court found a violation of Art. 8 ECHR where authorities refused to register the applicant's surname after his family surname had been registered as his wife's surname;¹²¹ or where a State ordered the removal of "von" prefix from a surname after a long period of accepted use;
- The right to identity documents,¹²² which in principle includes the right of an individual to have his or her birth registered and consequently, where appropriate, to have identity documents; thus, the ECtHR found a violation of Art. 8 ECHR in a case where a domestic court withheld identity documents following the applicant's release from custody, as documents are often needed in everyday life in order to prove one's identity;¹²³
- The right to ethnic identity,¹²⁴ in particular the right of members of a national minority to preserve their identity and to lead a private and family life in accordance with their traditions; consequently, the Court held that the refusal by authorities to register a person's ethnicity constitutes a failure to comply with the State's positive obligations under Art. 8 ECHR;¹²⁵ the ECtHR also ruled that the authorities violate the right to ethnic identity when they use fingerprints, cellular samples, and DNA profiles after the conclusion of criminal proceedings to infer the ethnic origin of this person;¹²⁶
- The right to discover one's origins,¹²⁷ which includes the right of children to access information about their paternity;
- The right to gender recognition,¹²⁸ which requires States to implement the recognition of gender reassignment for post-operative transgender persons, including through changes to their civil status data, with the consequences that this entails;¹²⁹



¹¹⁹ Case ECtHR 13710/88 Niemietz v. Germany (1992), para 29; Case ECtHR 427 Pretty v. the United Kingdom (n 12), paras 61 and 67; Case ECtHR 21722/11 Oleksandr Volkov v. Ukraine (2013), paras 165-167; Case ECtHR 39630/09, Case ECtHR 32265/10 EI-Masri v. the former Yugoslav Republic of Macedonia (2012), para 248-250.

¹²⁰ ECtHR (n 114) 75; Case ECtHR 71074/01 Mentzen v. Latvia (dec.) (2004); Case ECtHR 1367 Henry Kismoun v. France (2013).

¹²¹ Case ECtHR 16213/90 *Burghartz v. Switzerland* (1994), para 24.

¹²² ECtHR (n 114) 76 et seq.; Case ECtHR 3041/19 G.T.B. v. Spain (2023), para 113.

¹²³ Case ECtHR 46133/99 and 48183/99 Smirnova v. Russia (2003), paras 95-97.

¹²⁴ ECtHR (n 114) 77 et seq.; Case ECtHR 1581 S and Marper v the United Kingdom (n 114), para 66.

¹²⁵ Case ECtHR 27138/04 *Ciubotaru v. Moldova* (2010), para 53.

¹²⁶ Case S and Marper v the United Kingdom (n 115), para 66.

 ¹²⁷ ECtHR (n 113) 71 et seq.; Case ECtHR 42326/98 Odièvre v. France (2003), para 29; Case ECtHR 10454/83 Gaskin v. the United Kingdom (1989), para 39; Case ECtHR 47443/14 Boljević v. Serbia (2020), para 28; Case) ECtHR 21424/16 and 45728/17 Gauvin-Fournis and Silliau v. France (2023), para 109.
 ¹²⁸ Cf. ECtHR, Guide on the Case-Law of the European Convention on Human Rights: Rights of LGBTI Persons (updated 29 February 2024) <<u>https://ks.echr.coe.int/documents/d/echr-ks/guide_lgbti_rights_eng</u>> accessed 30 October 2024.

¹²⁹ Case ECtHR 28957/95 Christine Goodwin (n 13); Grant v. the United Kingdom (2006), paras 39-44.



• The right to desired appearance¹³⁰ to express one's personality whether in public or in private, such as a haircut,¹³¹ the wearing of clothing designed to conceal the face of women in public places,¹³² and appearing naked in public places;¹³³ however, in each of these cases, the Court found the restriction on personal appearance – although covered by Art. 8 ECHR – to be proportionate.

In addition to these rights, the ECtHR has also recognized the following rights at the intersection of the right to identity and the right to privacy:¹³⁴

- The right to one's image,¹³⁵ which is one of the most important attributes of a person's personality as it reveals their unique characteristics and distinguishes the person from their peers, including the individual's right to control the use of their image and to refuse its publication;¹³⁶
- The right to the protection of reputation,¹³⁷ which includes both social and professional reputation, but requires that the attack on a person's reputation reaches a certain level of seriousness in a way that affects the personal enjoyment of the right to respect for private life; furthermore, this right must be balanced against the right to freedom of expression.

6.3. Digital Identity as a Human Right?

The ECtHR is yet to address the question of whether a right to digital identity can also be derived from Art. 8 ECHR. Recent decisions have only dealt with the issue of whether a person's real-world identity must be protected online,¹³⁸ but not whether digital identities as such require protection.

6.3.1. The Case for Recognizing Digital Identities

There are several reasons to argue for a right to digital identities. First, the Court has already recognized that real-world identity is not limited to sameness and the possibility of identification, but goes far beyond that, in particular by protecting social identity – including personal autonomy and development, reputation, gender identification, sexual orientation and much more. According to ECtHR jurisprudence, a person may therefore





¹³⁰ ECtHR (n 114) 75.

¹³¹ Case ECtHR 4233/09 *Popa v. Romania* (dec.)(2013), para 32-33.

¹³² Case ECtHR 43835/11 S.A.S. v. *France* (2014), paras 106-107.

¹³³ Case ECtHR 49327/11 Gough v. the United Kingdom (2014), paras 182–184.

¹³⁴ As to the difference between privacy and identity cf. Clare Sullivan, *Digital Identity: An Emergent Legal Concept* (University of Adelaide Press 2011) 75 et seq.

¹³⁵ ECtHR (n 114) 53 et seq.; Case ECtHR 1874/13 and 8567/13 *López Ribalda and Others v. Spain* (2019), para 87–91.

¹³⁶ Case ECtHR 1234/05 *Reklos and Davourlis v. Greece* (2009), paras 40 and 43; Case ECtHR 40660/08 and 60641/08 *Von Hannover v. Germany* (no. 2)(2012), para 96.

¹³⁷ ECtHR (n 114) 55 et seq.; Case ECtHR 39954/08 Axel Springer AG v. Germany (2012), para 83; Case ECtHR 12556/03 Pfeifer v. Austria (2007), para 35.

¹³⁸ Cf. for example (with regard to protection of individual reputation): Case ECtHR 3877/14 *Tamiz v. the United Kingdom* (dec.) (2017), para 80-81; Case ECtHR 45016/18 *Çakmak v. Turkey* (dec.) (2021), paras 42 and 50.



have several identities – all protected under Art. 8 ECHR – as is made particularly clear by the fact that gender reassignment and desired appearance fall within the scope of protection.¹³⁹

Second, digital identities can be understood as extensions of our real-world identities, even if they do not represent the user's actual characteristics. Indeed, the idea of technology as an extension of human faculties has a longer history. As early as 1877, the German philosopher *Ernst Kapp* argued in *Grundlinien einer Philosophie der Technik* that all technical artefacts are projections of human organs, in that "humans unconsciously transfer form, function and the normal proportions of their body to the works of their hands".¹⁴⁰ Almost a hundred years later, in 1966, *Marshall McLuhan* analyzed various technologies in his famous book *Understanding Media: The Extension of Man*, in arguing "that all technologies are extensions of our physical and nervous system to increase power and speed."¹⁴¹

Such an extension of human faculties is particularly present in avatars, as they represent users in digital environments and enable them to interact and communicate in shared digital worlds. Accordingly, *self-representation* is a central aspect of avatar creation and avatar use, as many empirical studies have shown.¹⁴² The ability to strategically change the appearance and behavior of the avatar regardless of the user's actual characteristics is one of the main dimensions of avatar-mediated communication.¹⁴³ Specifically, studies of participants in online communities found that attributes of embodied avatars can influence users' behaviors in that they tend to align with the virtual avatars they embody (so-called *Proteus* effect).¹⁴⁴ For example, when a player embodies an attractive avatar, they integrate their avatar's attributes into their self-concept, showing increased self-esteem.¹⁴⁵ Interestingly, the *Proteus* effect can even occur in non-humanlike avatars.¹⁴⁶



¹³⁹ Cf. above, section 6.2.

¹⁴⁰ Ernst Kapp, Grundlinien einer Philosophie der Technik: Zur Entstehungsgeschichte der Kultur aus Neuen Gesichtspunkten (Braunschweig: Westermann 1877) v-vi, translated by Philip Brey, 'Technology as Extension of Human Faculties' in Carl Mitcham (ed), Metaphysics, Epistemology, and Technology (JAI 2000).

 ¹⁴¹ Marshall McLuhan, Understanding Media: The Extensions of Man (Paperback edn, McGraw-Hill 1966)
 91.

¹⁴² Cf. Daniel Zimmermann and others, 'Self-Representation through Avatars in Digital Environments' (2023) 42 *Current Psychology* 21775–21789 <<u>https://doi.org/10.1007/s12144-022-03232-6</u>> accessed 30 October 2024, with further references.

¹⁴³ Jeremy N. Bailenson and others, 'The Use of Immersive Virtual Reality in the Learning Sciences: Digital Transformations of Teachers, Students, and Social Context' (2008) 17(1) The Journal of the Learning Sciences 102–141 <<u>https://doi.org/10.1080/10508400701793141</u>> accessed 30 October 2024.

¹⁴⁴ Nick Yee and Jeremy Bailenson, 'The Proteus Effect: The Effect of Transformed Self-Representation on Behavior' (2007) 33(3) Human Communication Research 271–290 <<u>https://doi.org/10.1111/j.1468-2958.2007.00299.x</u>> accessed 30 October 2024.

 ¹⁴⁵ Yulong Bian and others, 'The Proteus Effect: Influence of Avatar Appearance on Social Interaction in Virtual Environments' in C Stephanidis (ed), *HCI International 2015 - Posters' Extended Abstracts* (Springer 2015) 78–83 <<u>https://doi.org/10.1007/978-3-319-21383-5_13</u>> accessed 30 October 2024.
 ¹⁴⁶ Xinmiao Lan and Zeph MC van Berlo, 'Can Non-Humanlike Avatars Induce the Proteus Effect? The Roles of Avatar Identification and Embodiment in Influencing Social Participation' (2023) 1(2)

Computers in Human Behavior: Artificial Humans 100020 <<u>https://doi.org/10.1016/j.chbah.2023.100020</u>> accessed 30 October 2024.



Research on avatar attachment moreover shows that users are often deeply distressed when their avatars are harmed by other participants' malicious actions.¹⁴⁷ These experiences of virtual harm by users are felt to an even greater degree in the metaverse because of its immersive nature. Indeed, as *Wolfendale* has pointed out, "[v]irtual harms constitute real moral harms against real people. What is different in virtual harms is not the nature of the harm but *how* the harm is inflicted, which is through participants' attachment to and identification with their online characters."¹⁴⁸ Even if players choose avatars with physical, emotional and personality traits that are very different from their actual traits, avatars are still experienced as an expressive part of the participant's personal identity. Avatars are therefore more than objects manipulated by a user. They are a form of self-expression and identity; as a consequence, the experience of virtual harm should be recognized as both morally and legally significant.

The Metaverse blurs the line between real and virtual words even further. In fact, we are already living in a world where it no longer makes sense to distinguish between our offline and online existence. As highlighted in the *Onlife Manifesto*,¹⁴⁹ the development and widespread use of Information and Communication Technologies (ICTs) is having a radical impact on the human condition. "(...) ICTs are not mere tools but rather environmental forces that are increasingly affecting: 1. our self-conception (who we are); 2. our mutual interactions (how we socialise); 3. our conception of reality (our metaphysics); and 4. our interactions with reality (our agency)."¹⁵⁰ In the Metaverse, the distinction between reality and virtuality; and between human, machine and nature, will become even be more fluid – due to its persistent multi-user environment that merges physical reality with digital virtuality, allowing real-time interaction with digital artefacts and other users- to the extent that it no longer makes sense to distinguish legally between real and virtual identities.

All these aspects argue in favor of recognizing digital identities as being protected under Art. 8 ECHR and – accordingly – to acknowledge virtual harms as both being morally and legally significant.

6.3.2. Fleshing Out the Right to Digital Identities

Arguably, a novel (fundamental) right to digital identities needs to be further explored in order to gain more contours. From a legal perspective, a subjective right requires a number of conditions to be met.¹⁵¹ In particular, a right must have a clear holder (identity subject), a clearly defined object (identity object), identifiable addressees, and also be sanctionable/punishable.



¹⁴⁷Jessica Wolfendale, 'My Avatar, My Self: Virtual Harm and Attachment' (2007) 9 Ethics and Information Technology 111–119 <<u>https://doi.org/10.1007/s10676-006-9125-z</u>
accessed 30 October 2024.

¹⁴⁸ Ibid, 114.

¹⁴⁹ Luciano Floridi (ed.), The Onlife Manifesto: Being Human in a Hyperconnected Era (Springer 2015)
<<u>https://doi.org/10.1007/978-3-319-04093-6</u>> accessed 30 October 2024.

¹⁵⁰ Luciano Floridi, Introduction, in: Luciano Floridi (ed.), *The Onlife Manifesto: Being Human in a Hyperconnected Era* (Springer 2015) 2 <<u>https://doi.org/10.1007/978-3-319-04093-6</u>> accessed 30 October 2024.

¹⁵¹ Serge Gutwirth, 'Beyond Identity?' (2008) 1 IDIS 123–133 <<u>https://doi.org/10.1007/s12394-009-</u> <u>0009-3</u>>, 123-133.



Recognizing a right to digital identities raises, first and foremost, the question of how to define or describe the "object" – namely, "identity" – of this new fundamental right for legal use. In this regard, *Gutwirth*¹⁵² argues that it is already problematic to recognize the fundamental right to real-word identity, given that once this concept is transformed into a legal qualification, judges would then need to answer the difficult question of whether or not the actual claim or set of facts should be considered as an aspect of 'identity' worthy of protection. This could even jeopardize the right to identity itself. Courts would have to differentiate between protected and unprotected expressions of identity – a decision that will ultimately depend on their moral, normative or political perspectives. However, such difficulties have not prevented the ECtHR from deriving a fundamental right from Art. 8 ECHR and to give shape to it in a number of judgments.

Similarly, further research and applications to the ECtHR will be necessary for the Court to clarify the conditions under which digital identities are protected under Art. 8 ECHR. As this is beyond the scope of the present study, this paper highlights only some of the key questions to be answered in this regard:

- Unitary or multiple: How many digital identities can a natural person have? Is there (in certain contexts, especially transactions) only the right to a single digital identity?
- Same or different authentic or fictitious: To what extent must the digital identity embody the characteristics of the digital identity subject? Can it take on characteristics different from those of the natural person behind it in all situations? Is there also a fundamental right to digital identities in the form of non-human or even abstract avatars?
- Fixed or flexible permanent or temporary: Can the digital identity subject move freely between forms and appearances? When must the digital identity manifest itself in a rigid, unchangeable form?
- Assigned or assumed: How far can digital identity be determined by others? When do individuals have the right to choose their own identity?
- *Public or private*: Is digital identity widely, easily and freely available? To what extent is there a right to take measures to limit the public exposure of digital identities?
- Possessed or owned: Does the digital identity subject only "possess" the digital identity or also "owns" it? If the digital identity is only owned: What is the relationship between the individual's right to the digital identity and the (intellectual) property rights of others?

Clearly, all of these questions – and surely a number of others not listed here – would have to be addressed at some point, if a fundamental right to digital identities is to be recognized. Their answers may well depend on the context and purpose for which such identities are used. In particular, when a user uses his or her identity for a commercial transaction (such as concluding a contract), a particular form of digital identity may be necessary for reasons of trust and legal certainty: a transactional identity,¹⁵³ i.e. one that is verified and recorded under an identity scheme. Such pre-defined scheme would require an individual to establish his or her real-world identity at the time of a transaction by providing real-world information that matches the information digitally. If, on the other



http://catedrametaverso.ua.es catedrametaverso@ua.es

¹⁵² Ibid.

¹⁵³ Sullivan (n 134).



hand, the avatar is used for socializing, gaming, political debate, or other non-commercial purposes, the situation may be quite different.

6.4. Horizontal Effect of Art. 8 ECHR and Its Impact on Contracts and Torts

Another question that needs to be addressed if a right to digital identities is recognized, is the effect of such a right. Traditional human rights doctrine suggests that these rights do not bind the private sector. Rather, fundamental human rights are created to limit the power of state actors.¹⁵⁴

In principle, this also applies to Art. 8 ECHR. According to the ECtHR, the primary purpose of Art. 8 ECHR is to protect against arbitrary interference in private life, including the right to identity, by a public authority.¹⁵⁵ However, Member States also have *positive* obligations to ensure that rights provided for under the article are respected between private parties. Specifically, as highlighted in the ECHR Guide on Article 8 (although this provision is essentially concerned with the protection of individuals against arbitrary interference by the public authorities), it does not merely oblige the State to refrain from such interference. In addition to this primarily negative obligation, there may be "positive obligations inherent in an effective respect for private life".¹⁵⁶ In this regard, the ECtHR has held that the State has positive obligations to ensure that efficient criminal or civil law provisions are in place to protect the rights enshrined in Art. 8 ECHR.¹⁵⁷ However, according to settled case-law, States enjoy a certain margin of appreciation in the implementation of their positive obligations under this provision. Consequently, Art. 8 ECHR does not necessarily require the provision of monetary compensation to the victim if other remedies are provided.¹⁵⁸ On the other hand, the ECtHR has also recognized that the margin of appreciation is limited when an important facet of the individual's existence or identity is at stake.¹⁵⁹ Thus, there may be cases where the margin of appreciation is so reduced that no remedy other than damages would satisfy the positive obligations of States under Art. 8 ECHR.

In Europe, the Digital Services Act has already changed the way fundamental rights influence contractual relations. As discussed above,¹⁶⁰ Art. 14(4) DSA requires (metaverse) platform providers to consider the fundamental rights of users in their content moderation decisions. Art. 14 thus unfolds a "revolutionary potential"¹⁶¹ in establishing an indirect horizontal effect of fundamental rights in the relationship between online (metaverse) platforms and their users. The recognition of a fundamental right to digital identities and



¹⁵⁴ Eleanor Spaventa, 'Fundamental Rights in the European Union' in C Barnard and S Peers (eds), European Union Law (3rd edn, Oxford University Press 2020) 243, 247, 249.

¹⁵⁵ Case ECtHR 588/13 Affaire Libert v. France (2018), 40–42; Case ECtHR 3153/16 and 27758/18 Affaire Drelon v. France (2022), 85.

¹⁵⁶ ECtHR (n 114) 8.

¹⁵⁷ Case ECtHR 5786/08 Söderman v. Sweden (2013); Case ECtHR 65286/13 and 57270/14 Khadija Ismayilova v. Azerbaijan (2019).

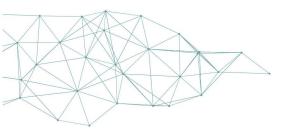
¹⁵⁸ Case ECtHR 16313/10 *Kahn v. Germany* (2016), para 75 – No award of damages required in a case where a publisher violated an injunction prohibiting publication of photos of two children of a former goalkeeper of the German national football team.

¹⁵⁹ Cf. for example, Case ECtHR 8978/80 X and Y v. the Netherlands (1985), para 24 and 27; Case Christine Goodwin v. the United Kingdom (n 13); Case Pretty v. the United Kingdom (n 12).

¹⁶⁰ Cf. section 4.3.3.

¹⁶¹ Joao Pedro Quintais and others (n 79) 881.





avatars under the ECHR - as well as under the EU Charter of Fundamental Rights¹⁶² - would therefore imply that such a right would also have to be respected by metaverse platform providers in their contractual relationships with their users.

A further step towards a horizontal effect of fundamental rights can be expected once metaverse platforms become so dominant that they start to influence most interactions between citizens: As (metaverse) platforms extend their reach further and further into areas where social participation and the provision of essential services to citizens are at stake, these platforms will become *infrastructures of general interest*.¹⁶³ Once this point has been reached, we can expect that the ECtHR will also recognize a horizontal direct effect of Article 8, so that a violation of the right to (digital) identity will require monetary compensation under tort law to the victim.

7. Summary of the Main Findings

- 1. Avatars provide a way for users to create digital identities in the Metaverse for purposes of self-expression, communication and interaction with others.
- 2. When users interact through their avatars, many situations can arise that would constitute a violation of the law if they occurred in the real world. Arguably, not all types of harm that occur in the metaverse can (and should) be sanctioned. Virtual worlds are governed by their own rules, which are determined by the purpose of the created world, the embedded code (the architecture), the terms of service as well as the rules of conduct, the context of use, and much more. Most notably, both platforms and users make clear distinctions between acceptable and unacceptable forms of avatar behavior including violence. Therefore, understanding different architectures, contexts and rules, is essential to assessing whether real-world legal remedies and sanctions accrue.
- 3. When avatars are subjected to unacceptable forms of behavior of other users' avatars (such as harassment, "rape", defamation, discrimination, or other kinds of violation of their "dignity"), the users behind the attacked avatar are protected in most cases, as in the offline world, if and insofar as digital tools are a simple means to violate the rights of a real person *behind* the avatar.
- 4. However, the situation is different when the real person behind the avatar is not identifiable, i.e. when the attacked avatar does not share sufficient characteristics with the real identity of the user. In such cases, it will be difficult in many jurisdictions to establish any actionable harm, because the avatar itself is not capable of having an identity, a right to reputation or any other rights of personality. With this in mind, this paper discusses the rights that may arise when the avatar does not embody the user, but assumes a new digital identity.
- 5. To a certain extent, user's digital identities are protected by contractual rights of the users vis-à-vis the (Metaverse) platform. However, if a user's avatar is subjected to unacceptable forms of violence of another user's avatar, the aggrieved user has no



¹⁶² In many cases, the ECJ takes the view that fundamental rights under the Charter should be given "the same meaning and the same scope" "as interpreted by the case-law of the European Court of Human Rights"; cf. Case C-345/17 *Sergejs Buivids v. Datu valsts inspekcija* (n 78), para 65 (regarding the freedom of expression established in Art. 11 CFR).

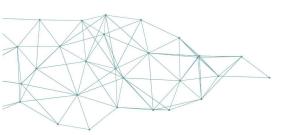
¹⁶³ Cf. Christoph Busch, Regulation of Digital Platforms as Infrastructures for Services of General Interest (Friedrich-Ebert Stiftung, Bonn 2021) <https://collections.fes.de/publikationen/download/pdf/451486>accessed 30 October 2024.



contractual recourse against the violent user, given that there is no contract between them.

- Another way users can protect their avatars is through (intellectual) property rights. However, most legal systems have difficulties recognizing such rights, due to the virtual nature of avatars. Moreover, such rights – even if recognized – provide only limited protection against the typical harms that avatar users experience in the metaverse.
- 7. As a solution, this paper argues for the recognition of a new fundamental right to digital identities on avatars on the basis of Art. 8 ECHR. To this end, the paper analyzes the rich case-law of the ECtHR, which has concretized the right to real-world identity in a large number of decisions, and unfolds the striking arguments for extending this right to digital identities. It then identifies the key issues that future research needs to address in order to concretize the right to digital identities, and the implications of such a right for both contract and tort law.
- 8. As a result, the paper concludes that there is a clear case for recognizing virtual harm inflicted on users through their avatar as both being morally and legally significant under Article 8 ECHR. In such a case, personality rights already established under a particular private law should be protected with respect to virtual identities in a similar way as with respect to real-world identities.







Bibliography

Adrian A., Avatars as trademarks' (2007) Computer Law & Security Report 23 (5), 436.

–, Law and Order in Virtual Worlds: Exploring Avatars, Their Ownership and Rights (IGI Global, 2010).

Almadani MS, Alotaibi S, Alsobhi H., 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.

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

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

Cheong BC, '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.

Cohen G., '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.

Craig E., 'Sensorium's Al-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/

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

Davidson D., Saubert R.W., 'Help! An Avatar Stole My Right of Publicity' (2015) Southern Law Journal 25 (1), 123.

De Brito Silva M.J., de Oliveira Ramos Delfino L., Alves Cerqueira K., 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.

De Hert P, 'A Right to Identity to Face the Internet of Things?' (UNESCO 2008) <<u>http://portal.unesco.org/ci/fr/files/25857/12021328273de_Hert-Paul.pdf/de%2BHert-Paul.pdf</u>>.

Diamantis M.E., 'Corporate essence and identity in criminal law' (2019) Journal of Business Ethics 154(4), 955.









Dickey 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.

Diego-Mas J.A., Alcaide-Marzal J., '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.

Doomen J., 'The Artificial Intelligence Entity as a Legal Person' (2023) Information &CommunicationsTechnologyLaw32(3),277,https://doi.org/10.1080/13600834.2023.2196827.

Ebers M. and Navas S. (eds), Algorithms and Law (Cambridge University Press 2020).

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

Garasic MD, 'Shouldn't Our Virtual Avatars Be Granted Human Rights Too?' (2022) AJOB Neuroscience 13(3), 160, https://doi.org/10.1080/21507740.2022.2082583.

García-Micó TG, 'Electronic Personhood: A Tertium Genus for Smart Autonomous Surgical Robots?', in Ebers M and Cantero Gamito M (eds) *Algorithmic 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.

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

International Telecommunication Union, Digital Identity Roadmap Guide (Geneva 2018).

Interpol, 'Metaverse - A Law Enforcement Perspective (Use Cases, Crime, Forensics, Investigation, and Governance)' White Paper, January 2024, <u>https://www.interpol.int/content/download/20828/file/Metaverse%20-</u>%20a%20law%20enforcement%20perspective.pdf.

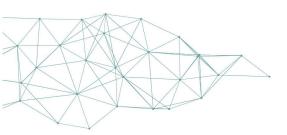
International Organization for Standardization ISO, ISO/IEC 24760-1:2019-05, IT Security and Privacy – A Framework for Identity Management – Part 1: Terminology and Concepts (International Organization for Standardization 2019).

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

Kennington H, '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.









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

Kozuka S., 'The avatar law and (cyber) transnational contracts' (2024) Uniform Law Review, https://doi.org/10.1093/ulr/unae008.

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

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

Lee A, 'Why Metaverse Builders Want to Create Safe, Consensual Virtual Worlds' (Digiday, 17 November 2021) <<u>https://digiday.com/marketing/metaverse-builders-want-to-create-safe-consensual-virtual-worlds/</u>>.

Lin J, Latoschik ME, '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.

Lindsey W., 'When the Invented Becomes the Inventor: Can, and Should Al Systems be Granted Inventorship Status for Patent Applications?' (2020) Legal Issues in the Digital Age 2, 3.

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

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

Lyman J, 'Gamer Wins Lawsuit in Chinese Court over Stolen Virtual Winnings' (TechNewsWorld, 19 December 2003) <<u>https://www.technewsworld.com/story/gamer-wins-lawsuit-in-chinese-court-over-stolen-virtual-winnings-32441.html</u>>.

Madiega T and others, Metaverse: Opportunities, Risks and Policy Implications (European Parliamentary Research Service, Members' Research Service, PE 733.557, June 2022).

McMahan A, 'Immersion, Engagement, and Presence: A Method for Analyzing 3-D Video Games' in Wolf MP and Perron B (eds), *The Video Game Theory Reader* (Routledge, Taylor & Francis Group 2003).

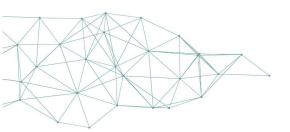
Mead GH and Morris CW, Mind, Self, and Society from the Standpoint of a Social Behaviorist (University of Chicago Press 2009).

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

Merriam-Webster Dictionary, 'Avatar' (Merriam-Webster) <<u>https://www.merriam-webster.com/dictionary/avatar</u>>.









Michalkiewicz-Kadziela E., Milczarek E, 'Legal boundaries of digital identity creation' (2022) Internet Policy Review 11(1), DOI: 10.14763/2022.1.1614.

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

Novelli C., Bongiovanni G, Sartor G., 'A conceptual framework for legal personality and its application to Al' (2022) Jurisprudence 13(2) 194

Nwabueze RN, Hancock H., '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.

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

OECD, 'At a Crossroads: "Personhood" and Digital Identity in the Information Society', STI Working Paper 2007/7, DSTI/DOC(2007)7.

Parks P, Cruz R, Ahn SJG, '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.

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

Perez S, 'Roblox Responds to the Hack That Allowed a Child's Avatar to Be Raped in Its Game' (TechCrunch, 19 July 2018) <<u>https://techcrunch.com/2018/07/18/roblox-responds-to-the-hack-that-allowed-a-childs-avatar-to-be-raped-in-its-game/</u>>.

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

Rodrigues RE, Revisiting the Legal Regulation of Digital Identity in the Light of Global Implementation and Local Difference (PhD thesis, University of Edinburgh 2011).

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

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

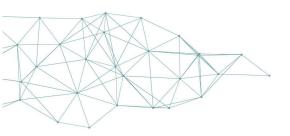
Sheth N., 'Hindu Avatāra and Christian Incarnation: A Comparison' (2022) Philosophy East and West, 52(1), 98

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









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

Steuer J, 'Defining Virtual Reality: Dimensions Determining Telepresence' (1992) 42 Journal of Communication 73.

Yee N and others, 'The Unbearable Likeness of Being Digital: The Persistence of Nonverbal Social Norms in Online Virtual Environments' (2007) 10 CyberPsychology & Behavior 115.









Universitat d'Alacant Universidad de Alicante

