


Chapter 21

Indigenous Digital Sovereignty: Data Cooperatives as the New Standard for an Inclusive Digital Economy?

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ABSTRACT

This research emphasizes the importance of Indigenous data sovereignty (IDSov). It foregrounds the rights of Indigenous peoples to exercise control over their data while resisting data colonialism and its myriad harms. It argues that including Indigenous knowledge in the design, development, and implementation of data-based technologies is essential. The CARE Principles for Indigenous Data Governance are applied to underpin this. The four case studies from Canada, New Zealand, Australia, and the US illustrate the links between Indigenous peoples' rights and data and ecosystem protection and show how responsible data management can benefit people and the environment. Such an understanding of data sovereignty illuminates the exploration of data cooperatives. The focus is on data cooperatives as new institutional models enabling Indigenous communities to exercise digital sovereignty. This term refers to active control and ownership of digital assets and data. It then examines whether the data and sovereignty principles from the Indigenous context can be transferred to other contexts.

INTRODUCTION

The increasing digitalization and datafication of the global economy have brought the value and importance of data to the fore. Datafication is the process of transforming various aspects of life and society into quantifiable data. In this context, the concept of data sovereignty is of growing importance. Data sovereignty refers to the right of individuals, communities, or states to control the collection, use, and sharing of their data by the laws and protocols of the nation-state where the information resides (Kukutai & Taylor, 2016). Unlike traditional data use, which companies and governments often control without the involvement of affected communities, data sovereignty ensures that this control is exercised by those whose data is processed. It is essential for Indigenous peoples, whose data is often used without regard to their cultural rights and traditions (Toki, 2024). Interest in Indigenous knowledge is growing, focusing more on relationships than acquisition. However, turning to Indigenous knowledge and bridg-

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ing knowledge systems carries the risk of reinforcing the racist hierarchy and the supposed assertion of sovereignty that already underpins the prevailing system of resource regulation and knowledge. However, Indigenous peoples' knowledge systems predate today's nation-states and have their own rules. They capture how peoples, lands, nature, history, and knowledge should be represented, who has the right to use information, and for what purpose (Carroll et al., 2020). It is crucial to support and understand the importance of community self-determination in the context of data sovereignty. This support is reinforced by Article 31 of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) (United Nations, 2008), which directly addresses Indigenous peoples' control over data and information. The principles of the UNDRIP express the importance of geographic and cultural context and community self-determination through meaningful participation (Lovett et al., 2019). The relevance of data sovereignty in the context of Indigenous communities goes beyond the protection of privacy and data sovereignty. Indigenous knowledge holders are under pressure from non-Indigenous scientists to work together, for example, to address environmental issues, while the open data movement is pressuring them to make their data public (Cannon et al., 2024). Indigenous data sovereignty (IDSov) refers to the collective right of Indigenous peoples to regulate the collection, storage, and use of data about their communities.

'This lens on data sovereignty not only exceeds narrow notions of sovereignty as data localization and jurisdictional rights but also upends the assumption that the nation-state is the legitimate locus of power. IDSov has thus become an important catalyst for broader conversations about what Indigenous sovereignty means in a digital world and how some measure of self-determination can be achieved under the weight of Big Tech dominance'. (Kukutai, 2023)

In the digital world, protecting Indigenous rights is paramount in the face of historical and ongoing marginalization. The CARE (Collective Benefit, Authority to Control, Responsibility, Ethics) Principles for Indigenous Data Governance serve as a crucial ethical framework. These principles, developed by Indigenous communities, aim to integrate Indigenous rights and values into data use, ensuring Indigenous peoples' self-determination, cultural integrity, and well-being. They emphasize the collective benefit of data use, the authority of Indigenous communities to control their data, the responsibility of data users to respect Indigenous values and traditions, and the ethical considerations that should guide data use (Carroll et al., 2020).

This study delves into the concepts and challenges of Indigenous digital sovereignty, with a specific focus on data cooperatives as a potential solution. The rising importance of digital sovereignty, especially for Indigenous communities, who are demanding control over their data and its usage, is a key area of exploration. While large tech companies and state actors often use data as a resource for economic and administrative purposes, the question remains: to what extent can Indigenous data cooperatives help redistribute data power and enable a fairer data economy? This understanding of data sovereignty sheds light on research into data cooperatives. It underscores the importance of cultural sensitivity, inclusivity, and ethical responsibility in data governance practices. The focus is on data cooperatives as innovative institutional models that actively empower Indigenous communities to exercise their digital sovereignty. These cooperatives, with their robust democratic governance, allow data decisions to be made by the members themselves or by representatives acting on their behalf. Digital sovereignty means more than purely legal interpretation and rhetorical use in political discourses. Data cooperatives are the vehicle to interpret digital sovereignty 'from within' as an ongoing series of negotiations, practices, struggles, and controversies embedded in infrastructures, their creation, development, and maintenance (Musiani, 2025).

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