



# “The Land on Which We Meet” – Modes of Indigenous Self-Determination in the Metaverse

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## Abstract

Amid growing academic and policy debates on the metaverse, Indigenous perspectives remain underrepresented yet offer crucial insights into the socio-political dimensions of virtual worlds. This paper investigates Indigenous self-determination in the metaverse. It starts its analysis with a focus on the Australian First Nations’ proposal for a “cultural embassy” It argues that this initiative demonstrates the metaverse’s inherently political nature while underscoring the importance of Indigenous control over virtual land, particularly through the role that data plays in an Indigenous perspective. By grounding the cultural embassy in the United Nations Declaration on the Rights of Indigenous Peoples, the paper highlights how this approach advances Indigenous self-determination in digital environments.

**Keywords** Metaverse · Virtual land · First nations · Data · Indigenous self-determination · Digital embassy

## 1 Introduction

The metaverse is envisioned as both a transformative way to experience cyberspace and a frontier for the digital economy. Private (Deloitte China, 2022; Elmasry et al., 2022) and public entities (Hupont et al., 2023) are both waiting its realisation and expect to reap its benefits, such as the possibility of novel types of interfaces and interactions between users (Dwivedi et al., 2022), while also anticipating the risks that this transformation might bring (Li & White, 2023b). Big corporations such as Meta,

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<sup>1</sup> Microsoft, <sup>2</sup> as well as regional superpowers such as the US (Zhu, 2022), China <sup>3</sup> and the EU <sup>4</sup> have shown great interest in the metaverse. While states and technological giants control much of the discourse, Indigenous nations and communities have emerged as key voices in academic and policy debates, highlighting the promises and risks of virtual worlds for their culture, history, and heritage. Amid this diverse constellation of stakeholders and interests, the very definition of the metaverse remains a contested and evolving concept, reflecting the complexity of its potential applications and implications. Some scholars, like McStay (2023), argue that the word *metaverse* behaves like an “empty signifier”, having no specific meaning. Others have tried to offer a preliminary definition of what the metaverse will look like. Ball (Ball, 2022, p. 65) defines it as a “massively scaled and interoperable network of real-time rendered 3D virtual worlds that can be experienced synchronously”. Di Porto and Foà (Di Porto & Foà, 2023, p. 11) state that the metaverse is “an immersive, synchronous, persistent and unified 3D user experience that might enable mass content creation”. According to Nickerson et al. (Nickerson et al., 2022, p. 2) the metaverse can be understood as “an ecosystem of digital ecosystems, where each ecosystem can be conceived of as a universe with its own material and symbolic elements”. Neal Stephenson’s seminal novel “Snow Crash” (Stephenson, 1992) first introduced the idea of the metaverse to define an extended reality in which users can act and live similarly to the real world, interacting and socializing through a digital replica called avatar. From there, with the diffusion of the broadband internet connection, platforms such as Second Life saw a high rate of adoption in the early 2000’s, creating an immersive world with a parallel economy and society (Sonia Huang, 2011). *Second Life*, launched in 2003, pioneered virtual world features foundational to the metaverse, notably user-generated content and avatar interaction. Subsequently, the evolution of Extended Reality (XR) technologies paved the way to rejuvenating hopes for the possibility to realize Second Life’s dream of a truly interconnected and immersive virtual world. Although the definition is far from universally accepted (see Rauschnabel et al., 2022), XR can be defined as “all real-and-virtual combined environments between human and computer input” (Alnagrat et al., 2022, p. 83). XR comprises Virtual reality (VR), augmented reality (AR) and mixed reality (MR). These terms define different relations the physical world and the virtual world, as experienced in a continuum by the user. Virtual reality defines a 3-dimensional, computer generated, and fully artificial environments accessed peripheral devices (often trough head-mounted displays). Augmented reality (AR) is defined as the experience of a mix of real and virtual objects. Mixed reality (MR) is defined as a step in the continuum between AR and full VR, in which users can interact with artificial objects (Alnagrat et al., 2022). In 2021, Facebook’s rebranding as Meta marked a renewed commitment to actualizing the metaverse vision, with Meta’s Reality Labs spearheading developments in

<sup>1</sup> <https://about.meta.com/metaverse/>, accessed on the 9/02/2024.

<sup>2</sup> <https://metamandril.com/microsoft-metaverse/>, accessed on the 9/02/2024

<sup>3</sup> <https://news.bitcoin.com/shanghai-aims-to-grow-a-52-billion-metaverse-cluster-by-2025/>, accessed on the 9/02/2024

<sup>4</sup> <http://www.reuters.com/technology/eu-looks-take-lead-metaverse-world-avoid-big-tech-dominance-2023-07-11/>, accessed on the 9/02/2024

XR technologies.<sup>5</sup> Moreover, platforms such as Decentraland and the Sandbox have been widely adopted within the so-called web 3.0, leveraging blockchain-based technologies to offer a cryptocurrency-based digital economy (Momtaz, 2022).

As the development of metaverse technologies is still in its infancy,<sup>6</sup> the definitions that I have offered try to encompass the general properties of an integrated, interoperable, massive virtual world experienced by the users. To probe the significance of the metaverse, researchers have taken a multifaceted perspective. The literature on the metaverse has focused, to name a few key aspects, on the technological (Wang et al., 2023), phenomenological (Floridi, 2022), psychological (Henz, 2022) and sociological (Mosco, 2023) impacts of virtual worlds. Moreover, the political implications of the metaverse have been thoroughly investigated focusing on the challenges it poses to great powers in their effort to control disruptive technologies (Baughman, 2022; European Commission, 2023; Sitnikov, 2024). Moving away from the angle of state actors, many reports from mainstream organizations in the business world, such as the World Economic Forum (Li & Collins, 2023) and the McKinsey Foundation (Elmasry et al., 2022), frame the metaverse as primarily a mode of extracting economic value, envisioning implicitly corporate ownership and governance of virtual worlds.

Recent studies have addressed the challenge of governing and regulating the metaverse by offering a more nuanced perspective on the legal and ethical issues underpinning its creation, covering the issues of privacy, inclusion, and asset ownership (Effing, 2024; Egliston et al., 2024). However, less attention has been dedicated to this challenge from an Indigenous perspective. After conducting extensive research (on Google Scholar) using the keywords “*Indigenous Metaverse*,” “*Indigenous data sovereignty in the metaverse*,” and “*Indigenous Metaverse and self-determination*,” it was found that the literature addressing these topics remains limited to Dobson & Fernandez (2023), who have discussed the problem of Indigenous data governance within the metaverse. Other contributions have covered the preservation of Indigenous cultural assets through the metaverse in Brazil (Silva et al., 2023) and Indonesia (Setiadi & Syah, 2024). This contribution aims to fill this gap in the literature, showcasing how an Indigenous perspective can offer a novel perspective on the politics and governance of the metaverse.

This paper explores how the metaverse can serve as a platform for advancing Indigenous self-determination by enabling ownership and control over virtual land. I will begin by examining the Australian First Nations’ proposal to create a cultural embassy within the metaverse, an initiative designed to ensure that digital Indigenous territories remain under Indigenous ownership. The concept of a cultural embassy in the metaverse draws directly from the legacy of the Aboriginal Tent Embassy, a site of Indigenous resistance and sovereignty that challenges colonial occupation of Australian First Nations’ Land (Myers & Lesh, 2021). Established on January 26, 1972, by Michael Anderson, Billy Craigie, Bertie Williams, and Tony Coorey, the Tent Embassy arose as a response to Prime Minister William McMahon’s dismissal

<sup>5</sup> Why Facebook Is Rebranding Itself as Meta | INSEAD Knowledge, accessed on the 10/11/2024

<sup>6</sup> Some estimations predict that the complete technological system necessary to create a metaverse will take from 5 to 10 years (see Li & Collins, 2023).

of Aboriginal land rights and his reinforcement of assimilationist policies (Iveson, 2017). By designating their protest as an “embassy,” the activists underscored the absence of recognition for Aboriginal sovereignty and the colonial assumption that Indigenous lands were unoccupied or unowned. Over its 50-year-long occupation, the Tent Embassy has become both a historical landmark and a living site of protest against the ongoing colonial denial of sovereignty.<sup>7</sup>

The choice for focusing on a cultural embassy in the metaverse stems from the possibility of considering digital land as inherently tied to the self-determination of its creators and participants. Much like the Tent Embassy physically asserts sovereignty in Canberra, a metaverse embassy carves out a sovereign digital space, resisting homogenized, corporate-controlled digital environments and emphasizing Indigenous agency.

I argue that the act of carving out arises from the distinct conceptual role that *data* holds within Indigenous frameworks of data governance and politics. Central to this approach is the control over data representing Indigenous land. I maintain that this concept is an extension of Indigenous self-determination, a core component of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP, 2007). To strengthen this argument, I will frame the proposal for a cultural embassy through the lens of Indigenous self-determination, demonstrating how it incorporates key rights articulated in the UNDRIP into the governance structure of the metaverse.

This paper will focus on two key ideas, *ownership of virtual land* and *Indigenous self-determination*, arguing that the proposal for a digital embassy in the metaverse situates the conversation in the nexus between these two concepts. *Indigenous digital ownership* refers to the rights and control individuals or entities (in this case, Indigenous people) have over digital assets, encompassing the ability to use, transfer, and manage these assets within digital environments.<sup>8</sup> Applying this concept to *Indigenous virtual land*, “ownership of virtual land” denotes the possession and control of virtual real estate within digital platforms, such as metaverses or online games. In this case, it refers to said control when exercised by Indigenous people on lands historically inhabited by Indigenous people. This ownership is typically established through digital assets like non-fungible tokens (NFTs), which are unique digital identifiers recorded on a blockchain, providing verifiable proof of ownership and authenticity (Baumann & Fauveaud, 2024). These digital assets can represent various forms of property, including virtual land, and are governed by the terms and conditions set by the platform or virtual world in which they exist. When it comes to Indigenous self-determination, provisionally, the term can be defined, following UNDRIP, as the right of Indigenous people through which “they freely determine their political status and freely pursue their economic, social and cultural development” (United Nations, 2007 Art. 1)

<sup>7</sup>A short history of the Aboriginal Tent Embassy - Reconciliation Australia, accessed on the 24/01/2025

<sup>8</sup>What is Digital Ownership | IGI Global Scientific Publishing, accessed on the 16/11/2024

## 2 Positionality Statement

As a Western scholar discussing Indigenous forms of political action, theory, and knowledge, one runs the risk of falling into the pitfalls of an uncritical universalist position. In the same way in which each form of knowledge (philosophical and scientific) is situated and embodied within a historical context and tradition, every scholar must acknowledge their role as a socio-theoretical actor. Given my positionality, inherently influenced by the privileges and perspectives shaped by the power structure embedded in Western epistemologies, it is crucial to ensure that my research effort does not inadvertently perpetuate the epistemic violence (Morris, 2010) that has long marginalized Indigenous scholars and knowledge.

My approach is characterized by a reflexive awareness of how my own socio-cultural and historical role influences my interpretations and representations of Indigenous knowledge systems. This reflexivity extends to a critical examination of the assumptions, biases, and power dynamics that I bring into my research effort. An important pitfall that one might fall into when addressing Indigenous or Non-Western forms of knowledge is to attribute a homogenous identity to what is a diverse and rich system of theories and practices. What is more, one risks essentializing indigeneity, creating a monolithic version of the “Other” losing significant nuances (Said, 1979; Smith, 1999). When I discuss the idea of an “Indigenous” control over virtual lands and data, I reference a term that has been widely used in the literature by Indigenous scholars, often adopting a definition loosely based on the UNDRIP (United Nations, 2007).

Indigenous identity refers to the distinctiveness of peoples who maintain historical and ancestral ties to a specific territory predating colonization or state formation. It encompasses cultural, legal, and political dimensions rooted in land and self-determination. As a concept, it operates as an assemblage, reflecting dynamic interactions among cultural practices, legal rights, and international institutions (Sawyer & Gomez, 2012). The UN Working Group on Indigenous Issues (Sanders, 1989) highlights the intergenerational nature of communities or nations that identify themselves as having long-standing connections to specific territories, predating settlement or treaty agreements. This understanding of Indigenous identity emphasizes the enduring relationship with ancestral lands, preserved for future generations. In Canada, Australia, New Zealand, and the United States, tribes must have written constitutions defining membership criteria. These criteria, recognized by governments for formal claims, outlines who qualifies as a member and can be adjusted by tribes under their self-determination rights. (Jacobs, 2019) While it is far from clear what defines Indigeneity, a crucial point to consider is the ability of Indigenous people to define themselves as such (Corntassel, 2003; Weaver, 2001).

This is not only a theoretical conundrum, but has real-world implications, being connected to data-management practices for census and demographic studies, allowing Indigenous people (and not a non-Indigenous government) to define who should count as “Indigenous” (Kukutai & Taylor, 2016, p. 99). In my paper I will then, when addressing a particular document or theory, be careful in specifying what is the origin of that claim, trying as much as possible to avoid careless use of the word “Indigenous”.

### 3 The Virtual Land in the Techno-Political Metaverse

When discussing the metaverse, it is crucial to investigate the role that data plays in its creation. A “platform of platforms” (McAfee & Brynjolfsson, 2018, p. 112) that is highly customisable and that can be used to generate an unprecedented amount of data about users’ identities and behaviours might have significant social and political impacts (Bibri, 2022). The metaverse could represent a turning point when it comes to the amount of data that is produced within society. Behavioral patterns such as eye tracking, emotional recognition, and body motions, as well as “psychographic” data that tracks users’ personality traits and values could all be harnessed to create a more satisfying and enriching user experience. However, they present significant privacy and security concerns that need to be addressed (Li & White, 2023a). From an Indigenous perspective, the political dimension of virtual worlds has been explored as a tool for fostering Indigenous narratives (Barrett, 2013; Fausto et al., 2023) and control over digital land (Caranto Morford & Ansloos, 2021). To the best of my knowledge, the most comprehensive example of an Indigenous metaverse is the “Biskaabiyaang” project. Biskaabiyaang is an Indigenous-led initiative that develops a virtual world dedicated to teaching the Anishinaabe (Ojibwe) language and culture (a group of Indigenous people in North America). Biskaabiyaang integrates digital technology with traditional storytelling to offer an immersive learning experience, allowing the player to explore a virtual world in which the avatar learns the Anishinaabe language interacting with a virtual environment.<sup>9</sup>

This intersection of technological advancement and socio-political implications raises critical questions about the role of data in shaping digital spaces, particularly in the context of marginalized communities. Indigenous metaverses, such as Biskaabiyaang, exemplify how virtual environments can serve as platforms for cultural preservation and empowerment. However, they also underscore the broader challenges posed by *datafication*, where the representation of cultural narratives risks being subsumed within dominant techno-political frameworks.

Bridging these perspectives requires a critical examination of how data is produced, managed, and controlled, with attention to the power dynamics embedded in these processes. Indigenous communities and individuals may lose the ability to decide how and to what extent their data are collected, thereby forfeiting significant control over their language and culture, particularly against the backdrop of colonial experiences. Referencing Biskaabiyaang’s participation in the World Summit on the Information Society:<sup>10</sup> “Indigenous presence is crucial in the metaverse. By incorporating Indigenous perspectives, the metaverse becomes enriched with unique knowledge, traditions, and practices, creating a platform for learning and understanding [...] Participants explored ways of challenging narratives that perpetuate colonial biases in the virtual world. Recognizing these power dynamics at play, the session aimed to foster dialogue and action towards creating a metaverse that acknowledges and addresses historical injustices.” Far from being a neutral entity, data undergoes

<sup>9</sup> Biskaabiyaang: The Indigenous Metaverse - Home, accessed on the 15/11/2024

<sup>10</sup> Embracing Indigenous Perspectives: Biskaabiyaang attends the UN World Summit on the Information Society — Biskaabiyaang: The Indigenous Metaverse, accessed on the 21/01/2024

a process of creation and labelling and is defined through the presence of political actors. Through what has been defined as the process of *datafication* (Mejias & Couldry, 2019), the world must be first taught as being made of data, and a certain material and techno-political structure of power and knowledge needs to be in place to realize this process and enable data collection and management (Gitelman, 2013). As Couldry and Yu have shown (Couldry & Yu, 2018), a naturalizing attitude towards data (treating them just as a commodity) risks making invisible how certain power structures exist in the world at the juncture of economic and political systems, and replicating them in the cyberspace.

A neutralizing outlook on how data can be managed, stored, and controlled entails the risk of producing a universalist discourse that is not suited to tackling the nuances of marginalized groups. While states and regional powers push forward narratives of digital empowerment and sovereignty through the metaverse and data, the existence of situated and local experiences of different needs obliges us to investigate how these differences need to be considered in our policies regarding data extraction and management.

States and supranational entities achieve this control through policies aimed at guaranteeing control over the data produced by citizens, such as *digital sovereignty* and *data-sovereignty*. The former defines the control through and over the cyberspace by means of regulations and strategic independence in the production of critical technologies (Bellanova et al., 2022; Floridi, 2020; Pohle & Thiel, 2020). The latter presents various possible interpretations. While a state-based approach points toward a state maintaining control over data produced within a region, an Indigenous approach to data-sovereignty frames the discourse as a “right” that Indigenous people have with respect to the data they produce (Hummel et al., 2021). While this paper will not focus specifically on the issue of “sovereignty” over Indigenous data, the role that data plays in an Indigenous perspective will be crucial. From a political perspective, the presence of communities that have faced significant discrimination and exclusion from state powers might represent a barrier to participation in the metaverse for individuals belonging to these communities.

Far from endorsing a one-size-fits-all solution, a critical reflection on how to manage data taking also account the need of Indigenous people in the metaverse is key. The problematic experience of Indigenous people with data has been subjected to a thoughtful examination by Indigenous and non-Indigenous scholars (Andersen & O’Brien, 2017). Out of the need to shape a bespoke data-governance policy to face the challenges of Indigenous groups, a series of conversations, reports, declarations, and papers have been produced to define an Indigenous approach to entrenching control over data over cyberspace (see Kukutai & Taylor, 2016, 2021). While this list is far from exclusive, these principles can be found applied to the following practices that have been investigated in academic literature: counter-mapping and digital repatriation.

*Counter-Mapping* involves the creation of maps that challenge official representations, asserting their perspectives and territorial claims. This practice allows communities to control spatial data and narratives about their lands. In Canada, the Gitxsan and Wet’suwet’en peoples developed counter-maps to assert land rights, influencing

legal decisions regarding their territories (Hunt & Stevenson, 2017; Syme, 2020; Wainwright & Bryan, 2009).

*Digital Repatriation* involves returning digital copies of cultural artifacts and knowledge to Indigenous communities, enabling them to manage and control their digital heritage (Bell et al., 2013; Douglas & Hayes, 2019; Krupa & Grimm, 2021). The Passamaquoddy Peoples' Knowledge Portal<sup>11</sup> is an example where digital recordings of language and songs were repatriated, allowing the community to preserve and revitalize their cultural heritage. Indigenous scholars and artists have demonstrated how Indigenous peoples assert their control over digital environments, effectively creating virtual territories that challenge settler-colonial paradigms. Morford and Ansloos (Caranto Morford & Ansloos, 2021) argue that platforms like Twitter serve as spaces where Indigenous communities maintain land-based relations through digital interactions, fostering language revitalization, cultural navigation, and resistance to colonial structures. This practice, termed "land-based cyber-pedagogy" connects digital expressions to physical homelands, underscoring the ongoing relationship between land and identity in cyberspace.

Art and media also play a central role in shaping Indigenous virtual spaces. Gaertner (2015) highlights the efforts of Indigenous artists to establish dynamic online territories through projects like CyberPowWow. These spaces enable Indigenous creators to remediate intertribal events and translate cultural protocols into digital forms. Such initiatives not only confront the exclusions of cyberspace but also reclaim it as a terrain for Indigenous presence and storytelling. Furthermore, the concept of virtual territory extends to Indigenous literary and artistic expressions. Theoretical interventions further expand the discussion of Indigenous virtual spaces, such as Cordes (2020), who introduces Indigenous feminist perspectives to reimagine cyberspace borders, rejecting the traditional notions of control and division in favor of relational and holistic geographies.

While initiatives like Biskaabiiyaang and the proposal for a cultural embassy that will be discussed in the next pages showcase the potential for reclaiming virtual spaces, key challenges remain underexplored. These include the implications of broader challenges within the metaverse governance (Effing, 2024; Egliston et al., 2024; Hasan, 2023), highlighting the tensions between Indigenous control over data and reliance on private technological infrastructures, and the broader integration of Indigenous virtual spaces within a predominantly commercialized metaverse.

I will focus on the role of Indigenous communities in the metaverse, grounding my investigation on the crucial role of data within an Indigenous vision of the metaverse, and applying this to the challenge of Indigenous self-determination. Through technological lenses (Edwards & Hecht, 2010; Kurban et al., 2017; Rasmussen, 2007) it is possible to offer a more nuanced consideration of the role that the metaverse has in the relations among states, citizens, and private powers. Where technologies can sometimes be a tool for self-liberation, they can be co-opted to represent a mode of re-enacting forms of oppression and marginalisation (Ricaurte, 2019). Following the definition of Edwards and Hecht (2010), techno-politics can be defined as "hybrid of technical systems and political practices that produce new forms of power

<sup>11</sup>Passamaquoddy People, accessed on the 16/11/2024

and agency”. A techno-political approach grants the ability to investigate technology from a perspective that goes beyond the limitations of a neutral a-political analysis, considering a technology only with regards to its goals (Treré & Barranquero Carretero, 2018).

Techno-politics can help to show how the metaverse can in fact be understood as a platform that, beyond creating economic value, foster the self-determination of marginalized individuals and groups. Recognizing that the creation, adoption, and spread of new technologies are not neutral and affect people differently is crucial. This understanding provides a basis for examining how technologies can be used to achieve political objectives. As Hecht has shown, technologies are used within a state to enable and realize certain political objectives, such as the creation of a national identity for France through nuclear power (Hecht, 1998) and the rationalization of apartheid bureaucracy through computing (Edwards & Hecht, 2010). Further to this, Hecht and Edwards show (Edwards & Hecht, 2010, p. 260) that technologies can represent also forms of resistance from state-enacted objectives, as in the case of the anti-apartheid activists. Hence, the main takeaway that can be drawn from techno-politics is that technology can be appropriated and applied to different political goals from different actors to shape both policies and narratives. This underscores the critical need to examine how datafication specifically impacts Indigenous communities, as the processes through which their cultural narratives are represented in the metaverse are often shaped by dominant techno-political frameworks. These frameworks risk marginalizing Indigenous voices by embedding power dynamics that prioritize mainstream or commercial interests over the self-determination of Indigenous peoples. Such an imbalance has the potential to undermine Indigenous efforts to authentically represent their histories, knowledge systems, and cultural practices within virtual spaces, emphasizing the urgency of ensuring that data governance, production, and control remain firmly in the hands of Indigenous communities.

This perspective offers a better insight into the reasons that moved Tuvalu to digitalise itself and become the “first digital nation in the world”<sup>12</sup> for preserving its territory from the rising sea-level. What is more, through these lenses it is possible to read the establishment of a digital embassy from the islands of Barbados (Zhahira & Christianti, 2023). Barbados’ metaverse embassy is designed to perform specific diplomatic functions in a virtual environment, addressing the resource limitations that hinder microstates from maintaining widespread physical diplomatic missions. This digital embassy, hosted in a metaverse platform, aims to facilitate diplomatic representation, engagement, and cultural promotion with partner states and international organizations. The metaverse embassy will serve as a virtual hub for official diplomatic interaction, enabling Barbados to conduct bilateral and multilateral discussions, promote its policies, and participate in global forums without the logistical constraints of physical travel or infrastructure. In the case of Tuvalu, climate change is expected to destroy natural and cultural heritage, and Tuvalu has chosen to establish its embassy following the experience of digital diplomacy from various countries (Gupta, 2023). When it comes to digital representation, Indigenous activists have focused on the preservation of cultural assets. Indigenous-led NFT projects

<sup>12</sup> <https://eastasiaforum.org/2023/02/21/finding-hope-in-tuvalu-digital-nation/>, accessed on the 1/02/2024

like *Walking Between Worlds*, *400 Drums*, and *IndigeNFT* are leveraging blockchain technology to amplify Indigenous voices, preserve culture, and promote financial self-determination. *Walking Between Worlds*<sup>13</sup> is the first Indigenous generative NFT collection, featuring 2,222 unique pieces inspired by Aboriginal and Torres Strait Islander dance, supports financial inclusion and cultural expression. Collaborations with global experts aim to empower Indigenous communities economically and technologically. *400 Drums*,<sup>14</sup> based on handcrafted Indigenous drums by artist David Fierro, creates 11,111 NFTs, funding community initiatives like food and housing security while sharing cultural teachings and traditional crafts. *IndigeNFT*<sup>15</sup> blends Aboriginal art with digital attributes. *IndigeNFT* promotes cultural preservation and socioeconomic development. Richard Bell's *Embassy (2013–ongoing)*<sup>16</sup> is a reimagining of the 1972 Aboriginal Tent Embassy, originally established on the lawns of Parliament House, Canberra, as a protest against oppression and displacement. Functioning as a public platform for envisioning alternative futures and retelling histories, it has been showcased in prominent international exhibitions, including the Biennale of Sydney, Performa 15 (New York), the Jakarta Biennale, and the Venice Biennale. In 2021, Bell expanded the concept into the digital sphere with the *Digital Aboriginal Embassy*.

The use of technology as a political and diplomatic tool is not unseen in the metaverse, and the possibility of leveraging the outreach potential of virtual worlds is currently being explored. While the examples of Barbados and Tuvalu are mostly drawn from a state-based perspective, it is also possible to explore how an Indigenous proposal for digital diplomacy is shaped, and how it represents a mode of entrenching different political objectives and needs.

One instructive example of a cultural embassy in the metaverse is the Discussion Paper on the Australian “First Nation Cultures in the Metaverse”—hereafter, “Discussion Paper” (Barba et al., 2022). Australian First Nations people, comprising Aboriginal and Torres Strait Islander peoples, are the original inhabitants of the Australian continent and its nearby islands. Recognized as two cultural groups, Aboriginal peoples belong to the mainland and many of the islands, including Tasmania, while Torres Strait Islander peoples, originating from the islands of the Torres Strait, between the northern tip of Queensland and Papua New Guinea. It is assumed that these groups have lived in Australia for over 65,000 years (Clarkson et al., 2017). Suffering significantly after the British colonisation since the end of the eighteenth century, Australian First Nation People have started in the last decades a long process of formal reconciliation with the Australian authority, since the establishment of the Council for Aboriginal Reconciliation in 1991 (Pratt, 2005).

I argue that, reading the Discussion Paper as one of the main attempts to establish a political reflection on the metaverse from an Indigenous perspective, the metaverse is considered a *reparative space* that allows for mending the historical harms of the

<sup>13</sup>Walking Between Worlds |, accessed on the 16/11/2024

<sup>14</sup>400 Drums | Home, accessed on the 16/11/2024

<sup>15</sup>IndigeNFT, accessed on the 16/11/2024

<sup>16</sup>Aboriginal Embassy | Digital Embassy, accessed on the 16/11/2024

colonial experience through the control over digital land. The authors argue in fact that (Barba et al., 2022, p. 5):

“By taking early action to incorporate First Nation peoples and their rights into the early formation of the metaverse, society can be supported to move in the direction of recognising the importance of First Nations culture and *healing past cultural and economic injustices*. Such early action could help ground the metaverse in the *rich spiritual history* of the people that have been here since the beginning of time and may foster the building of mutual respect and recognition of the inherent rights and sovereignty of First Nations people to represent their history, culture and spiritual traditions in the digital realm.”

From the experience of the massive land grab during the colonial experience, the discussion paper focuses on the risks “digital land grab” of projects like Next Earth<sup>17</sup> which might lead to the exclusion of Indigenous populations from the control of the digital version of their own territory. The Discussion Paper argues in fact that “Virtual land that ‘mirrors’ the earth is being sold without acknowledgement or consent from existing land or Native Title owners.” (Barba et al., 2022, p. 6). While in fact Web 3.0 enables a decentralized form of value creation through the use of cryptocurrencies and non-fungible tokens (Borri et al., 2022) it is far from clear who will benefit from this potential increase in revenues. As for 2022, Decentraland or The Sandbox (two of the biggest existing metaverse platforms) priced their smallest plot of land available for \$13,000.<sup>18</sup> Manufacturers of extra luxury good such as Gucci or Nike are producing virtual products that are sold for higher prices than their physical counterparts.<sup>19</sup>

As a massive amount of revenues are generated through already existing metaverse platforms, Indigenous scholars express the risk of seeing Indigenous people, given their position, excluded from the benefits of the metaverse. This exclusion might in fact cast out Indigenous people from the ownership of their cultural heritage (represented by their virtual land), a politically significant theme considering the colonial experience of land grabbing and expropriation (Barba et al., 2022, p. 6).

Against this backdrop, the Discussion Paper proposes the establishment of a cultural embassy in the metaverse (Barba et al., 2022, p. 8). The cultural embassy aims to preserve the identity and foster representation of Indigenous people in the metaverse. In particular, there is a focus on the experience of colonialism, maintaining that the establishment of an embassy mitigates the risk that “the harms of colonization are not repeated in the creation of ‘mirror’ and imaginary worlds in the metaverse.” (Barba et al., 2022, p. 8). The embassy is envisioned to advocate for the international protection of Australia First Nations peoples’ intellectual property and creative rights, specifically through their Traditional Cultural Expressions in the metaverse. It emphasizes the importance of aligning with the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) to ensure that the rights of Australian First Nations Peoples are respected and preserved.

<sup>17</sup> <https://nextearth.io/>, accessed on the 6/02/2024

<sup>18</sup> <http://www.forbes.com/sites/bernardmarr/2022/03/23/how-to-buy-land%96real-estate-in-the-metaverse/>, accessed on the 6/02/2024

<sup>19</sup> <https://hypebeast.com/2021/5/virtual-gucci-bag-roblox-resale>, accessed on 6/02/2024

The principle highlighted is that only Australian First Nations Peoples, as custodians of their lands, waters, air, and sacred objects, have the authority to share their stories or grant permission for their use in a transparent and non-exploitative manner. More concretely, the embassy will be tasked to maintain the ownership and control of virtual land through negotiation or purchase and work with web3 experts to design the virtual building and user experience (Barba et al., 2022, pp. 8–9). Its functions would include a) co-designing virtual land and experiences, including gaming, to promote awareness of First Nations history, culture, and spiritual traditions while preserving intellectual property; b) highlighting sacred sites, objects, and storytelling to honour mystical and spiritual dimensions of First Nations culture; c) linking virtual and physical spaces to support cultural education, connection, and healing processes.

Further to this, the “Discussion Paper” put forth a proposal for establishing a decentralized autonomous organization (DAO) and setting up decentralized governance bodies to manage the embassy (Barba et al., 2022, p. 9). Decentralized autonomous organizations are blockchain-based modes of organizing the governance of certain digital assets (such as cryptocurrencies), that employ possession of digital tokens to establish voting rights. Moreover, they leverage on a human-algorithm system of decision-making to ensure the trustworthiness and decentralization of the organization (Nabben, 2023). Leveraging on the decentralization and immutability of the blockchain, DAOs are seen as a mode to enable the “Silent Data Revolution” (Dobson & Fernandez, 2023) of Indigenous people. Through a community-based decision protocol that is independent from the control of any centralized authority, Indigenous people scattered across the world can take control over their digital life and ownership and management of their cultural heritage (Dobson & Fernandez, 2023, p. 7).

Taking an Indigenous perspective (with the necessary limitations that are embedded in my positionality as a Western scholar), in the next sections I will try to show how and why, to build an inclusive metaverse, it is necessary to reflect on the experience that Indigenous people have (and had had) with data. A more institutional and western view tends to see data as a resource that can be extracted and controlled, akin to the extraction of oil (World Economic Forum, 2019). Indigenous scholars, instead see data as necessarily linked with the colonial experience (Cormack & Kukutai, 2022). The meaning of data, we will see, is broader, considering that pre-digital data have been used as a mode to catalogue, stigmatize and oppress Indigenous people. What is more, the experience of cultural appropriation of significant historical artifacts and landmarks, as well as the land expropriations that Indigenous people have faced, set the stage for a different sensibility, offering a nuanced perspective on the role that data plays over digital and non-digital lives. Therefore, as I will show in the fourth section, building a digital embassy, as well as having access to control and ownership of data, enables a mode of self-determination in which Indigenous people can reclaim their place and identity in the digital world.

## 4 Data in the Indigenous Metaverse

Data occupies a crucial place in the process of digital self-determination. The ownership of data is key to ensure the possibility of *prima facie* discussing of digital determination, given that, beyond techno-solutionist promises, the challenge of guaranteeing basic rights and capabilities in the cyberspace is a matter of shaping a socio-technical system that puts data-ownership and control at the very centre (Pierucci & Cesaroni, 2023).

Whereas data is considered an important tool of political action both by state and non-state actors, in the context of Indigenous data this investigation primarily defines them as a mode of reading the world. Data make the world analysable, and through governance practices data about the world is sorted and organized, creating representations and narratives. Following the seminal remarks of Scott (2020), the legibility of the world is not a neutral practice. Scott argues that state-led projects of social engineering, driven by an overreliance on scientific management and standardization, often result in unintended consequences. Pushing for an encompassing representation of the world for the need to establish a standardized method of cataloguing and interpreting social phenomena, centralized and modern bureaucratic machinery produces a representation of the world that forces the fitting of certain groups into pre-determined and inflexible categories. In the case of colonial practices, this happens to a greater extent.

Kukutai & Cormack (2019) show how the very identity of Māori and Iwi people has been subjected to the framing of state centric and colonial introduction of racial categories and stereotypes, that have reduced the trust of New Zealand/Aotearoa people in the Crown. Further to this, the experience of illegal practices of data control, such as the circulation of blood samples and sensitive information from Indigenous people has cast a shadow on the ability of the state-centric model of data governance to suit the specific needs of the Indigenous populations (Kowal, 2013). Surveillance practices on Māori-inhabited communities (Norris & Tauri, 2021) have furthermore led Māori scholars and activists to urge for a conversation on the rights of Māori (and Indigenous people across the world) to control their own data. Data plays a pivotal role not just in the adaptation of state-led policies in the digital era, but also holds significant importance for Indigenous communities, particularly in terms of self-governance and control. The “Te Mana Raraunga — Māori Data Sovereignty Network Charter” (Kukutai & Taylor, 2016, p. 18) posits that the Māori community must govern their data as it represents a “living tāonga” The concept of tāonga in Māori culture extends beyond the English notion of an “asset” to encompass a broader semantic range. It traditionally includes items like carvings and burial sites, which carry immense cultural significance for the Māori people (Paterson, 1999). Briggs’ English-Māori Dictionary (Biggs, 1990, p. 130) provides a basic definition of tāonga as encompassing “goods, merchandise, possessions, property, riches, treasure, wealth,” and also includes a polite term for sex organs. This term’s significance was amplified in a cross-cultural context through the Treaty of Waitangi (1840), as noted by Craig, Taonui, and Wild (Craig et al., 2012), where in the Māori version, “tāonga” was employed to denote complete control and possession over Māori lands, homes,

and all treasures, a concept that extended beyond the mere notion of property as understood in the English version.

The establishment of the Waitangi Tribunal in 1975, aimed at addressing violations of the Treaty, has broadened the interpretation of “tāonga” to also include spiritual sites and human remains, highlighting its wide-ranging and culturally profound implications. Tāonga encompasses both tangible and intangible items, from cultural artifacts to inherited goods, embodying a mix of secular and spiritual values that are integral to Māori cultural identity. As legacies from ancestors, tāonga is revered as a vital component of the Māori heritage, capturing the essence of their living tradition (Tapsell, 1997). The Māori Governance model, in fact, argues that (Kukutai et al., 2023b, p. 17) “Data is often described as the world’s most valuable resource – a commodity to be extracted, used and reused. By contrast, Māori data is a *taonga tuku iho* – an ancestral gift – which requires active protection and careful nurturing for the benefit of individuals and collectives, now and in the future.

This perspective underscores the unique reasons Indigenous populations, such as the Māori, have a vested interest in the autonomous management and governance of data. The richness of the conceptualization of Māori vision of data is hardly representable within common data management practices. Data encompasses then a broad set of entities that are interwoven in fundamental cultural, historical, and political dimensions of Māori’s society. Torres Strait Islanders and Aboriginals show a similar abundance of conceptual depth. Australian First Nations cultural artifacts (such as totems or song lines) are crucial to the definition of familial identity and to establish a form of personal and social responsibility, through the notion of Kinship and the Tribal Lore of Indigenous people (Davis, 2019). As such, the artefacts themselves, and their digital representation, are held at the highest place and cover a spiritual as well as political function of consolidating First Nations identity and lineage. For this reason, the Discussion Paper that I have described in the previous chapter (Barba et al., 2022, p. 10), highlights how: “These objects are intrinsically linked to Kinship and can include objects associated with initiation or other ceremonial, birth or burial purposes. There is an obligation on every member of a Nation Group to be a protector of these objects as it is only Traditional Owners who can determine what First Nations’ objects are considered spiritual and/or sacred; and who can source the objects”. The cultural significance of data that represent artefacts, burial places, or in general heritage of Indigenous tradition, cannot be overstated. Indigenous Data Sovereignty Indigenous Governance Charter Statement posits that:

“Indigenous nations need data about their citizens and communities to make informed decisions. However, the information that Indigenous nations have access to is often unreliable, inaccurate, and irrelevant. Federal, state, and local governments have primarily collected these data for their own use. Indigenous nations’ reliance on external data that do not reflect the community’s needs, priorities, and self-conceptions is a threat to self-determination.” (Oguamanam, 2020, p. 17)

Since the colonial experience, the mode in which Indigenous populations have been represented has shaped the meaning of data and the purpose of data-gathering practices. Through what Walters (Walter et al., 2020) defines as the 4-D “disparity, deprivation, disadvantage, dysfunction and difference”, a negative and totalizing construction of Indigenous people as problematic groups within the Australian

state, a form of legibility of the world is enacted by constructing a narrative over a certain set of data that depict a (and politically determined) reconstruction of the social world. Against this backdrop, the need to reappropriate the representation has spurred various organizations, such as *Te Mana Rauunga* (the Māori Data Sovereignty Network)<sup>20</sup> in Aotearoa/New Zealand, the US Indigenous Data Sovereignty Network<sup>21</sup>, and the *Maiam nayri Wingara* Aboriginal and Torres Strait Islander Data Sovereignty Group in Australia.<sup>22</sup> These organizations paved the way towards a definition of new principles for governing data. The quest for control over data among Indigenous communities, particularly within Māori populations, has entailed a transformative approach to data management and governance. This paradigm is enshrined in the vision: “Tuia te korowai o Hine-Raraunga – Data for self-determination.” (Kukutai et al., 2023a) This vision fosters an environment where iwi, hapū, Māori organizations, businesses, and communities are empowered to chase their aspirations for cultural, social, economic, and environmental. Central to this vision is the recognition that data is inherently relational, stemming from a fundamental understanding that all data originates from specific sources and individuals embedded in a cultural tradition. The decolonization of data is a critical component of this paradigm shift. It entails the cessation of exploitative and extractive practices that have historically impacted Indigenous lands, lives, and knowledge (Leone, 2021). Case studies illustrate how Indigenous nations operationalize these frameworks to achieve governance goals. For instance, innovation in health research through frameworks that integrate cultural governance, institutional ethics, and data stewardship (Griffiths et al., 2021). The application of such principles enables Indigenous nations to reclaim agency over their data, challenge extractive practices, and align data governance with their cultural priorities (Hudson et al., 2023). Despite progress, these attempts face challenges, including jurisdictional conflicts and the integration of Indigenous values into broader data ecosystems (Bruhn, 2014).

To guarantee this integration, various proposals have been presented. The Ownership, Control, Access, and Possession (OCAP) principles form the cornerstone of Canadian First Nations’ information governance (First Nations Information Governance Centre, 2014), highlighting their sovereignty over cultural knowledge, data, and information. These principles emphasize the right of First Nations to exert jurisdictional authority and self-determination in the management of their information resources. The historical context of ethical violations in research with First Nations communities, such as the Nuu-chah-nulth “Bad Blood” Research, the Havasupai Tribe case (Genetic Research among the Havasupai, 2011), the Barrow Alcohol Study (Foulks, 1989) underscore the critical importance of adhering to OCAP to prevent such breaches. Another set of principles, this time coming from the Global Indigenous Data Alliance, underscores the collective nature of Indigenous thinking on data.<sup>23</sup> The CARE Principles for Indigenous Data Governance (Carroll et al., 2020) emphasize Collective Benefit, Authority to Control, Responsibility, and Eth-

<sup>20</sup> <https://http://www.temanararaunga.maori.nz/>, accessed on the 9/02/2024

<sup>21</sup> <https://usIndigenousdatanetwork.org/>, accessed on the 09/02/2024

<sup>22</sup> <https://http://www.maiamnayriwingara.org/>, accessed on the 9/02/2024

<sup>23</sup> <https://http://www.gida-global.org/care>, accessed on the 19/02/2024

ics. Those principles aim to guarantee that Indigenous people manage to control their data and exercise their sovereignty. According to CARE Principles, Indigenous data encompasses a wide range of information, from environmental and resource data to personal and collective knowledge, underscoring the implications of data governance for Indigenous communities.

The urgency to develop these principles arose from the efforts of Indigenous Data Sovereignty networks in Aotearoa New Zealand, Australia, and the United States, alongside Indigenous scholars and leaders. Their goal was to bolster Indigenous self-determination by enhancing the use of data for Indigenous purposes while respecting the FAIR Guiding Principles for scientific data management (Findable, Accessible, Interoperable, Reusable) (Wilkinson et al., 2016). The CARE Principles, similarly to the OCAP principles, aim to rectify historical power imbalances by promoting standards and practices that respect Indigenous worldviews, creating value from Indigenous data in ways that align with these perspectives. This approach seeks to leverage opportunities for Indigenous Peoples within the knowledge economy, ensuring that data governance supports collective benefit, respects Indigenous authority, upholds responsibility, and adheres to ethical standards in data management and use (Carroll et al., 2020; Kelsey et al., 2023).

Integrating these principles in a discussion on the metaverse requires understanding them within the larger context of self-determination. Indigenous scholars emphasize the importance of data practices that generate collective value by empowering Indigenous communities, particularly in terms of capacity building and control over their data that represents their lands and cultural heritage. Therefore, the issue of land ownership and the resistance against “digital land grabs” will be examined through the lens of Indigenous self-determination.

## 5 Indigenous Self-Determination– Framing the Quest for the Digital Land

A fundamental principle of Indigenous self-determination is the inherent right of Indigenous peoples to determine their own futures and establish their own political and legal institutions. This applies equally to the physical and to the digital world. Authors like McMahon (2013) and Oguamanam (2020) argue in great detail about the main constituting aspects of Indigenous self-determination as applied to cyberspace. Remolina and Findlay (2021) expand on this to understand this concept more broadly, to define the guiding principles for establishing digital autonomy and the capability to exercise a form of control over the digital life. Self-determination is a core concept of post-WWII international law, as it is enshrined both in the first article in common of the International Covenant on Civil and Political Rights (United Nations General Assembly, 1966) and in the International Covenant on Economic Social and Cultural Rights (United Nations General Assembly, 1966b).

Self-determination is a crucial principle of modern international law. Shrinkhal (2021) argues, in his review of the term, that self-determination emphasises creating a safe space for Indigenous peoples, promoting their rights to consent, self-governance, and the protection of their languages and culture. While there is far from

a consensus on the precise boundaries and scope of the term (Shrinkhal, 2021, p. 75), self-determination is a common paradigm focusing on the ability of Indigenous people to organize their lives according to their own will. According to Lenzerini (2006) it encompasses the right to own traditional lands, maintain cultural identity, participate in decision-making processes, especially concerning cultural and life issues, and self-govern through customary laws. This claim from autonomous decision-making allows us to bridge this concept to the digital counterpart of Indigenous self-determination, as elaborated by Indigenous and non-Indigenous scholars. McMahon (2013) argues for the idea of digital self-determination as an encompassing framework that deals with the autonomous development of telecommunication infrastructure in Canada from First Nation Indigenous people. Fostering the upkeep of Indigenous languages alongside French and English, he maintains that the practice of deploying self-managed radio and internet networks has bolstered Indigenous identity and has enabled them able to organize their community independently from the central Canadian government. This autonomous capacity is key to understanding the place that the control over technologies plays in Indigenous sovereignty. As discussed in the second section, techno-political endeavors can create space for autonomous governance and pave the way toward a form of political action. The uptake and deployment of technologies governed by Indigenous people can be framed as a modality of re-defining and re-shaping the place that is covered by Indigenous people vis-à-vis the centralized non-Indigenous authority. Where offline self-determination is concerned with the carving of new spaces of action within non-Indigenous institutions, online self-determination is tasked with defining the scope of new powers, rights, entitlements, and capabilities. The analogy, which was noted by McMahon in the construction of the Indigenous telecommunication network in Canada, is still applicable digitally when it comes to the definition of the rights over Indigenous data.

Owning the capacity and the right to use data that refers to, and that are produced by, Indigenous populations, represents a proxy for entrenching the pillars of self-determination of Indigenous people vis-à-vis digital platforms. As the platformisation of the economy (Sasikumar & Sersia, 2020) and of social life (Koivunen et al., 2024) increases, modes of countering the risk of losing control over prized cultural heritage, images, and lands, are needed. Indigenous scholars have started reflecting on how to carry on with the quest of developing conceptual tools that adapt historical endeavors (self-determination) facing the new challenges of the datafied society. Self-determination and control, enshrined in the governance principles analyzed in the previous sections, pave the way toward a set of political claims on how a metaverse *polity* ought to be structured. This restructuring is far from being a single domain of Indigenous people. As Bratton (2015) accurately observes, advancements in technology and information are reshaping the global governance structure, introducing a new order that merges the political-geographical realm with the digital-informational space. This shift, rather than inherently paving the way for democratic and liberating opportunities, gives rise to a novel form of governance architecture characterized by platform-based logic. Hence, the rationale for the proposal to establish a cultural embassy in the metaverse that has been analyzed in the second section appears clearer.

First Nations culture in the metaverse  
**Discussion Paper’s Aims** (Barba et al., 2022, p. 8)

United Nations Declaration on the Rights of Indigenous People

1. To ensure self-sovereignty of First Nations peoples in the metaverse.

**Article 3**

Indigenous peoples have the right to **self-determination**. By virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development (United Nations, 2007, p. 9).

2. To ensure that First Nations peoples are represented in the metaverse.

**Article 4**

Indigenous peoples, in exercising their right to **self-determination**, have the right to **autonomy** or self-government in matters relating to their internal and local affairs, as well as ways and means for financing their autonomous functions (United Nations, 2007, p. 9).

3. To ensure that the history, culture and spiritual traditions of First Nations peoples are recognised and respected in the metaverse

**Article 11**

Indigenous peoples have the right to practice and revitalize their cultural traditions and customs. This includes the right to maintain, protect and develop the past, present and future manifestations of their cultures, such as archaeological and historical sites, artefacts, designs, ceremonies, technologies and visual and performing arts and literature.

(United Nations, 2007, p. 11)**Art 31.**

Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions [...]  
 (United Nations, 2007, p. 22).

4. To ensure that the harms of colonization are not repeated in the creation of ‘mirror’ and imaginary worlds in the metaverse.

**Preamble**

Concerned that Indigenous peoples have suffered from historic injustices as a result of, inter alia, their colonization and dispossession of their lands, territories and resources, thus preventing them from exercising, in particular, their right to development in accordance with their own needs and interests [...] Solemnly proclaims the following United Nations Declaration on the Rights of Indigenous Peoples as a standard of achievement to be pursued in a spirit of partnership and mutual respect  
 (United Nations, 2007, p. 7).

The embassy serves the purpose of enhancing self-determination in the metaverse. This can be found in the “Discussion Paper” itself. The proposal claims that, among other things, the embassy is appointed (Barba et al., 2022, p. 8) “To ensure self-sovereignty of First Nations peoples in the metaverse”.

Further to this, it can be observed how the aims presented in the proposal are also enshrined in the United Nations Declaration of the Rights of Indigenous People. In the following table, a comparison between the claims of the cultural embassy contained in the Discussion paper and the UNDRIP are presented:

In particular, claim 5 focuses on the promotion of an “ethical creation in the use of the metaverse” (Barba et al., 2022, p. 9). The cornerstone of the ethical metaverse

from an Indigenous perspective, is the guardianship of Indigenous lands, as a component of Indigenous digital self-determination. This principle is enshrined in article 25 of the UNDRIP, which claims the following (United Nations, 2007, p. 19):

“Indigenous peoples have the right to the lands, territories, and resources which they have traditionally owned, occupied, or otherwise used or acquired. Indigenous peoples have the right to own, use, develop, and control the lands, territories, and resources that they possess by reason of traditional ownership or other traditional occupation or use, as well as those which they have otherwise acquired.”

The metaverse presents a novel frontier where Indigenous peoples can assert their self-determination by controlling data that represents virtual land and cultural assets. The establishment of Cultural Embassy involves Australian First Nations negotiating with metaverse platforms to secure virtual land, designing virtual embassy buildings with web3 experts, and creating immersive experiences that promote awareness of their history and cultural heritage.<sup>24</sup>

Control over virtual land data empowers Indigenous peoples to authentically represent themselves in the digital realm, mitigating the risk of cultural misappropriation and the perpetuation of colonial harms in new forms. By owning and managing this data, Indigenous communities can protect their intellectual property, sacred sites, and cultural narratives from unauthorized use. This control aligns with the CARE Principles—which advocate for Indigenous peoples’ rights to govern data relating to them to advance innovation and self-determination (Carroll et al., 2020).

The reasoning behind this approach is that data ownership in the metaverse is analogous to land ownership in the physical world. Just as the control over traditional lands is central to Indigenous self-determination offline (Lenzerini, 2006), so too is control over virtual lands crucial online. As such, Indigenous-led institutions (like a cultural embassy) facilitate this control by setting up governance structures to oversee the realisation of Indigenous self-determination, and by establishing an operational framework in which virtual land can be managed. As mentioned in the previous section, McMahon (2013) illustrates this by showing how the autonomous development of telecommunications infrastructure by First Nations in Canada has bolstered Indigenous identity and community organization. By managing their own radio and internet networks, these communities have maintained and revitalized their languages and cultures, strengthening their capacity for self-governance independent of centralized authorities.

In the metaverse, data representing virtual land becomes a digital territory over which Indigenous peoples can exercise sovereignty. This digital self-determination enables them to create spaces that reflect their cultural values, governance structures, and social norms. It supports the implementation of Articles 11 and 31 of the UNDRIP, which protect the rights of Indigenous peoples to practice and revitalize their cultural traditions and to maintain control over their cultural heritage, traditional

<sup>24</sup>The announcement garnered attention from Australian media and cryptocurrency-focused outlets, with coverage in four notable articles: “*Cultural Indigenous Embassy to be Established in the Metaverse*” (Yarn), “*Indigenous Cultural Embassy Eyes Space in the Metaverse*” (National Indigenous Times), “*The Dreaming: Indigenous Australians Are Making an Embassy in the Metaverse*” (COINTELEGRAPH), and “*Indigenous Australians Making an Embassy in the Metaverse*” (Crypto News Australia). All articles were accessed on 21 January 2025.

knowledge, and cultural expressions (United Nation, 2007). Moreover, owning data on virtual land allows Indigenous communities to set the terms of engagement within these spaces, ensuring that any interaction or representation is conducted according to the terms set by them. This control prevents the exploitation of Indigenous cultures in the digital economy, where platformization risks commodifying cultural assets without consent. By establishing a cultural embassy in the metaverse, Indigenous peoples can actively participate in shaping the metaverse leveraging the control they establish over data that represent virtual lands.

Although there is no explicit mention in the literature of what an Indigenous metaverse might look like, I believe that the request for keeping the land in control of Indigenous people is a crucial point, given its connection to digital self-determination. Owning the land has, in Indigenous terms, a broader significance than a simple contract. In fact, it has to be evaluated against the backdrop of the colonial experience of dispossession and appropriation, and within the journey of achieving Indigenous self-determination, of which the UNDRPI represent a milestone. The Discussion paper – whose principles were already underpinned by cyber-activism aimed at establishing control over data - paves the way toward a vision of a metaverse that is suited to accommodate the needs of Indigenous people. The “Land on which we meet”, to realize the true spirit of the UNDRPI, must be a digital land in which Indigenous people are in control of their data and realize their self-determination. In fact, the presence of a governance structures for Indigenous communities that inhabit the metaverse entails the necessity to discuss how those governance structures might look like. As mentioned in the beginning of this paper, it is far from evident what will be the final shape that the metaverse will have. Will it be a decentralized blockchain-based system of systems? Will it be made of a few huge platforms that will provide most of the technological stack on which user activities will be carried out? An answer to this question entails the ability to predict the future, and at the present time, current geopolitical changes might make our predictions very inaccurate. However, Indigenous self-determination principles offer the opportunity to outline a sketch of how a metaverse that is tailored also for the presence of Indigenous people looks like. Virtual land ownership is at the core of this model. As digital land, in fact, is data that mimics real-world land owned by Indigenous people, the interplay between data ownership and land ownership is established as a tool to foster Indigenous self-determination. Glancing at the elaborated conception that data as taonga covers in Māori and Iwi’s theory, it can be showcased how the very idea of “data” can have a broad significance. As the land of Indigenous people, described as fundamental ownership both in the Discussion Paper and in the UNDRIP, is transformed into data by a digital representation, then this representation (in the form of data) must be owned by the legitimate possessor of the land. Safeguarding this ownership is achievable leveraging data-governance principles such as the OCAP and the CARE principles, as well as establishing Indigenous-led institutions in the metaverse, like a cultural embassy that facilitate Indigenous people in negotiating their claims of self-determination.

## 6 Conclusions

The conclusions that have been reached are by no means able to exhaust the complexity of the subject matter. The political, ethical, and social implications of the metaverse are yet to be fully understood. On top of this, the addition of the question of Indigenous sovereignty and governance makes my analysis necessarily incomplete. The limitations of this study visibly shape the scope of the theoretical results. First, my position as a Western scholar limits the applicability of the conclusions. As a person who is not Indigenous, and not under the assumption of dictating an overarching course of action for Indigenous digital self-determination, the reasoning that I have presented must leave room for the ability of Indigenous voices to explore and shape their own political theories and tactics. Thus, the limitations of this study are firstly defined by the vastness of the matter, and secondly delimited by the impossibility of defining a conclusive strategy given my role in the Indigenous discourse. Further to this, the proposal that I have analyzed stems from a specific experience of indigeneity, namely, the Australian First Nations. As often propounded by Indigenous scholars, an all-encompassing strategy might be ill-suited to address the needs of different Indigenous people. The sheer variety of experiences, histories, and modes of experiencing the real and the digital world forces us to consider that, beyond the strategic essentialism (Eide, 2016) that has been adopted by Indigenous people to make their claim with a single voice, it could be impossible to generalize this finding to every projects of Indigenous – and non-Indigenous – metaverse governance.

Despite this paper's aim to foreground Indigenous perspectives on the politics and governance of the metaverse, it acknowledges a limitation in fully centring Indigenous-authored scholarship discussing the metaverse. Further research should focus on collaborative approaches that center Indigenous voices and leadership in these discussions.

Additionally, there remain significant gaps in the effective measures required to enforce Indigenous control over virtual lands, an area that deserves further research within the nexus of Indigenous self-determination and data sovereignty. While this paper outlines the theoretical framework for how Indigenous sovereignty might manifest in the metaverse, it does not offer detailed comparative analysis of how different Indigenous communities approach virtual representation or the extent to which these efforts have been successful. For instance, the nexus between data sovereignty and territorial sovereignty in virtual spaces could be explored more deeply in future research, as it represents a critical aspect of Indigenous self-determination in the metaverse. Covering these gaps would provide a better understanding of the potential and limitations of Indigenous governance in virtual spaces, as well as actionable insights for policymakers and metaverse developers, from Indigenous and non-Indigenous perspectives.

Further to this, the constraints of the approach that I have taken further reinforce the conclusion that the findings that have been gathered from this paper should be taken as necessarily partial. Having discussed the political role of Indigenous people in the metaverse, I have mostly analyzed how Indigenous control over data and virtual land might affect their right to self-determination. The ramifications of considering the metaverse as a polity, so far as this contribution is concerned, could not be

fully addressed. The reason is that, in addressing the question of Indigenous people inhabiting the metaverse, I have not discussed the fundamental issue of the relation between Indigenous people and societies and the non-Indigenous one. What type of relations will be established by Indigenous and non-Indigenous people? What's the role of the states in which they are citizens in fostering their self-determination? How policies on data enacted by the providers of metaverse platforms and XR technologies might affect the aim of (digital) Indigenous self-determination? The journey to realizing this goal is, both online and offline, perilous, and full of hindrances. The establishment of an embassy is a first step toward the definition of an inclusive metaverse that might accommodate different perspectives and positions. Which challenges that might come up in the future, this is difficult to predict. The presence of a digital embassy can however be the main place in which Indigenous and non-Indigenous people, cooperatively, might discuss and envision a “land on which we meet” for the metaverse to come.

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