

Sexual violence and harassment in the metaverse:

A new manifestation of gender-based harms

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Contents

Acknowledgements	3
Introduction	4
1. The metaverse: Getting the basics	5
1.1 Describing the metaverse	6
1.2 Accessing the metaverse through avatars	6
1.3 Involving the public and private sectors in the metaverse design and governance	7
2. Reporting sexual violence and harassment in the metaverse	8
3. Contextualising sexual violence and harassment in the metaverse: A framework within online and technology-facilitated violence against women	10
3.1 The nature of online and technology-facilitated violence, including sexual violence and harassment in the metaverse	12
3.2 Unfolding the harm of online and technology-facilitated violence including sexual violence and harassment in the metaverse	13
4. Discussing law and policy: Current status and future directions	15
4.1 Criminalising sexual violence and harassment in the metaverse	16
4.2 Addressing sexual violence and harassment in the metaverse: The role of States and the private sector	19
4.2.1 <i>Women's rights impact assessment</i>	19
4.2.2 <i>Gender-responsive content moderation</i>	20
4.2.3 <i>Women's rights by design</i>	21
Conclusion	23
References	25

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Introduction

In the early days of the digital era, the internet was welcomed with enthusiasm as a force capable of challenging the widespread and enduring subordination of women in society, paving the way to their liberation and emancipation. The internet was not only considered a technological marvel. It arguably carried the potential to go beyond physical differences, granting women the liberty to embrace diverse identities beyond dominant and discriminatory social norms. Behind the screen, some feminist authors argued, the ethos was one of equality and inclusion, where everyone, irrespective of gender and personal characteristics, was expected to stand on equal footing (Plant, 1997; Stone, 1995; Haraway, 1991).

However, as technological progress unfolded, it became evident that, rather than empowering women, technology could be a catalyst for sexual violence - facilitating, amplifying, generating, or enabling new forms of abuse motivated by gender (EDVAW, 2022). This has been the case, for example, of image-based sexual abuse - covering the non-consensual creating, taking, and sharing of intimate content, along with their threats. In targeting women due to their gender and affecting them disproportionately, such acts result in a severe violation of fundamental rights, adversely impacting the physical, psychological, social, and economic well-being of the victim (Rigotti & McGlynn, 2022).

The metaverse was developed to revolutionise human life much like the internet did (Ball, 2022). By transforming our personas into avatars and offering interconnected virtual worlds, it is already possible to envision a shift towards the metaverse for learning, training, work, communication, entertainment, and

many other experiences, including sexual and intimate interactions (Cheng, 2023; Khan, 2023; Shannon, 2023). In this regard, dating apps are increasingly venturing into virtual and augmented realities, enabling 3D rendezvous. Meta-dating, in fact, is considered to go beyond superficial looks, encouraging connections on deeper levels through the avatar creation process, detached from physical appearance and gender stereotypes (Aggeler, 2023; Dhaliwal, 2022). At the same time, a troubling social dynamic has emerged in the metaverse, where female-presenting avatars face escalating instances of sexual

violence, including sexual groping, harassment, and other violations by their male counterparts. These gender-based harms negatively impact users and lead many to disengage from this new reality and society (Donegan, 2023; Petter, 2022; Basu, 2021), to the detriment of its diversity.

“a troubling social dynamic has emerged in the metaverse”

Against this backdrop, this report will address the pressing question: ‘How should one understand and address sexual violence and harassment in the metaverse?’ Section 1 will set the stage, providing essential insights into the metaverse, its creation, access, and diverse purposes. Sections 2 and 3 will shed some light on the conceptualisation of sexual violence and harassment in the metaverse, while placing them within the continuum of sexual violence that women generally experience throughout their lives, due to their gender and other intersecting personal characteristics. Section 4 will begin with a brief, critical analysis of the mitigation measures the private sector has so far implemented, and will then explore the necessity and relevance of legal and policy measures. The report will finish with concluding remarks.

1. The metaverse: Getting the basics

Neil Stephenson coined the term ‘metaverse’ in his novel ‘Snow Crash’ in 1992, borrowing it from a software malfunction on early Macintosh computers (Ball, 2022; Burrows, 2022). Inspired by the multiplayer online games of the 1990s, the American writer envisioned the metaverse as a virtual world seamlessly integrated with the internet, providing a platform for individuals to fully transition their lives online. Access to the metaverse involved creating an avatar and using either a personal or public terminal, with some users remaining continuously connected through portable terminals. Similar to the physical world, the metaverse was governed by private companies, arising from the backdrop of a global economic collapse (Ball, 2022; Burrows, 2022). Despite its science fiction origin, this depiction of the metaverse already bears some resemblance to present-day developments as will briefly follow.

“The metaverse is described as “[a] massively scaled and interoperable network of realtime rendered 3D virtual worlds that can be experienced synchronously and persistently by an effectively unlimited number of users.”

1.1 Describing the metaverse

The metaverse has recently become a pervasive term making waves in headlines across the media. For example, The Guardian has allocated a specific tag and webpage to explore this emerging technology.¹ Yet it remains a somewhat elusive concept deeply entrenched in the realm of science fiction, with scholarly literature presenting diverse and often conflicting definitions (see Cheng, 2023; Dwivedi et al., 2022; Park & Kim, 2022). In a previous report, the authors adopted Matthew Ball’s formulation, which stands out as one of the earliest and most frequently referenced in both academic and media circles (Rigotti & Malgieri, 2023). For Matthew Ball, the metaverse is described as “[a] massively scaled and interoperable network of real-

time rendered 3D virtual worlds that can be experienced synchronously and persistently by an effectively unlimited number of users with an individual sense of presence, and with continuity of data, such as identity, history, entitlements, objects, communications, and payments” (Ball, 2022).

Breaking down his definition, Matthew Ball seemingly posits the metaverse as an overarching term encompassing various yet potentially interconnected virtual worlds, offering experiences as diverse or even more so than those in the physical realm (Ball, 2022). Being entirely computer-generated and reliant on simulated spaces, it appears that the metaverse endeavours to virtualise and digitise the physical world with utmost fidelity. From a technical angle, this necessitates

¹ The webpage is available at: <<https://www.theguardian.com/technology/the-metaverse>> accessed: 12 December 2023

adherence to three prerequisites: immersive three-dimensionality (referred to as 3D) (Cheng, 2023; Ball, 2022), real-time rendering to eliminate temporal gaps between physical actions and meta-performance (Kreutzer & Klose, 2023; Shannon, 2023; Ball, 2022), and interoperability, enabling the exchange and use of information across virtual worlds, while managing data persistence across different realms and timeframes (Kreutzer & Klose, 2023; Ball, 2022). In this context, each meta-experience achieves synchronicity and shareability, further blurring the distinction between materiality and virtuality. The metaverse, in fact, operates without a 'shut down' or 'reboot,' allowing users to partake in the same event simultaneously and in the same virtual space (Cheng, 2023; Kreutzer & Klose, 2023; Ball, 2022).

1.2 Accessing the metaverse through avatars

To enter the metaverse, users create a username and set a password, or they may opt to use existing credentials from social platforms like Facebook. Ian Khan suggests that meta-providers may start forming agreements, adopting a single sign-on (SSO) approach, as well as streamlining and enhancing the meta-life experience for their users (Khan, 2023). This means, for example, that a user could effortlessly engage in activities like grocery shopping, dating, and attending concerts, irrespective of the service provider, ensuring a unified virtual identity. Also, this virtual identity is expected to be unique, granting users full control over their personal and sensitive data (Cheng, 2023). However, this feature does not seem to restrict users from having one virtual identity linked to their real one and multiple avatars tailored to specific contexts (e.g. workplace, leisure activities).

Generally speaking, in the metaverse, an avatar serves as the virtual representation of

the user. Users typically have the freedom to customise their avatars, selecting various personal characteristics, such as skin pigmentation, hair colour, and clothes. While some meta-providers offer these personalisation options, others enable users to shape their avatars based on a selfie. Additionally, in some spaces, users can create avatars with non-human shapes. As discussed in a previous report on human vulnerability in the metaverse, avatar creation is often considered an empowering tool, especially for socially marginalised groups, addressing their needs and fundamental rights (Rigotti & Malgieri, 2023). However, it was demonstrated that individuals from socially marginalised groups in the physical world may encounter similar subordination in the metaverse, if their avatars mirror their personal characteristics (Rigotti & Malgieri, 2023). Conversely, choosing avatars with different physical attributes to conform to societal norms can also be problematic, eroding personal autonomy, self-determination, and diversity, even if these avatars are less likely to face social subordination (Rigotti & Malgieri, 2023). Finally, the report argued that the metaverse is frequently inaccessible, potentially exacerbating social inequalities stemming from the digital divide (Rigotti & Malgieri, 2023).

1.3 Involving the public and private sectors in the metaverse design and governance

In the public sector, some countries and international entities are actively committing to the creation and governance of the metaverse. For instance, the South Korean government has initiated a \$48.3 million USD fund dedicated to development, supporting mergers and acquisitions of various startups in this domain (Piscione & Drean, 2023). The Emirate of Dubai has formulated its strategy with the aim of becoming a leading metaverse economy globally by 2030, positioning itself as a central hub for the metaverse

community (Piscione & Drean, 2023). As part of its digital strategy, the European Union is currently scrutinising the aspirations and limitations of the metaverse, engaging in consultations with key stakeholders. Notably, the European Commission and the Virtual Reality/Augmented Reality (VR/AR) Industrial Coalition have collaboratively produced a strategic paper and formed a citizen panel to discuss the normative creation and governance of the metaverse (European Commission, 2023). Additionally, taking on an advocacy and policy-making role, the Platform of Independent Expert Mechanisms on Discrimination and Violence against Women (hereinafter: the EDVAW Platform) emphasises the critical need for forward-thinking policy development to effectively safeguard women in the metaverse (EDVAW Platform, 2022).

Despite the interest and investments from the public sector, the metaverse is predominantly under private ownership. This concentration

suggests that metaverse governance is likely to be primarily held in the hands of the private sector, particularly a small number of major companies (commonly known as Big Tech) involved in designing and providing the infrastructure (Ball, 2022; Burrows, 2022). Consequently, akin to the governance models of social media platforms, the governance of the metaverse may prioritise a profitable business model focused on acquiring and retaining users, rather than ensuring that fundamental rights and freedoms are upheld and promoted. Conversely, some envision a decentralised metaverse where users can contribute to its design, and governance is not solely attributed to a corporate entity (Narula, 2022). Achieving decentralisation in this scenario relies on key technologies like blockchain and edge computing – which are used for applications such as crypto currency and non-fungible tokens (NFTs) – a model already implemented in the gaming industry (Cheng, 2023).

“the governance of the metaverse may prioritise a profitable business model focused on acquiring and retaining users, rather than ensuring that fundamental rights and freedoms are upheld and promoted”

2. Reporting sexual violence and harassment in the metaverse

For women, sexual violence and harassment beyond the offline realm are not a new experience. The notion of ‘virtual rape’ was introduced as early as 1993, when a user in the virtual world ‘LambdaMoo’ used a text-based subprogram, forcing other avatars to describe explicit sexual acts and engage in sexual behaviours (Strikwerda, 2015; MacKinnon, 2006). While deeply harmful and an early example of potential criminal behaviour, the actions described did not match the legal qualification as rape. This was due to the absence of the constitutive elements of the criminal offence, such as the act of penetration, and could not consequently face criminal prosecution (Haber, forthcoming). However, in 2007, the Belgian Federal Police launched a criminal investigation into a ‘virtual rape’ incident on the Second Life platform, after an avatar assumed control over another to simulate non-consensual sex. While the investigation did not lead to charges, it shed light on the frequency of such incidents in Second Life (Danaher, 2018), underscoring the growing relevance of sexual misconduct in virtual environments. Subsequently, instances of sexual misconduct have persistently been brought to the attention of national authorities, civil-society organisations, the media, and academia (AccessNow, 2022; Weissman, 2021;

Danaher, 2018; Esparza, 2018; Strikwerda, 2015), now permeating the contemporary and future metaverse landscape.

When looking at personal experiences of sexual violence and harassment in the metaverse, the narratives often echo familiar themes, resembling descriptions of incidents that take place in the physical world. Generally, the female presenting avatar, serving as the victim, experiences non-consensual touching, groping, exposure to ejaculatory acts, or penetration perpetrated by one or more male avatars. These acts may involve varying degrees of force and coercion, occur in the presence of bystanders, and are at times captured through filming or photography (Donegan, 2023; Horne, 2023; Zytko & Chan, 2023; Yoon, 2022; Mahdawi, 2021). Offenders seem to derive a sense of power from the virtual realm, where they feel unrestrained and capable of unchecked actions (Frenkel & Browning, 2021). Amidst these accounts, the question arises of whether these personal experiences could be considered sexual violence and harassment for criminal law purposes, given the absence of physical touch and the alleged belief held by some that harm cannot occur without direct physical conduct (Basu, 2021).

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In this regard, it is worth observing that the victim's response to sexual violence and harassment in the metaverse closely mirrors offline reactions, often including instances of freezing and flight (Yoon, 2022). The reasons are seemingly threefold. First, the customisation of avatar bodies can lead to strong psychological bonds, meaning that the impact of abuse persists beyond the virtual experience, manifesting in a physical response, such as anxiety, panic attacks, and potential depression akin to real-life victims (Ramirez et al., 2023; Freeman et al., 2022). Second, despite the absence of a physical body, the immersive qualities of metaverse technologies, providing 3D views, realistic audio, and touch simulations, create a multisensory experience that blurs the line between the virtual and the physical (Yoon, 2022; Frenkel & Browning, 2021). This means that, although the physical body is absent, the mind is deceived into perceiving its presence, retaining the social implications of sexual abuse and its potential to degrade, humiliate, and traumatise the victim (Donegan, 2023; Ramirez et al., 2023; Basu, 2021). On a different note, another parallel with offline sexual

violence and harassment emerges when the victim wishes to report her experience and then experiences victim-blaming responses and the continuum of gender-based harms, including death and rape threats following their denunciation (Yoon, 2022). Third, the firsthand encounters of sexual violence and harassment in the metaverse is likely to evoke the fear and trauma women endure daily due to their common subordination and oppression within society. This emotional burden is unlikely to be paralleled for a male user, who would not typically experience a similar real-life counterpart of harm within the metaverse.

Against this backdrop, it is necessary to think of the metaverse as a venue where new, yet deeply entrenched, kinds of harm can happen, steering clear of a direct comparison with sexual offences against women in the physical world and refraining from establishing hierarchies of gender-based abuses. The following section will therefore aim to legally qualify sexual violence and harassment in the metaverse, positioning it within the broader framework of online and technology-facilitated violence.

3. Contextualising sexual violence and harassment in the metaverse: A framework within online and technology-facilitated violence against women

In 2018, the UN Special Rapporteur on violence against women and girls, its causes and consequences (the UN Special Rapporteur) stood out as one of the initial voices in offering a comprehensive definition of online and technology-facilitated violence against women. She defined it as “any form of gender-based violence against women that is committed, assisted, or exacerbated, either partially or entirely, through the use of information and communication technology (ICT), such as mobile phones, smartphones, the Internet, social media platforms, or email” (OHCHR, 2018, par. 23). Nevertheless, within academia and among various international actors active in the realm of women’s rights, alternative definitions of online and technology-facilitated violence

have been put forth. Given the broad range of forms of abuse falling within the scope of online and technology-facilitated violence against women, there is a contrast between expansive definitions and specific terminology. This includes, on the one hand, overarching designations such as the digital dimension of violence against women (GREVIO, 2021), which serve as umbrella terms. On the other hand, there are more specific terms like image-based sexual abuse (McGlynn & Rackley, 2017), cyberstalking (Parsons-Pollard & Moriarty, 2009), and sextortion (Paquet-Clouston et al., 2019), to name but a few examples, which captures specific instances of gender-based violence experienced in cyberspace or perpetrated via technologies beyond the digital realm (e.g., artificial intelligence).

“Avatars may provide a cloak of anonymity and reduced inhibition, coupled with a sense of omnipresence, which can embolden them to engage in harmful behaviour.”

Whilst broad definitions may risk being overly vague and ambiguous, and specific definitions might fall short in addressing the extensive and interconnected nature of online and technology-facilitated violence, the EDVAW Platform proposes four categories to comprehensively describe it. “First, forms of harassment, violence or abuse that are facilitated by specific technologies and technology-enabled devices, such as intimate partner violence carried out via the use of technologies including spyware and other tracking devices; secondly, abuse that takes place and is amplified online, such as forms of image-based sexual abuse such as the non-consensual sharing of intimate images; thirdly, where technology has generated a new form of abuse, such as deepfake pornography and abuse of our digital selves in the metaverse; and, fourthly, where the online environment is used to enable violence and abuse to take place, such as the use of social media being central to various forms of sexual violence against women and girls” (EDVAW Platform, 2022, p. 8).

Against this backdrop, sexual violence and harassment in the metaverse can be placed within all the categories of online and technology-facilitated violence put forward by the EDVAW Platform. First, the metaverse can facilitate the commission of sexual violence and harassment against women. Avatars may provide a cloak of anonymity and reduced inhibition, coupled with a sense of omnipresence, which can embolden them to engage in harmful behaviour. Second, sexual violence and harassment that takes place in the metaverse not only exacerbate the harm

to the victim because of its realistic nature but also due to the lack of geographical boundaries. This allows offenders to reach a global audience and target women regardless of their location, amplifying the impact and scope of their harmful actions. Third, the social interaction between avatars introduces a novel avenue for abuse, specifically the sexual violence and harassment directed at digital personas that are female presenting. Additionally, the integration of deepfakes in the metaverse could cause severe harm, particularly with regard to impersonation and the related creation of realistic intimate images or videos (Ramirez et al., 2023).

Fourth, in the metaverse, male users seemingly cause harm to women in a way that provides them plausible deniability through the guise of play (Donegan, 2023). This dynamic is exacerbated by the fictional nature of avatars and their virtual interactions, contributing to a space where the severity of the harm inflicted is often not given the same level of significance as gender-based violence offline. Accordingly, as

is the case with cyberspace, the metaverse serves as a conducive environment for gender-based abuse, where its existing design and governance actively contribute to, tolerate, and ultimately legitimise instances of sexual violence motivated by gender.

This classificatory approach provides a more adaptable and comprehensive framework that effectively captures the nuances and shifts in sexual violence and harassment within the ever-changing landscape of the metaverse. Regardless of technological progress, however, the next subsection will

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identify some common features of online and technology-facilitated violence that inherently extend to its metaverse dimension. These encompass its gender-based and intersectional nature across both offline and online spheres. Specific considerations about the harm and significance of online and technology-facilitated violence, including sexual violence and harassment in the metaverse are also provided.

3.1 The nature of online and technology-facilitated violence, including sexual violence and harassment in the metaverse

Similar to its offline counterpart, online and technology-facilitated violence against women is inherently gender-based, targeting women specifically because of their gender or disproportionately affecting them. This distinguishes it from other forms of violence, as the victim's gender serves as the primary motive for its commission. Furthermore, the perpetration of such violence is deeply rooted in the enduring social subordination of the woman in both private and public spheres (Rigotti, forthcoming). In cyberspace, the gendered dimension of the harm is substantiated by a growing body of qualitative and quantitative literature. For instance,

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a survey conducted by HateAid and the Landecker Digital Justice Movement reveals that women in Europe are more likely to fear cyber violence and are less inclined to express their opinions online due to their gender and the associated social subordination (HateAid & The Landecker Digital Justice Movement, 2021). Similarly, a comparative study conducted by Amnesty International in 2017 across Europe, the United States, and New Zealand showed that nearly a quarter of surveyed women had encountered online and technology-facilitated violence motivated by gender at least once in their lifetime (Amnesty International, 2017). While empirical research on sexual violence and harassment in the metaverse is still in its early stages, a 2018 report by Pluto VR and The Extended Mind revealed that 49% of female users experienced sexual harassment in virtual reality. Additionally, 55% of gender variant users reported suffering from similar harm due to their gender identity (Pluto VR & The Extended Mind, 2018). In 2022, the civil society organisation Sum of Us reported the normalisation of sexual harassment towards avatars presenting as female, with researchers impersonating them, entering the metaverse, and documenting their experiences of abuse (Sum of Us, 2022).

Online and technology-facilitated violence against women is therefore far from being a novelty. Rather, it is deeply entrenched in the enduring subordination women experience throughout their life within society (Rigotti, forthcoming). This means that online and technology-facilitated violence should not be completely detached from violence in the 'real' world, nor should a hierarchy of gender-based harms be created. Rather, this abuse should be seen in the context of the ongoing and interconnected manifestations of violence that women face offline, framing it as an 'online-offline continuum of violence' and encompassing a discourse on 'new

forms of gender-based violence.’ Based on Liz Kelly’s research conducted in the late 1980s, which highlighted the persistent nature of sexual violence against women, this conceptualisation illustrates a continuum ranging from the everyday sexism women encounter to more severe forms of abuse, including rape (Kelly, 1988). This pattern is already mirrored in cyberspace, where online abuse often follows or spills over from offline harmful experiences, creating a nexus where victims endure both online and offline violence (Rigotti, forthcoming; Amnesty International UK, 2017). As a result, in the metaverse, things are not expected to be much different. As previously mentioned, victims are already targeted based on their gender and experience spillover effects in their offline lives.

At the same time, online and technology-facilitated violence impacts women in varying degrees and manifests in diverse ways due to personal characteristics beyond gender, such as age, race and sexual orientation, showing its intersectional nature. The concept of ‘intersectionality,’ initially coined by Kimberlé Crenshaw, sheds light on the relationship between gender and other personal characteristics, along with social systems, working together to subordinate and oppress women in both private and public spheres (Crenshaw, 1989). Supporting this viewpoint on sexual violence in cyberspace, a study by Suzie Dunn et al., encompassing a global scope with nearly 18,500 participants, revealed that a higher percentage of LGB*

individuals (75.8%) had encountered some form of online harm compared to their heterosexual counterparts (57.2%) (Dunn et al., 2023). Additionally, a growing body of research highlights the pervasive cyberviolence faced by women journalists and politicians due to their occupations. A global survey conducted by the UN Educational, Scientific and Cultural Organization (UNESCO) and the

International Center for Journalists recently disclosed that 73% of its 625 respondents had experienced one or more forms of online abuse (Posetti et al., 2021). Although data on the metaverse are still scarce, it is likely that this technology may likewise cause intersectional harm. Its tendency to magnify various gender-based subordination and oppression experienced offline suggests a potential parallel in the virtual realm.

“this abuse should be seen in the context of the ongoing and interconnected manifestations of violence that women face offline”

3.2 Unfolding the harm of online and technology-facilitated violence including sexual violence and harassment in the metaverse

Online and technology-facilitated violence has a profound and lasting impact on women, with each instance of distribution or viewing intensifying the harm at an alarming rate (Dunn, 2020). The term “third-victimisation” has been coined to describe such additional abuse (Clevenger & Navarro, 2021). More generally, victims often experience profound social isolation (McGlynn et al., 2021), leading to disengagement from social media, adversely affecting their private, professional,

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and political lives, often with significant financial burdens (Keats Citron, 2019). The impact also extends to the physical and mental well-being of victims, manifesting in conditions like depression and self-harm (Aborisade, 2022; Henry & Powell, 2018; Bates, 2017). The violence can escalate to physical harm, including instances where the victim also experiences sexual abuse offline, or instills a pervasive sense of threat. This fear often prompts victims to alter their offline behaviour out of concern for their safety (Van der Wilk, 2018). Ultimately, the broader societal consequences involve a substantial curtailment of participatory rights online, diminishing women’s voices in public discourse (Posetti et al., 2021). The retreat of women from the digital realm results in reduced diversity and inclusivity in social, political, and public discussions, along with notable financial ramifications for society (Garrido, 2022), including the loss of economic activity and increased health-related costs (EIGE, 2017a). Furthermore, it also means that women generate less data to be continuously processed by AI and other technological components of the metaverse, resulting in these systems being more informed by male behaviours and opinions.

In the metaverse, as previously mentioned, victims undergo social, psychological, and physical harm. However, this harm takes on a subtly different form than the ones associated with cyberviolence. Upon entering the metaverse, the virtual world seamlessly

integrates with the reality of the user, with their avatar serving as a direct extension of their body and a vehicle of their identity and social interactions (Ramirez et al., 2023). Also, the design of the metaverse seeks to deceive the human brain into perceiving and reacting within this immersive and real-time space, often utilising headsets and other hardware devices. Consequently, if someone encounters sexual violence and harassment in this environment, the emotional impact is likely to mirror real-world experiences (Petter, 2022), and the resulting trauma may extend into the physical realm (Wiederhold, 2022).

In this context, online and technology-facilitated violence against women, including instances within the metaverse, represents a significant violation of their fundamental rights. This recognition aligns with the stance of the UN Human Rights Council and the UN General Assembly, both of which have already acknowledged the potential adverse impact of new technologies on the enjoyment of fundamental rights. In particular, they have asserted that “the same rights that people have offline must also be protected online” (UNGA, 2018; OHCHR, 2016). More precisely, research highlights the significant violation of the fundamental rights to human dignity, sexual autonomy, privacy, physical integrity, and mental well-being, as well as the freedoms of expression, association, and movement resulting from online and technology-facilitated violence (Coombs, 2021).

4. Discussing law and policy:

Current status and future directions

In response to sexual violence and harassment in the metaverse, certain providers have adopted mitigation measures. Meta, for instance, has introduced the ‘Safe Zone,’ namely a protective shield allowing users to activate a bubble when feeling threatened. Within this zone, users are protected from any form of interaction until they choose to lift the Safe Zone signal. In theory, users are first trained in the effective use of this measure, with regular reminders integrated into screens and posters within Horizon Worlds (Basu, 2021). In another metaverse, Quivr, a solution is provided where users can stretch their arms in a V gesture, automatically pushing away potential offenders (Basu, 2021). More often, it appears that meta-providers rely on their terms and conditions along with internal policies to delineate permissible and impermissible conduct (Horne, 2023; Frenkel & Browning, 2021).

These solutions, however, fall short for several reasons. First and foremost, they exhibit victim-blaming attitudes and a myopic perspective. On the one hand, the implementation of safe zones is akin to suggesting that women have the sole responsibility to and can avoid harassment in the metaverse by confining themselves, which is reminiscent of advising them to stay at home to prevent sexual harassment on the street (Mahdawi, 2021). On the other hand, the V gesture approach is similar to proposing

that women should participate in self-defence courses rather than addressing the underlying societal attitudes and abusive behaviours displayed by men. Second, the metaverse operates as a contractual relationship between developers and users, where the former establishes the rules, and the latter is expected to comply. Ultimately, users are left with no choice but to exit the metaverse if they feel uncomfortable or disagree with the rules, or simply tolerate social discrimination

and violence in exchange for fulfilling their needs (Rigotti & Malgieri, 2023). Ultimately, as explored further below, content moderation in the metaverse introduces new challenges, as it goes beyond regulating content to potentially moderating and restricting user behaviour.

Against this background, the following subsection will explore legislative and policy measures to pave the way for a metaverse that is free

from sexual violence and harassment. Despite the recent trend of governments urging private entities to curb the dissemination of specific content online, it is necessary to acknowledge the complexity of this policy request and the nuanced approach it requires. Whilst the primary responsibility for ensuring the protection of women’s rights in the metaverse should still rest with the State, effective protection necessitates collaboration between the State and the private sector including at

“it appears that meta-providers rely on their terms and conditions along with internal policies to delineate permissible and impermissible conduct”

the international level (EDVAW, 2022). This collaboration is vital to ensure that women's rights are protected according to international standards, particularly considering the multi-jurisdictional nature of social media platforms and search engines and the different legal frameworks governing them (INTERPOL, 2024).

4.1 Criminalising sexual violence and harassment in the metaverse

With the evolving digital landscape, international and national policymakers are increasingly recognising the harmful effects of online and technology-facilitated violence against women (EDVAW Platform, 2022). As a result, criminal and civil laws are expanding in some countries to address these new and continually-emerging forms of harms. Envisioning a similar trajectory in the metaverse, the challenge is to shape the criminal justice response on the distinctive features of this emerging and disruptive technology, as well as its specific forms of gender-based sexual harms.

The main question therefore emerges concerning the potential applicability of existing criminal offences designed to address sexual violence and harassment against women in offline or cyberspace settings. There is an argument that existing laws may be sufficient to address these issues, suggesting that the current legal framework can adapt to new challenges brought about by technology (Haber, forthcoming; Brenner, 2020). This approach straightforwardly recognises that sexual violence and harassment in the metaverse have harmful effects, particularly with the incorporation of haptic technologies that can induce feelings of discomfort and pain. As previously said, these effects can go beyond the virtual realm and impact the victim's offline life as well. Whilst it is less likely that sexual offences criminalising offline conduct will be directly applicable to online conduct, sexual offences already construed with reference to cyberspace may remain relevant. An example could be the applicability of the crime of doxing, where the personal information of a user is non-consensually disseminated in the metaverse. Similarly, the

“international and national policymakers are increasingly recognising the harmful effects of online and technology-facilitated violence against women”

crime of cyber harassment may be relevant, where the metaverse is intentionally used to humiliate, molest, attack, threaten, alarm, offend, or insult someone. But context is also crucial in considering the expansion of existing criminal offences to the metaverse (Haber, forthcoming). If the metaverse enables virtually working together, for example, policymakers and judges may decide that virtual touching of a sexual nature, although not generally considered a crime in the metaverse, could become one in this context to ensure legal protection is not compromised. Finally, one could argue that, if sexual violence and harassment are not permitted by the terms and conditions of the metaverse, would likely be considered a cybercrime if the infringing act is an offense in national frameworks.

In contrast to sexual offences offline, non-consensual engagement in sexual conduct in the metaverse entails an immersive and interactive simulation, devoid of physical touching or penetration of the user's physical body. Nonetheless, users can still experience intimate behaviour within the simulated environment, resulting in potential harm that policymakers and judges may not have previously imagined in the context of criminal law. This harm manifests as mental and emotional distress to victims without a physical counterpart. Such physiological effects could mirror those experienced offline (Haber, forthcoming). Although the consequences on the victim could differ from real-life scenarios, this distinction should not diminish the harmful impact, and new criminal offences should be formulated.

In response to this challenge, scholars have started proposing some solutions. Chandler Horne, for instance, suggests applying the crime of attempted rape, which punishes offenders for having the intention to commit rape but ultimately failing to do so. Given that users have complete control over their avatars in the metaverse, viewing them as extensions of themselves, it can be argued that an avatar's intent reflects the user's intent. Consequently, when an avatar intends to non-consensually engage in sexual conduct with another avatar, the user controlling it intends to commit the sexual offence. The said lack of physical penetration or touching would no longer hinder criminal prosecution because the crime of attempt does not require the successful completion of the harmful conduct. At the same time, the focus of legal protection would shift to the victim's absence of sexual consent, wherein the meta-user is aware that the victim did not consent to the sexual

“context is also crucial in considering the expansion of existing criminal offences to the metaverse”

conduct (Horne, 2023). This suggestion however is not appropriate in this context because it still relies on an understanding of rape, as defined under international human rights law as a non-consensual sexual act involving penetration. Query also whether there would be challenges made in court that no “persons” were involved, rather avatars, and that, since the victim was not real or identifiable in real life to the perpetrator, there could be no crime of attempted rape under existing law. There is a distinction to be made between sexual violence committed to peoples' avatars in the metaverse and violence experienced by people in the real world, and this should be differentiated in the

terminology applied. The sexual violence or assault experienced by peoples' avatars when engaging in the metaverse is not restricted to an attempt to violate their avatars, but in fact, the violation has been fully completed. Whilst this would not legally be defined as rape, there may be the necessity to establish a separate category of criminal offenses or develop specialised legislation for such offences. Some argue that existing laws could be deemed adequate to address these issues, signifying that the current legal framework can adapt to new challenges brought about by technology (Haber, forthcoming; Brenner, 2020). Others contend that criminal activities in the metaverse should be treated either as regular crimes or cyber-related crimes depending on the nature of how they are conducted (Haber, forthcoming; Laue, 2011).

Overall, making the assumption that the existing legal framework will effectively regulate the criminal aspects of the metaverse is premature. This is particularly evident due to the persistent challenges surrounding sexual interactions in the metaverse, and the associated harms, which have sparked off a lively debate on how to balance jurisdictional concerns (Yelmini, 2023). Whilst some scholars argue for universal jurisdiction - which would allow every State to prosecute and punish sexual offenders in the metaverse, others highlight the significant differences in criminal laws, especially in sexual offences, amongst States. Even similarly criminalised conduct will likely differ in many other aspects with

respect to procedures, evidentiary rules, and sanctions (Haber, forthcoming). As a result, it is commonly argued that States are unlikely to relinquish their jurisdiction, and forum selection clauses in terms and conditions may establish the appropriate venue, as is already observed in some cases (Yelmini, 2023). Alternatively, one could take inspiration from the Council of Europe Convention on Cybercrime. Despite its European origins, this international treaty has signatories from countries such as the United States, Canada, Israel, and Australia. One of its purposes is to establish the jurisdiction for cybercrimes and determine which criminal laws should apply accordingly (Robinson, 2018).

In conclusion, it becomes imperative for policymakers at all levels including at the international level to take common action and think of new provisions conveying the normative message that this form of sexual conduct should have no place in our society. While laws that mirror the experiences of victims are crucial, they alone cannot eliminate sexual violence and harassment against women. These issues, deeply ingrained in society, require a comprehensive and holistic approach involving additional policy measures like education, training for stakeholders, and enhanced social awareness. Critically, it is worth mentioning that an additional challenge will lie in establishing jurisdiction (Haber, forthcoming; Cheng, 2023), which refers to the legal authority or power granted to a legal entity, such as a court or

“making the assumption that the existing legal framework will effectively regulate the criminal aspects of the metaverse is premature”

government, to interpret and apply the law. Given the absence of territorial borders in the metaverse, determining the precise location of any conduct, the offline offender, the meta-provider, applicable legal rules, and the court with jurisdiction to hear potential cases is likely to become complex. However, it is essential to emphasise the necessity of collective action and the key role that international law could play in this context. International law would provide legal clarity and foster judicial cooperation in criminal matters within the metaverse. By fostering collaboration amongst States and leveraging expertise in exploring this new field, an international framework could be established to address jurisdictional issues and uphold legal standards in this virtual realm.

4.2 Addressing sexual violence and harassment in the metaverse: The role of States and the private sector

As previously mentioned, it is evident that meta-providers will play a central role in metaverse governance. They currently wield authority over user behaviour, establishing rules and meting out punishments for violations. Said otherwise, the design of the metaverse itself is already proactively determining permissible and impermissible conduct, echoing Larry Lessig's notion that "code is law," suggesting the potential for technology to enforce regulations (Lessig, 2006). Whilst the following subsections will provide a brief overview of policy measures for consideration, one could stress that their adoption should primarily stem from the duty of due diligence States bear under international law. This duty entails taking action to prevent women's rights violations, as well as to investigate, prosecute, and punish such violations, regardless of whether they are committed by the State or by private bodies or individuals (Bourke-Martignoni, 2009), and whether they occur offline or online (Abdul Aziz, 2012).

4.2.1 Women's rights impact assessment

While the term 'impact assessment' is defined in various ways, it generally refers to a formal, evidence-based procedure that involves identifying, analysing, and evaluating potential risks arising from a specific policy, procedure, technology, and so forth. The outcomes of this evaluation then inform the formulation of policy recommendations, effective responses, and/or mitigation plans. Importantly, an impact assessment should not be viewed as a mere compliance check. Instead, it explores how the object of the evaluation is likely to impact on stakeholders, and how it aligns with social expectations and interests. It is a process that should start early, continue throughout its lifecycle, and even go beyond deployment as society changes, dangers evolve, and knowledge grows (Wright & De Hert, 2012).

While the origins of impact assessments can be traditionally traced back to the 1960s, spurred by heightened awareness of environmental consequences in plans, policies, or programs, their scope first expanded in the 1980s to encompass privacy and data protection concerns. This broadening was fueled by viewing impact assessments as both an accountability measure, demonstrating compliance with the relevant legal, ethical, and social framework, and an ex-ante regulatory mechanism, designed to identify potential negative consequences at an early stage and proactively mitigate them (Kosta, 2020). At present, there is a growing consensus in both literature and policy circles in favour of incorporating impact assessments that account for women's rights (Götzmann & Bainton, 2021; Meyersfeld, 2019; EIGE, 2017b). This practice, widely endorsed, should be duly acknowledged and applied in the ongoing design and launch of the metaverse.

Briefly, the performance of an impact assessment with a focus on women's rights

could help meta-providers adapt their design choices, fostering empowerment for women. Potentially, it also allows for the recognition that women experience social discrimination and violence in diverse ways and to varying degrees, influenced by interacting and cumulative personal characteristics beyond gender. In the literature, active participation from a spectrum of stakeholders, including diverse scholars and NGOs representing various women's interests, is considered indispensable and strongly advocated. Despite the challenges associated with its implementation, such as identifying appropriate representatives, ensuring balanced representation, and addressing competing interests, this inclusivity is pivotal (Lilja & Bellon, 2008). It facilitates a more nuanced understanding of the metaverse's ambitions and limitations, particularly averting the reproduction of gender and other social stereotypes in its design—a risk that has manifested frequently in the development and use of new technologies (see Loideain & Adams, 2020; Rigotti, 2020).

In Europe, national and regional legislations are increasingly embracing the implementation of a fundamental rights impact assessment (FRIA) as a key policy measure. Particularly, during

the political negotiations on the proposal for a Regulation laying down harmonised rules on artificial intelligence (the AI Act) in December 2023, the European Parliament and the Council of the European Union agreed on incorporating FRIA for high-risk AI systems in Article 29a.² Given that AI systems constitute a core component of the metaverse, the adoption of this legal measure holds substantial promise. Specifically, the FRIA is expected to facilitate a comprehensive evaluation of risks to fundamental rights, with a possible focus on those pertaining to women. This potential is heightened by the FRIA's mandate for the involvement of diverse stakeholders “to the best extent possible,” thereby endorsing a participatory approach.

4.2.2 Gender-responsive content moderation

In broad terms, content moderation is defined as “the organised practice of screening user-generated content posted to internet sites, social media, and other online outlets to determine its appropriateness for a given site, locality, or jurisdiction” (Roberts, 2022, p. 44). This places the responsibility on the private sector to regulate user-posted content, establishing a normative boundary between

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² Briefly, the AI Act divides AI systems into four distinct categories based on their design, associated risk levels, and corresponding accountability obligations. For a first commentary on the AI Act, see (Veale & Zuiderveen Borgesius, 2021)

acceptable and unacceptable material. However in doing so, companies may be enforcing their own values, which may not align with the fundamental rights, principles, and values of society. Notably, content moderation has demonstrated a tendency to perpetuate gender and other diversity biases (Zolides, 2021; Gerrard & Thornham, 2020; Gray et al., 2017), while also reflecting a potentially discriminatory formulation of public morality (e.g. the treatment of female nudity) (Gerrard & Thornham, 2020). Additionally, it seemingly mirrors the current criminal justice framework, emphasising punishment (i.e. content removal) without sufficient focus on re-education and rehabilitation (Schoenebeck & Blackwell, 2020). This content moderation approach appears to divert attention from the root causes of online and technology-facilitated violence against women including the abuse committed in the metaverse, potentially compromising the effectiveness of this measure.

Despite its limitations, in the European context, content moderation stands as one of the measures governed by the Regulation (EU) no. 2022/2065 on a single market for digital services (DSA), with the goal of fostering 'a safe, predictable, and trustworthy online environment' (Article 1) conducive to the respect and fulfilment of fundamental rights for users. Specifically, Article 3(t) of the DSA defines content moderation as any action, automated or otherwise, taken by social media platforms to identify and address illegal content or information contravening their terms and conditions. This encompasses measures affecting the presence, visibility, and access to such content (e.g., removal) or influencing the user's ability to share information (e.g., account suspension or termination). To put content moderation into practice, the DSA combines a conditional

liability regime with a mandatory 'notice-and-action' system. This means that, on the one hand, social media platforms can only be held liable for user-generated content if they possess "actual knowledge" of its illegality. On the other hand, users are responsible for flagging illegal content and filing complaints about the platforms' inaction (Becker & Penfrat, 2023).

Given the potential application of the DSA to the metaverse based on Article 3(1)³ and the following Brussels Effect it may induce - whereby EU laws influence global content moderation policies (Nuniziato, 2023), it is first essential to address the said limitations of current content moderation practices. Precisely, these practices should truly reflect women's experiences of sexual violence and harassment. In this regard, one could observe that in the metaverse, content moderation goes beyond regulating content to potentially moderating and restricting user behaviour. With this in mind, if the metaverse is continuously perceived and treated by its users as a digital equivalent of the offline world, one could argue that its content moderation policies should align with the legal framework on sexual conduct (Ramirez et al., 2023).

4.2.3 Women's rights by design

It is commonly assumed that that design plays a crucial role in shaping human behaviour, thoughts, and responses to the environment. The design of a chair, for instance, can influence how individuals choose to sit (Hendren, 2020). Traffic lights, instead, both guide drivers, riders, and pedestrians and simultaneously convey normative implications through their distinct colours. However, design not only nudges human actions but also has the potential to reinforce and perpetuate gender biases. For example, in everyday products

³ The metaverse, akin to online platforms, functions through hosting services that disseminate stored information to the public upon users' requests, in accordance with Article 3(i) of the DSA.

like smartphones and headphones, designs often cater to the male anatomy, inadvertently reinforcing existing power imbalances between women and men (Criado-Perez, 2020). This trend is also evident in healthcare, where designs such as exoskeletons frequently adopt a one-size-fits-all approach, driven by investment considerations but potentially neglecting the diverse needs of end-users (Søraa & Fosch-Villaronga, 2020).

In this context, the design of technology is likewise considered to have a dual role - normative and regulatory - by incorporating ethical, moral, and legal norms into its software and hardware, influencing human behaviour and opinions (van den Berg & Leenes, 2013). This perspective, often termed 'techno-regulation' or 'legal by design' (Hildebrandt, 2020), aligns to some extent with the concept of 'design for values,' where moral and social values are explicitly translated into context-dependent design requirements (Friedman, 1996). Importantly, approaches like value-sensitive design emphasise considering the societal context and involving stakeholders throughout the design process. They therefore broaden the focus from technical artefacts to a proactive consideration of the societal context, ensuring that technology aligns with human needs and values. Such an approach not only ensures compliance with ethical and legal obligations but also safeguards fundamental rights, countering potential rights violations within the technological infrastructure (Aizenberg & van den Hoven, 2020).

Against this backdrop, women's rights by design emerges as a promising practice to foster a more inclusive metaverse, aligning with the conclusions of the 67th session of the UN Commission on the Status of Women (UN Commission on the Status of Women, 2023). In

this regard, bridging the digital gender divide is essential (Wajcman et al., 2020), making the effective promotion of digital literacy a fundamental right and a prerequisite to ensure women's equal participation as developers and users in the metaverse. At the same time, this heightened involvement empowers women to advocate for the implementation of their fundamental rights by design. For instance, mirroring gender-responsive sexual offence legislation, the metaverse can integrate sexual consent mechanisms, incorporating features that clarify and ensure users' pre-active agreement before engaging in interactions (Zytko & Chan, 2023) as well as the ability to withdraw consent at any time. Additionally, to counter risks like deception, impersonation, and image-based sexual abuse, meta-developers can take inspiration from initiatives like the bodyright campaign introduced in 2021 by the United Nations Population Fund (UNFPA), involving the use of the 'B' symbol on the skin in images (UNFPA, 2021). In this wake, the UK Revenge Porn Line's has launched 'StopNCII.org', namely a cutting-edge technology capable of generating digital fingerprints for intimate images and therefore facilitating proactive detection and removal.⁴ Furthermore, placing women's rights at the core of technological design imposes human rights responsibilities on the private sector to address gender-based harm within their networks and services. Whilst being already advocated in the context of social media platforms (Suzor et al., 2019), this approach aligns with the UN Guiding Principles on Business and Human Rights and has the potential to translate provisions of the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) into action, along with other relevant international and regional treaties on violence against women and girls.

⁴ See <https://stopncii.org/?lang=en-gb>

Conclusion

In the rapidly evolving landscape of gender-based violence, a new and pressing concern has emerged, namely sexual violence and harassment in the metaverse. This working paper discussed this issue, aiming to enhance understanding and propose some mitigation solutions to address it.

The metaverse, welcomed as a ground-breaking technology, currently facilitates sexual and intimate interactions among avatars, that is to say, digital twins enabling users to represent and express themselves within this virtual realm. However, it appears that female avatars frequently endure non-consensual sexual acts, mirroring physical-world instances of sexual offenses. Also, the repercussions extend beyond the virtual space, harming the physical and mental well-being of the victims. Consequently, instances of sexual violence and harassment within the metaverse were situated within the broader category of online and technology-facilitated violence. This form of abuse has been demonstrated to be inherently gender-based, impacting victims disparately based on personal characteristics, and constituting a continuous form of the harms that women endure throughout their lives.

In acknowledging and attempting to address the disturbing prevalence of sexual violence and harassment in the metaverse, certain meta-providers have introduced some mitigation measures. However, these efforts have faced criticism for exhibiting victim-blaming tendencies and a myopic perspective, neglecting to recognise these gender-based harms as social problems and addressing their root causes. Besides, the dynamics of the metaverse, functioning as an unequal contractual relationship between developers and users, presents challenges. This structure only allows users either to disengage or to endure misconduct based on their comfort levels or agreement with the virtually established rules. Instead, the primary responsibility for safeguarding women's rights in the metaverse should unequivocally lie with the State, exercising due diligence and necessitating collaboration – in a human rights respecting manner – at the international level, including with the private sector. There is also a need for international law requiring States to enact national laws and mechanisms placing obligations on the technology companies to ensure that they promote and protect human rights on their different platforms and through their user policies and community standards.

“the dynamics of the metaverse, functioning as an unequal contractual relationship between developers and users, presents challenges”

By so requiring, States will be able to meet their duty to ensure the protection and protection of human rights. Further, States will be working in collaboration with the private sector which, in real time, is deciding how users' human rights, including user safety, is promoted and protected. To effectively protect women from sexual violence in the metaverse and in the digital realm more broadly, coordinated national and international laws and mechanisms are needed, which also place accountability on the private sector.

Following the need for legislative and policy measures, the report therefore explored the potential application of criminal offences to metaverse scenarios. Among the discussed solutions were the applicability of existing laws and the creation of ones. The overarching emphasis was on the urgent need for collective action and the use of international law to effectively combat sexual violence and harassment in the metaverse, while also addressing the associated jurisdictional challenges. Acknowledging the key role of the private sector, the State should still have a proactive involvement in metaverse design and governance in line with international human rights law and standards to effectively

combat gender-based violence. Women's rights impact assessments could provide a comprehensive evaluation of metaverse design choices. This approach aims to consider the diverse experiences of women and the risks associated with perpetuating gender stereotypes, aligning with the evolving legal landscape, such as the inclusion of fundamental rights impact assessment in the AI Act. The discussion extended to content moderation, regulated by the DSA in the EU.

Recognising the limitations of current practices, the report emphasised the necessity for tailored approaches that reflect women's experiences of sexual violence and harassment in the metaverse. Finally, it explored the concept of women's rights by design. It suggested addressing the digital gender divide by promoting digital literacy as a fundamental right and fostering women's equal participation as both developers and users. To mitigate risks in the metaverse, the incorporation of sexual consent mechanisms and support for initiatives like the bodyright campaign were proposed, offering preventative and response mechanisms to fostering a safer virtual environment.

“To effectively protect women from sexual violence in the metaverse and in the digital realm more broadly, coordinated national and international laws and mechanisms are needed, which also place accountability on the private sector.”

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