2 “Pushing the space”

Data sovereignty and self-determination in Aotearoa NZ

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Get out my face, we been pushing the space
I don't want to play your game, running in my own race (ay)

(JessB, 2018)¹

Introduction

Since the publication of *Indigenous Data Sovereignty: Toward an Agenda* in 2016, Indigenous Data Sovereignty (IDS hereafter) activities have proliferated across the CANZUS states and beyond. National IDS networks have been established in Aotearoa New Zealand (Aotearoa NZ), Australia and the United States, with growing interest in the Pacific (Moana Research, 2019), Scandinavia (see Axelsson and Mienna, this book) and Mexico (Figueroa, this book). These sites of activism and advocacy build on the foundations laid by the pioneering First Nations Information Governance Center, widely regarded as the original IDS network (First Nations Information Governance Centre, 2016). There are now at least two international IDS networks, one affiliated with the influential Research Data Alliance (RDA IDS IG, n.d.), the other a network of networks known as the Global Indigenous Data Alliance (Global Indigenous Data Alliance, 2019). Collectively, the Indigenous scholars, practitioners and activists involved with these networks have advanced the increasing recognition of IDS as both an expression and an enabler of Indigenous rights, Indigenous well-being and self-determination. There is also a growing sense that IDS offers an alternative and potentially transformative vision of “good data” practices (Daly, Devitt & Mann, 2019), with possible benefits extending beyond Indigenous communities (Pendergrast, 2019).

To date, IDS networks have focused largely on self-organization, outreach and awareness. Most networks have published their own IDS charters, principles and/or guidelines (Global Indigenous Data Alliance, 2019; Maïam nayri Wingara, & Australian Indigenous Governance Institute 2018; Te Mana Rauunga, 2018a; Rainie et al., 2017), engaged in public advocacy and media commentary around specific IDS issues (Te Mana Rauunga, 2018b; Wezerek & Van Ripper, 2020) and actively socialized IDS concepts and principles within Indigenous communities

and government agencies (see Sporle et al., this book). Less attention has been paid to the implementation of IDS through public policy, hence the timeliness of this book.

In this chapter, we examine the linkages between IDS, self-determination and policy, focusing on our own context of Aotearoa NZ. Specifically, we ask whether and how policy can realize the transformative potential of IDS to support Māori aspirations for self-determination. By policy we take a broad definition to include regulatory measures and laws, along with government agency actions and investment priorities. The focus on self-determination is important. All of the CANZUS IDS networks, as well as the First Nations Information Governance Centre, include self-determination provisions (Rainie et al., 2017; Te Mana Raraunga, 2018a). Notwithstanding the tremendous cross-national variation in political context, Indigenous Peoples generally agree that self-determination is an inherent right and desired outcome. Self-determination can be defined in various ways but typically requires that nation states recognize Indigenous Peoples' distinct forms of social organization, governance and decision making, and redistribute power so that Indigenous Peoples are the ones making decisions over matters that affect them (Toki, 2017; UN General Assembly, 2007).

Our central argument is that the fullness of IDS cannot be realized within the architecture of the colonial settler state. In Aotearoa NZ, as in the other CANZUS states, the approach to Indigenous policy has long been to contain and manage, rather than to enable genuine forms of Indigenous self-determination or autonomy. To give full effect to IDS—that is, for Indigenous Peoples to determine the means of collection, access, analysis, interpretation, management, dissemination and reuse of data from or pertaining to them (Walter & Suina, 2019)—requires a level of Indigenous power and autonomy *within* State systems that does not currently exist. So long as the constitutional position and policy *raison d'être* of the State is to see itself as the sole source of sovereignty, and this is certainly the case in Aotearoa NZ, we see little prospect of this changing, despite the growing interest in IDS across government. Indeed, as we argue later in this chapter, data colonialism and “surveillance capitalism” (Zuboff, 2019) may well result in a deepening rather than redistribution of unequal power dynamics (Bigo, Isin & Ruppert, 2019).

To assert that IDS is unobtainable within State structures might seem unduly pessimistic given the aspirational framing of this book, but we offer two caveats. First, we believe that Indigenous data governance (IDGov) over government-held data in Aotearoa NZ can and should be an effective mechanism for implementing a limited form of IDS. Designed carefully, and supported by legislative powers, IDGov can protect against and mitigate some data harms, and increase the visibility of Māori rights and interests in data. However, there is also a very real risk that only the weakest forms of IDGov, such as voluntary frameworks and principles, will be implemented, and will serve as both the beginning and endpoint of the state's commitment to Māori Data Sovereignty (MDS). Second, we believe there is scope for policy to support Māori and iwi (tribal) nations and communities to develop and control our own data ecosystems (Gifford & Mikaere, 2019). We

discuss what we see as the transformations needed to move from "data dependency" (Carroll, Rodriguez-Lonebear & Martinez, 2019) to data sovereignty, and the policy levers that might reduce barriers and generate opportunities for the development and enhancement of sustainable Indigenous-controlled data systems.

Data sovereignty, self-determination and tino rangatiratanga

The concept of self-determination is closely connected to the articulation of Indigenous Peoples' rights in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and domestic treaties such as He Whakaputanga (1835 Declaration of Independence) and Te Tiriti o Waitangi² (1840 Treaty of Waitangi). A central tenet of Indigenous self-determination is that Indigenous Peoples have an inherent right to be in control of their destinies and to create their own political and legal organizations (Toki, 2017). Early global human rights instruments framed self-determination as, first and foremost, an individual right. The 1966 International Covenant on Civil and Political Rights, and International Convention on Economic Social and Cultural rights, for example, held that individuals should be able to "freely determine their political status and freely pursue their economic, social and cultural development". The right to freely determine political status and forms of development, including cultural development, is also reflected in Article 3 of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), but is framed primarily as a collective right. Articles 4, 5, 18, 19, 20 and 33 also contain provisions relevant to self-determination (Davis, 2016). Importantly, this also includes the right *not* to participate in state institutions (Art. 5).

Although self-determination is central to global human rights and Indigenous rights discourses, there are domestic nuances that IDS must speak to. In the context of Aotearoa NZ, Toki (2017) argues that tino rangatiratanga, a Māori concept that can be defined as "absolute chiefly authority", offers a stronger right for Māori than the "western paradigm" of self-determination. Whereas "self-determination derives from, and exists under, sovereignty as an international law norm", tino rangatiratanga exists independently of state sovereignty (p. 143). That is, tino rangatiratanga exists whether the state recognizes it or not. Māori have always maintained that sovereignty was never ceded in Te Tiriti and the independent Waitangi Tribunal confirmed this position in its landmark, but non-binding, 2014 report *Te Paparahi o te Raki* (Waitangi Tribunal, 2015). Tino rangatiratanga is closely aligned with another intrinsically Māori concept, mana motuhake (Matike Mai, 2016, pp. 33–34; also see Waitangi Tribunal, 2015). Jackson (2018a) argues that while sovereignty is not a Māori concept of power, mana is the "very Māori expression of the very human desire to be free and to make one's own decisions in one's land" (p. 6). Inherent in the notion of mana motuhake is the concept of mana whenua—to hold territorial rights associated with long-term occupation.

It is no accident that the Māori Data Sovereignty network centers the concept of mana in its name (Te Mana Raraunga means authority over data and data systems) and has prioritized Māori concepts in its founding charter and principles

(Te Mana Raraunga, 2016, 2018a). The rangatiratanga principle has three sub-principles relating to control, jurisdiction and self-determination. Control asserts the inherent right of Māori to exercise control over Māori data and Māori data ecosystems. Jurisdiction relates to decision making over the physical and virtual storage of data. Self-determination asserts Māori rights to data that are relevant and empower sustainable self-determination and effective self-governance. Thus, the principles express a reciprocal relationship between rangatiratanga and MDS, whereby MDS is both an expression of authority (control, jurisdiction), and a key enabler of collective autonomy in a much broader sense (self-determination).

Beyond Aotearoa NZ, there is increasing recognition that IDS is both a critical enabler of Indigenous self-determined development (for more on self-determined development, see Tauli-Corpuz et al., 2010) and a powerful tool for Indigenous resurgence and decolonization (Carroll, Rodriguez-Lonebear & Martinez, 2019). Legal scholar Chidi Oguamanam argues that IDS is “key to realizing the full and effective participation of Indigenous peoples in matters that affect them and the advancement of ... self-determined development” (2019, p. 11). The growing awareness of IDS reflects the increasing importance of data as a “core thematic of international development” and policy frameworks for engaging with Indigenous Peoples (p. 9). A similar point is made by Kukutai & Taylor (2016), who note that the functional implementation of UNDRIP rights are themselves reliant on data rights. Oguamanam goes further, arguing that data sovereignty is “a crucial and fairly new frontier of the struggle for self-determination and decolonization” (2019, p. 11). While some might question the framing of data as the new “frontier” (Prendergast, 2019), there is no denying that datafication and digitalization ushers in new opportunities and risks that IDS must confront, not the least of which data colonialism is (Kukutai & Cormack, 2019). It is to this we now turn.

Data colonialism

Data scholars and activists have theorized how contemporary data practices and relations represent a continuation of the processes and underlying belief systems of extraction, exploitation, accumulation and dispossession that have been visited on Indigenous populations through historical colonialism (Cloudry & Mejias, 2019; Kwet, 2019; Daly, Devitt & Mann, 2019; Sadowski, 2019). Imperialist, colonial logics are evident in the ongoing devaluation and suppression of Indigenous knowledge systems in contemporary data environments, in the imposition of technologies and infrastructure that maintain inequitable power relations (Kwet, 2019), and in the capitalist extractive logics that are embodied in many state data practices and relations (Sadowski, 2019).

Data is increasingly asserted as being an asset or resource (e.g., data.govt.nz), with claims that it is the world’s most valuable resource. Though empirically founded, this framing of data is problematic insofar as it implicitly centers extractive logics (Prendergast, 2019). The narrative of digital economies and data as a resource to be harnessed shares common threads with neoliberal ideas of the “knowledge economy” (e.g. Smith & Smith, 2018). Sadowski (2019) contends

that "framing of data as a natural resource that is everywhere and free for the taking reinforces regimes of data accumulation" (p. 2). Within capitalism, data are new commodities and new markets. However, the "same imperialist tactics are being replayed now, but updated for the digital age" (Sadowski, 2019, p. 3). For Māori, the mass production, collection, storage and use of data in Aotearoa NZ can be understood as a "replaying" of a familiar colonial experience, whereby "resources" are seen to be open for exploitation and extraction of profit, with little regard for Indigenous knowledge systems and ways of conceptualizing benefit. As Ricuarte notes, "Data centered economies foster extractive models of resource exploitation, the violation of human rights, cultural exclusion, and ecocide. Data extractivism assumes that everything is a data source" (2019, p. 352), a notion that is challenged by IDS.

Data colonialism also plays out through the surveillance practices that remain a feature of contemporary state data practices and systems for Indigenous Peoples (Daly, Devitt & Mann, 2019). In Aotearoa NZ, recent policy environments have bought heavily into the notion of evidence-based decision making, whereby claims are made for the central role of data in policy formulation and in driving social investment decisions (Stuart, 2019). The social investment approach that gained significant traction under the National Coalition Government (2008–2017) typified this way of thinking. Boston and Gill (2017) describe a social investment approach as increasingly depending on "integrated data, information sharing, risk profiling, actuarial analysis, outcomes-based contracting and joined up services" (p. 12). While some of the technologies and capabilities are new, such as the Integrated Data Infrastructure (see Sporle et al., this book), the conceptualization of Māori as watchable and in need of watching within contemporary data regimes is a continuation of coloniality, not a departure.

Māori policy: containment and "non-performativity"

Having surveyed the links between self-determination, tino rangatiratanga and IDS, and the risks of data colonialism, we now consider the broader context of Indigenous policy in Aotearoa NZ. While the motivating logics and desired outcomes of policies relating to Māori have shifted course over the last 170 years,³ the one constant is the state's refusal to recognize or give effect to tino rangatiratanga. This provides an important context within which to assess current, and future, efforts to implement MDS policies.

From the mid 19th century until at least the 1970s, most aspects of Crown policy were explicitly directed at the assimilation of Māori into Pākehā society (Pākehā are White New Zealanders of largely British origins). In education, assimilation policy was tied to goals of "civilizing" and establishing mission schools, and later Native Schools under the Native Schools Act 1858 (Tomlins-Jahnke & Warren, 2011). One barometer of assimilation was the rate of interracial marriage. Thus, early–mid 20th-century census reports tracked the comparative rates of growth of the so-called Māori "half-caste" and "full blood" populations. In the post-World War II economic boom, assimilation policies gave way to integrationist

policies that emphasized the incorporation of what Pool (1991) calls the “Māori reserve army of labour”. Integral to this was the 1961 Hunn report which stimulated a major policy push to encourage Māori migration from rural to urban areas to take up work in the expanding manufacturing and services sectors. The late 1980s onward saw a stronger focus on health equity and closing socioeconomic gaps between Māori and non-Māori (Te Puni Kōkiri, 2000), coupled with policies to promote and protect Māori cultural institutions, including the Māori language *te reo Māori*. More recently, Crown policy has moved to have a broader “focus on families and children and attempts to introduce whole-of-government issues”, including important developments in terms of a holistic family well-being “*whānau ora*” approach (Smith et al., 2019).

In her discussion of Māori involvement in foreign policy, Bargh identifies three key assumptions driving the Crown’s approach that are germane to the MDS policy nexus. First, and most significant, is the taken-for-granted assumption that Māori ceded sovereignty in *Te Tiriti*. Second, that the Crown has the sole right to formulate foreign policy. Third, while there are many interest groups in a liberal democracy, Māori are simply “one interest group amongst many” (2012, p. 87). Relatedly, Tawhai and Gray-Sharp (2011) argue that the absence of strong Māori input or direction into the making of public policy maintains unequal power arrangements, even as it appears to be responsive to Māori concerns and priorities.

It is this appearance of doing something while doing nothing—either in the form of containment or non-performativity—that is most challenging for MDS. In containment, the policy approach is to limit the scope of Māori autonomy which has the effect of bringing Māori under the ambit of state control. A good example of this is the policy relating to *kohanga reo* or Māori language preschools. *Kohanga reo* emerged in the early 1980s, driven and funded by Māori mothers, grandmothers and their communities. By 1994, there were more than 800 of them. As genuine “flaxroots” initiatives, they were “expressions of *mana Māori motuhake*, education Māori controlled and operated” (Tomlins-Jahnke & Warren, 2011, p. 50). The first total immersion primary school (*Kura Kaupapa Māori*) was established in 1985. Initially, the Department of Education did not acknowledge *Kura Kaupapa Māori* and Māori parents funded and resourced them themselves until educational reforms in the late 1980s bought them, and *kohanga reo*, under state funding and accountabilities. Commenting on declining enrolments from the mid 1990s, a Waitangi Tribunal report argued that the *kohanga reo* movement had been “weakened more by the governmental failure to give it adequate oxygen and support than by any Māori rejection of their language” (2010, p. xi).

An alternative to the containment of Indigenous Peoples within policy domains is what Ahmed (2006, 2016) refers to as “non-performativity”. Ahmed argues that the use of terms such as anti-racism, equity and diversity increasingly enable institutions to make visible and legible signs to the public that they are engaging in transformative practice, while doing very little. Her textual analysis shows how institutional commitment to action becomes the action, rather than the precursor for it (2006). A recent case in point is *He Korowai Oranga*, the Ministry of Health’s Māori health strategy (Ministry of Health, 2014). Although an excellent

strategy that had significant input from acknowledged Māori health experts, it has struggled to have its full potential impact realised. Poor quality health care and institutional racism are as much an issue for Māori as they ever were (see Waitangi Tribunal, 2019).

Although government agencies are showing an increasing interest in, and even appetite for, MDS, the specter of containment and "non-performativity" loom large. Take, for example, recent commitments by the National Statistics Office, Stats NZ, to uphold Te Tiriti, engage with Māori as a partner and co-design Māori-Crown co-governance of data across the whole of government (Gleisner, Downey & McNally, 2015; Stats NZ, 2019b, 2020). Outwardly, these responses are positive and enabling of MDS and self-determining aspirations. Yet, at the same time, the agency's Draft Algorithm Charter (Stats NZ, 2019a), which was under review at the time of writing, makes no mention of Te Tiriti, or even MDS. Rather, it merely seeks to "embed a Te Ao Māori perspective in algorithm development or procurement". Stats NZ's extensive use of alternative government data to plug missing data in the 2018 Census was undertaken with no Māori input into decision making, even though Māori and Pacific people were most affected by non-response (2018 Census External Data Quality Panel, 2019). Around the same time, the agency committed to trialing a Māori tikanga framework to guide decision making over who can access and analyze integrated Māori data, which includes all of the data sources used to fill census gaps (see Sporle et al., this book). This uneven approach means MDS applies in one context, but not in another. Māori authority is contained to decisions about who can access, analyze and disseminate findings from the integrated data, but decisions about whether Māori data should be integrated and made available at all, are higher-level prior decisions over which Māori appear to have no influence.

The Department of International Affairs (DIA), which houses the Government Chief Digital Officer (GCDO), has also made commitments to engaging Māori as Treaty partners and is promoting a national vision of "digital inclusion" as instrumental to the full expression of citizenship in a digital age (Department of Internal Affairs, 2019). At the same time, DIA is leading the government's digital strategy and proposing to offshore the storage of all government data, including Māori data, with no Māori data governance in place (O'Neill, 2019). This is a sharp departure from prior practice—until 2017 there were restrictions on government agencies offshoring identifiable health information (Ministry of Health, 2017). Furthermore, the presumption that digital inclusion is a mechanism for activating rights as citizens, is oddly blind to historical, and ongoing, instances of state surveillance of Māori and enduring Māori mistrust (Kukutai & Cormack, 2019). These examples illustrate the challenges of exercising mana motuhake when the state is making the consequential decisions and its power to "know" is potentially omnipotent. In such contexts, IDS is illusory and there is a real risk of being co-opted into our own surveillance.

The challenge for MDS advocates (and IDS more broadly) is finding the right balance between competing interests and priorities so that we keep steering a path toward the transformative vision that motivated the establishment of IDS in the

first place (for a discussion on this tension in the context of IDGov, see Carroll, Rodriguez-Lonebear & Martinez, 2019). For some, that path might be premised on what Murphy (2008) calls a “relational” model of self-determination that emphasizes the need for shared decision making as well as self-government. This might be viewed as a pragmatic response when the “ideal of autonomy is constrained by the realities of interdependence” (p. 203). Applied to data, IDGov might serve as part of a broader strategy for advancing Indigenous self-determination that involves targeting a variety of complementary access points to data control. Ideally, the IDGov mechanisms for control would “recognize and promote sovereignty; lead with Indigenous core values; include dialogue comprised of multiple ways of knowing; utilize and support exiting tribal data governance protocols and procedures; engage and promote Indigenous scholarship; and conduct data science in service to communities” (Carroll, Rodriguez-Lonebear & Martinez, 2019, p. 12). For others, a preferred approach might be to focus on ways to realize IDS outside of state structures. In the Canadian First Nations context, Coulthard (2007) argues that the liberal politics of recognition risk “reproducing the very configurations of colonial power that Indigenous demands for recognition have historically sought to transcend” (p. 439). He argues for a turning away “from the assimilative lure of the statist politics of recognition ... toward our own on-the-ground practices of freedom” (p. 456). Closer to home, but in a complementary vein, Jackson (2018b) argues:

colonisation is an inherently illiberal as well as an unjust process, and to presume that some notion of Māori self-determination can be exercised within the systems it privileged is to follow the same strange and colonising thought that, contrary to all the evidence about the inalienability of mana, Iwi and Hapū nevertheless gladly surrendered it to the Crown (p. 106).

Our view is that turning our backs on state-controlled data systems could result in serious harm and deepening inequities, given the penetration of such systems into the daily lives of Māori families, and rapid developments in surveillance capacities, offshoring and the application of algorithmic decision making to Māori data. Advocating for the strongest form of Māori data governance (MDGov) within colonial state structures—that support aspirations for self-governance and autonomy with respect to Māori data—is both possible and necessary. But we are unconvinced that it will enable a substantive form of data sovereignty or mana motuhake in a broader sense. For the latter to occur requires what Coulthard might label a “radical alternative” to the colonial project, outside of settler state structures. There are ways that policy might facilitate the realization of MDS, both as an expression of mana motuhake, and as an enabler of self-determined development. We sketch out what we see as the core elements below.

From data dependency to data self-determination

To realize the substance, rather than the shadow, of IDS, Māori need to be able to freely determine the shape and form of our data ecosystems. The foundations of

these digital data systems need to be built on our own tikanga (ethical principles, practices and processes for what is "tika" or right in a given context), mātauranga (knowledge systems and ways of knowing) and priorities. What might such a system look like? And what, if any, is the role of policy in enabling by Māori, for Māori data systems to come to fruition? Our intention here is not to prescribe a vision, but rather to identify key elements of what we think it might entail.

The emphasis on collective rights and reciprocal obligations is a common thread across all IDS networks and would form the fundamental building blocks of IDS ecosystems. Carroll, Rodriguez-Lonebear & Martinez (2019) describe this interconnectedness well:

Indigenous data systems rely on shared responsibilities to ensure that Indigenous ways of knowing, being, and doing are transmitted from one generation to the next. Within this context, knowledge belongs to the collective and is fundamental to who Indigenous nations are as peoples

(p. 3)

In settler state data systems, the collective is ever present but rarely acknowledged because of the narrow focus on individual data rights and protection. Taylor, Floridi & van der Sloot (2017) describe the evolving big data landscape as one where "risks relating to the use of big data may play out on the collective level, and where personal data is at one end of a long spectrum of targets that may need consideration and protection" (p. 10). Indigenous privacy interests are intertwined with concepts of community, sovereignty and self-determination. "In these communities, notions of property, ownership and privacy (Western in origin) are foreign to a normative and social system that emphasizes totality and interconnectedness" (Williams et al., 2011, p. 22). Despite the growing recognition that group privacy cannot be reduced to the aggregate privacies of its members, there are few examples, anywhere in the world, of collective data privacy approaches in law or other regulatory mechanisms. One exception is in Canada, where First Nations communities that have adopted the First Nations Information Governance Centre OCAP® principles have passed their own privacy laws (FNIGC, n.d.). Like other Indigenous Peoples, Māori have complex protocols around the protection and sharing of knowledge that safeguard information and maintain community cohesion. A tikanga-centered approach to creating collective data privacy frameworks, principles and protocols could protect group identities and collective privacy, build trust, reduce group harm in diverse social, cultural and environmental settings and resolve potential risks and tensions with individual data rights. In Aotearoa NZ, reviews of the Statistics Act and Privacy Act are in train but it is unlikely that Māori concepts of privacy will be recognized in either. While there is not yet a wider appreciation of the relevance and benefits of a collective Indigenous privacy approach, there is scope to develop frameworks and policies within Māori-controlled data environments such as tribal registers. These approaches would need to be acceptable to those from whom the data came and developed in conjunction with them. MDS principles used by other Indigenous

communities, such as First Nations, provide a useful starting point, but would need to be tailored to meet local requirements and sensitivities. The development of community-focused privacy policies and approaches have potential outside of Indigenous communities. As O'Shea argues (2019):

For privacy to be meaningful, it needs to be about winning back control over our own sense of self—demanding our rights collectively. It needs to drive a stake through the heart of these zombie digital doppelgangers. A better way to understand what we mean when we talk about privacy, then, is to see it as a right to self-determination.

How might policy enable MDS data systems built on *tikanga*, collectivism and interdependencies? The response, we believe, depends less on a particular policy, than a policy approach that creates an enabling environment for *iwi* and Māori-controlled data infrastructure. This in turn requires a level of investment in *iwi* and community-based systems and a willingness to relax the state's singular control over data "resources". The operational failures of the 2018 New Zealand Census—which resulted in poor quality *iwi* (tribal) data that could not be officially released—is a potent example of the risks of data dependency, and the need for innovative alternatives outside of state structures (2018 Census External Data Quality Panel, 2019; Kukutai & Cormack, 2019). One of the silver linings from Census 2018 was that it amplified questions about the fitness for purpose of the overall census model for meeting *iwi* data and information needs. For example, comparisons of census and *iwi* register data often reveal large differences in the size and age-sex composition of individual *iwi*. This is not surprising, given that census *iwi* affiliation is based on self-identification and *iwi* register affiliation is based on *whakapapa* or genealogical connection (Kukutai & Rarere, 2017; Mahuika, 2019). From a technical perspective, neither source is capturing the "true" population—there are omissions and biases in both. But what would complete enumeration look like? What is the "true" population? From a *hapū* or *iwi* worldview, it is all individuals descended from the eponymous ancestor of the *hapū* or *iwi*, regardless of whether or not they personally know or claim it. State data systems are neither capable, nor appropriate, for classifying, counting and tracking these collectives.

The as-yet unrealized potential is for a decentralized or distributed system that disperses data and power away from a central location or authority and puts Māori data in Māori hands. As Kwet has argued, "there are alternative technologies, models and ideologies for constructing a digital society aligned with human rights, democracy and socioeconomic justice, for which decentralised ownership and control of software, hardware, and the Internet are prerequisites" (2019, p. 4). In *te Ao Māori*, there are layers of collectives between the individual and the nation state—*whānau* (extended kin group), *hapū* (clan), *iwi*—that provide existing structures on which to map distributed networks. These human structures of interconnectedness have no parallels in the dominant group—in Aotearoa NZ, they are distinctively Māori.

This notion of a decentralized hapū and iwi data ecosystem shares some similarities with Cloudry & Meijas's (2019) proposal of data nationalization as a way for the global south to push back against data colonialism and surveillance capitalism. Nationalization of data involves storing data only on domestic servers and charging multinationals like Facebook for using citizens' data. While Cloudry & Meijas recognize that nationalization only offers a partial counter to data colonialism, as it still enables a form of data extraction to continue, the important point is that it shifts the locus of control back to those from whom the data derive.

Conclusion

IDS is both an extension of ongoing Indigenous struggles for sovereignty over land and for political autonomy, as well as being necessary to realize these rights and monitor progress toward them. Although we have considered the manifestations and implications in the specific context of Aotearoa NZ, this dual characterization of IDS transcends nation-state boundaries. Prevailing data practices and relations present many challenges for Indigenous Peoples. Some of these are new but many are familiar. This chapter has argued that contemporary data environments overwhelmingly reproduce imperial, colonial ideologies in how data is understood and valued. Proposed solutions, such as paying people for their data, do not disrupt extractive, neoliberal understandings of data but rather replicate them in Indigenous settings. Similarly, digital inclusion strategies are promoted as solutions to inequities within the digital economy, but risk co-opting Indigenous Peoples into oppressive structures that do not fundamentally change the underlying logics (Ricuarde, 2019).

Data colonialism is enacted through state policies (Ricuarde, 2019) in ways that undermine both IDS and tino rangatiratanga more broadly and perpetuate data harms for Indigenous Peoples. IDS can challenge the epistemic oppression built into data ecosystems, can trouble concepts of data, privacy and consent, and can resist harmful practices of surveillance, extraction and accumulation. However, without a fundamental disruption to the underpinning logics, it is likely that policy will revert to strategies of containment or will be "non-performative" in its "statements of commitment" (Ahmed, 2006, 2016) around MDS.

Self-determination and tino rangatiratanga requires us to imagine and re-member Māori data futures outside of the current dominant regimes. IDS can create spaces for this re-imagining of data, data practices and data relations, through engagement in what Browne calls "disruptive staring" (2015) at state policies and practices. Similarly, drawing on Tuck & Yang (2014), a politics of "refusal" that refuses colonial, neoliberal, extractive and accumulative data practices can create space for an alternative self-determined data future that is both a contribution to, and an enactment of, broader tino rangatiratanga. As we state in the introduction to this chapter, the fullness of IDS cannot be realized within the architecture of the colonial settler state. However, policy, both that developed at a local level as well as that within global instruments, may be able to support environments for the realization of IDS where those policies facilitate a divestment of state control and domination and involve a return of Indigenous lands and resources to Indigenous Peoples.

Notes

- 1 Used with the permission of JessB, an Aotearoa NZ-based hip hop artist. This track is from her album *Bloom* available on Spotify.
- 2 Te Tiriti o Waitangi/Treaty of Waitangi, signed by Māori chiefs and representatives of Queen Victoria is Aotearoa NZ's founding document, and has been called the Māori "Magna Carta".
- 3 The New Zealand Constitution Act 1852 set up the country's parliamentary system, based on the British model.

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