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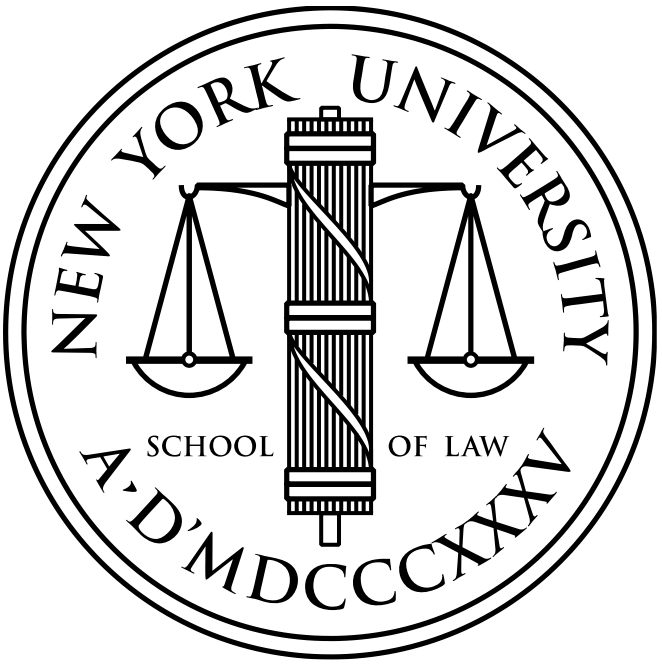

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DATA IS A *TAONGA*: AOTEAROA NEW ZEALAND, MĀORI DATA SOVEREIGNTY AND IMPLICATIONS FOR PROTECTION OF TREASURES

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Sovereignty, and how Indigenous people interpret sovereignty, matter in relation to data. There have been persistent claims and counter-claims as to what constitutes Indigenous sovereignty, both in international agreements and national legal cases. To understand the complex nature of Indigenous data sovereignty claims requires framing within precepts such as the Doctrine of Discovery, which enabled appropriations of Indigenous land and possessions, and embedding terra nullius*, or that land belonged to no one and hence was free for others' use and ownership. Such "fictions" of Crown sovereignty over land has a contemporary corollary in* datum nullius*. Hence, Indigenous people are seeking to assert their enduring relationships to their tangible and intangible properties, possessions and treasures as these are transformed into data.*

To examine this in more depth, Indigenous Māori claims to their treasured possessions or taonga are examined through reference to the findings of two cases brought to Aotearoa New Zealand's Treaty of Waitangi Tribunal. The Tribunal is a permanent commission of enquiry into Crown (State) actions and omissions in relation to the Treaty of Waitangi, signed between the Crown and some Māori tribes in 1840. Along with the policy implications of these findings, there is an overview of how Māori data sovereignty is being implemented at State institutional levels. Finally, there is a brief

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examination of how the author's tribe of Ngāi Tahu might implement data sovereignty through a case study of a taonga as it transfers from its biophysical form to data.

INTRODUCTION

Issues of sovereignty are deeply ingrained in settler colonial nations like Aotearoa New Zealand. Some Indigenous scholars argue that the Doctrine of Discovery, outlined in 1823 by Chief Justice Marshall of the United States Supreme Court in *Johnson v. McIntosh*,[1] continues to be an underlying backdrop to policies and laws that affect Indigenous groups in Canada, Australia, New Zealand and the United States (the CANZUS nations).

Why should the Doctrine of Discovery matter to Indigenous claims of sovereignty in relation to data? After all, local policies and laws in CANZUS nations are often designed to take into account Indigenous land, resource and property rights following international conventions and declarations such as the Indigenous and International Labour Organisation (ILO) Tribal Peoples Convention, 1989 (No. 169) and the 2007 United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). Although these documents have either not been ratified universally (ILO 169) or only have a "moral" force (UNDRIP), their assertions have found their way into procedures to guide the behaviour of industry and nation alike: consultation; free, prior and informed consent (FPIC); compensation; Indigenous management of resources; and benefit sharing. While this is welcome, both these documents make clear that sovereignty is the preserve of the nation state. And yet, sovereignty is the very thing that is contested. Sovereignty and how Indigenous people interpret sovereignty matter.[2]

[1] Johnson & Graham's Lessee v. McIntosh, 21 U.S. 543 (1823); *see also* Kent McNeil, *The Doctrine of Discovery Reconsidered: Reflecting on Discovering Indigenous Lands: The Doctrine of Discovery in the English Colonies*, 53 OSGOODE HALL L.J. 699, 700 (2016).

[2] SOVEREIGNTY MATTERS: LOCATIONS OF CONTESTATION AND POSSIBILITY IN INDIGENOUS STRUGGLES FOR SELF-DETERMINATION (Joanne Barker ed., 2005).

This study is going to examine what is meant by Indigenous sovereignty and its importance in relation to Indigenous claims to data sovereignty. To do this, I will first examine the mechanisms by which CANZUS nations appropriated Indigenous lands through the "fiction" of Crown sovereignty and *terra nullius*,[3] that is, the Doctrine of Discovery. Some scholars view that the fiction of *terra nullius* finds its data corollary in *datum nullius* – "a blank slate on which could be constructed the edifice of a distorting 'colonial archive.'"[4]

I will then consider how such understandings play out in relation to Māori claims to their *taonga*, or treasured possessions, through a discussion of Te Tiriti o Waitangi (Te Tiriti)/Treaty of Waitangi, signed between representatives of the British Crown and some iwi (tribes). *Te Tiriti* is considered to be Aotearoa's founding constitutional document. This will involve an analysis of what is meant by *taonga* in relation to *Te Tiriti*. From here, I examine two findings from the Waitangi Tribunal, which is a permanent Commission of Enquiry that investigates and makes recommendations on claims brought by Māori in relation to actions or omissions of the State that breach *Te Tiriti*.[5] These findings are pertinent to issues of Māori data sovereignty, in particular in relation to Māori interest, control and protection of Māori knowledge, inherent in *taonga*.

In the next section, I look at some of the policy implications of these findings, explaining how these have impacted on the State's behaviour. I then take a brief overview of how Māori data sovereignty is being implemented at an institutional level. Finally, I briefly examine how the author's tribe of Ngāi Tahu might implement data sovereignty through a case study of a taonga as it transfers from its biophysical form to data.

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[3] John Borrows, *The Durability of* Terra Nullius*: Tsilhqot'in Nation v. British Columbia*, 48 U.B.C. L. Rev. 701 (2015).

[4] Diane E. Smith, *Governing Data and Data for Governance: The Everyday Practice of Indigenous Sovereignty, in* Indigenous Data Sovereignty: Toward an Agenda 117, 121 (Tahu Kukutai & John Taylor eds., 2016).

[5] *About the Waitangi Tribunal*, N.Z. Ministry of Just. (Feb. 12, 2023), https://waitangitribunal.govt.nz/about/.

I

The Doctrine of Discovery

> We are thus faced with a situation today where the Crown exercises de facto sovereignty and claims de jure sovereignty domestically and internationally, while Indigenous nations have de jure sovereignty under their own systems of law and demand acknowledgement of their sovereignty . . .[6]

In the nineteenth century, there were massive transfers of land from Indigenous peoples to settler states across all the CANZUS nations.[7] The Doctrine of Discovery that facilitated such transfers asserted that Indigenous peoples' lands, and hence resources, were acquired, not through conquest or cession of lands but through the "so-called discovery doctrine" outlined in 1823 by Chief Justice Marshall of the United States Supreme Court in *Johnson v. McIntosh*.[8] This case continues to set a precedent in the four CANZUS countries in devising and developing laws and policies in relation to Indigenous peoples' land and resource rights.[9] To summarise, the Doctrine holds that when a European, Christian nation discovered new lands, it automatically gained sovereignty and property rights over Indigenous nations and peoples. While Indigenous sovereign rights as independent nations were not entirely disregarded, they were "diminished," as Indigenous people no longer had power to dispose of land to anyone except the "discoverer" who was given exclusive title. This exclusive discovery right was also considered to have given the "discoverer" sovereign powers over the Indigenous peoples and their governments. Native governments were restricted in their international political and commercial relationships as they could deal solely with their discoverer. This transfer of sovereign rights was done without the knowledge or consent of the Indigenous peoples or their governments.[10]

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[6] McNeil, *supra* note 1, at 727.

[7] *See, e.g.*, Kaius T. Tuori, *The Theory and Practice of Indigenous Dispossession in the Late Nineteenth Century: The Saami in the Far North of Europe and the Legal History of Colonialism*, 3 Compar. Legal Hist. 152 (2015).

[8] McNeil, *supra* note 1, at 700.

[9] *See generally* Robert J. Miller et al., The Doctrine of Discovery in the English Colonies (2010).

[10] *Id.* at 3-5.

That the Doctrine continues to have a place in law and policy of the CANZUS nations seems astounding, and yet it remains the case. For example, in 2005 the United States Supreme Court in *City of Shemill v. Oneida Indian Nation* observed that under the Doctrine of Discovery, Indian lands became vested in the sovereign — first the discovering European nation and then the original States and the United States.[11] Moreover, while Indian tribes may occupy their lands, and even use and enjoy their surface and mineral resources, this is viewed as a "limited possessory right: possession without ownership, and possession without complete power of disposition."[12]

In New Zealand, the Doctrine of Discovery continues "to haunt contemporary legal and political reasoning."[13] As in the United States, the title of the Crown to land was said to be have been acquired by "discovery," with Indigenous Māori described by Justice Prendergast in *Wi Parata v. Bishop of Wellington* (1877) as incapable of performing the duties of a civilised community.[14] Despite this, more recent legislation has rolled back such ideas, with various judgments affirming native or customary rights. Most significantly is the 2003 *Ngati Apa* decision,[15] which confirmed that Māori may still have ongoing ownership rights in the foreshore and seabed.[16] The suggestion that this might be the case saw the government of the day immediately assert its sovereignty to pass legislation to vest such land in the Crown, thus undermining the *Ngati Apa* decision.[17]

In Australia, the legal fiction of *terra nullius* and the idea that the land was effectively free for others to claim ownership "erased the very existence of indigenous peoples as self-organizing social and political societies."[18] The fiction persisted well into the twentieth century, and while overturned by the Australian Court High in the *Mabo (No. 2)* case, its legitimating principle remains embedded

[11] City of Shemill v. Oneida Indian Nation, 544 U.S. 197, 203 n.1 (2005).

[12] Blake A. Watson, *The Doctrine of Discovery and the Elusive Definition of Indian Title*, 15 Lewis & Clark L. Rev. 995, 1019 (2011).

[13] *See* Miller et al., *supra* note 9, at 227.

[14] *Wi Parata v. Bishop of Wellington* (1877) NZLR 3 SC 72.

[15] *Ngati Apa v. Attorney-General* (2003) 3 NZLR 643 (CA).

[16] *See generally* Valmaine Toki, *Rights to Water an Indigenous Right?*, 20 Waikato L. Rev. 107 (2012).

[17] *See, e.g.*, Christian N. Siewers, *Balancing a Colonial Past with a Multicultural Future: Maori Customary Title in the Foreshore and Seabed after* Ngati Apa, 30 N.C. J. Int'l L. 253 (2004).

[18] Robert Nichols, *Indigeneity and the Settler Contract Today*, 39 Phil. Soc. Criticism 165 (2013).

in Australian law and policy.[19] Likewise it may be argued that *terra nullius* remains a feature of Canadian legislation, where although the Supreme Court has stated that *terra nullius* never applied to Canada, the same Court has likewise stated that on assertion of European sovereignty, the Crown acquired radical or underlying title to all lands in the provinces. As Burrows notes, such a statement makes no sense without some version of *terra nullius*; even in ground-breaking decisions on native title, such as the 2014 *Tsilhqot'in Nation v. British Columbia*, *terra nullius* and the Doctrine of Discovery persist.[20]

As the quotation that begins this section identifies, Indigenous people across the CANZUS nations continue to see themselves as having *de jure* sovereignty under their own systems of law even as the nation state reserves and continues to legislate such sovereignty for itself, reframing the practice of the Doctrine of Discovery even while disavowing it in words.[21] Thus, when it comes to local policy and law, it should be no surprise that Indigenous people continue to question and contest CANZUS state claims to permanent sovereignty over resources, given that "story, songs and stories of spirit-law, were always embodied in land, the greater natural world and universal order of things."[22] As Watson reiterates, Indigenous people and land "are one."[23]

Sovereignty lies at the heart of the Doctrine of Discovery. Public discourse in CANZUS nations often conceives of sovereignty as unitary and indivisible: the "one nation," described by Tully as the "Empire of Uniformity."[24] Whenever it is brought into public consciousness that there might be "multiple and overlapping sovereignties,"[25] often the CANZUS states will swiftly shut down such claims. However, while both public and politician continue to conceive of sovereignty as unitary, recent understandings and practices reveal a more nuanced and perhaps

[19] *See, e.g.*, Irene Watson, *The future is our past: We once were sovereign and still are*, 40 INDIGENOUS L. BULL. 12 (2012).

[20] *See* Borrows, *supra* note 3.

[21] *See* Margaret Mutu, *Behind the Smoke and Mirrors of the Treaty of Waitangi Claims Settlement Process in New Zealand: No Prospect for Justice and Reconciliation for Māori Without Constitutional Transformation*, 14 J. GLOB. ETHICS 208 (2018).

[22] Irene Watson, *Buried Alive*, 13 L. & CRITIQUE 253, 254 (2002).

[23] *Id.* at 256.

[24] JAMES TULLY, STRANGE MULTIPLICITY: CONSTITUTIONALISM IN AN AGE OF DIVERSITY 58–98 (1995).

[25] Paul Keal, *Indigenous Sovereignty*, *in* RE-ENVISIONING SOVEREIGNTY: THE END OF WESTPHALIA? 315–16 (Trudy Jacobsen, Charles Sampford & Ramesh Thakur eds., 2008).

more promising pathway to understand and then actualise sovereignty, including in relation to Indigenous claimed data.

First, when sovereignty is used in the context of Indigenous people, it is always in a relational sense. That is, who does or does not have sovereignty in relation to the "other" and what type of sovereignty the "other" has. In the CANZUS nations, the common law of England through the Doctrine of Discovery, was imported into these nations,[26] and consequently, ideas about sovereignty were and continue to be framed by the non-Indigenous. More recent Indigenous thought, following mid-twentieth decolonisation thinkers like Franz Fanon,[27] views calling for Indigenous sovereignty as a waste of time better spent on more authentic approaches to autonomy,[28] perhaps even pathological given the continued reliance on a non-Indigenous viewpoint.[29] While this may be true, as the previous section showed, sovereignty continues to be contested by Indigenous groups, both within nations and internationally.[30]

Perhaps one of the best ways to understand the dimensions of sovereignty from an Indigenous perspective is to reflect on the arguments that accompanied the development of the UNDRIP. Erueti has argued that many of the articles of the UNDRIP such as the right to self-determination, self-government, the right to free, prior, and informed consent (FPIC), and the right to the recognition, observance, and enforcement of treaties were based on anti-colonialism arguments advanced by indigenous people from CANZUS nations.[31] Compromises were made to the Declaration towards matters of culture, consultation, and land rights to accommodate the needs of Indigenous groups in Africa, South America and Asia who were struggling for fundamental human rights. As Erueti argues:

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[26] *See* Paul McHugh, Aboriginal Societies and the Common Law: A History of Sovereignty, Status, and Self-Determination (2004).

[27] *See, e.g.*, Frantz Fanon, Black Skin, White Masks (Charles L. Markmann trans., 1986).

[28] *See* Jeff Corntassel, *Re-envisioning Resurgence: Indigenous Pathways to Decolonization and Sustainable Self-determination*, 1 Decolonization 86 (2012).

[29] Glen S. Coulthard, Red Skin, White Masks: Rejecting the Colonial Politics of Recognition (2014).

[30] *See* Kirsty Gover, *Settler–State Political Theory, 'CANZUS' and the UN Declaration on the Rights of Indigenous Peoples*, 6 Eur. J. Int'l. L. 345 (2015).

[31] Andrew Erueti, *The Politics of International Indigenous Rights*, 67 U. Toronto L.J. 569 (2017).

> The decolonization model speaks to a nation-to-nation relationship between Northern indigenous peoples and CANZUS states, whereas a human rights model applies, and in fundamental ways depends on, existing configurations of state power.[32]

Culture, consultation and land rights have been described as the "soft" edge of the claims by Indigenous people against settler States,[33] as opposed to the more challenging claim to inherent sovereignty with the final authority (*imperium*) to exclusively own, use and distribute the benefits of resources (*dominium*) that accompanies such sovereignty. As Erueti and others make clear,[34] nation-states have been willing to negotiate *dominium* or limited and proscribed private property rights but have refused to countenance *imperium* and Indigenous peoples "independent, territorial monopoly of political power."[35] It is worth teasing out this distinction between *imperium* and *dominium*, or "the question of the relationship of rule (or sovereignty) and that of property."[36] As McHugh argues, Indigenous people did not distinguish issues of *imperium* from those of *dominium*.[37] Thus, Indigenous people do not just claim ownership of land and the resources therein but also claim legal, political and philosophical rights to shape debates about sovereignty.[38] As I will show in relation to Māori data sovereignty, such shaping has applied when it comes to data sovereignty.

While CANZUS states have been willing to settle injustices through governance (*dominium*) over land areas, this merely reinforces the unwillingness to countenance that land claims are not merely about the "historical" or originating injustice, but rather about an ongoing occupation. To exemplify this, Nicholls cites the U.S. Supreme Court's decision in *City of Sherrill, New York v. Oneida Indian Nation of New York*. The Court likened the Oneida attempt to reassert sovereignty

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[32] *Id.* at 584.

[33] Sheryl R. Lightfoot, *Emerging International Indigenous Rights Norms and 'Over-Compliance' in New Zealand and Canada*, 62 Pol. Sci. 84 (2010). *See also* Karen Engle, The Elusive Promise of Indigenous Development: Rights, Culture, Strategy (2010).

[34] *See, e.g.*, Siegfried Wiessner, *Rights and Status of Indigenous Peoples: A Global Comparative and International Legal Analysis*, 12 Harv. Hum. Rts. J. 57 (1999).

[35] James Tully, *The Pen Is a Mighty Sword: Quentin Skinner's Analysis of Politics*, *in* Meaning and Context: Quentin Skinner and His Critics 17 (James Tully ed., 1988).

[36] Nichols, *supra* note 18, at 175.

[37] *See* McHugh, *supra* note 26, at 62.

[38] *See* Nichols, *supra* note 18, at 175

over recently purchased land to the exclusion of the City of Sherrill as an effort to ”rekindl[e] embers of sovereignty that long ago grew cold.” [39] In other words, even though the wrongs to the Oneida may, as Justice Ginsberg stated, have been “grave,” they were also “ancient” and therefore, despite the Oneida now owning such property, their sovereign and exclusive rights could not be countenanced. Nicholls argues that such cases are evidence of how liberal nations ”ratchet” up their dominance, creating an ever-increasing stranglehold over Indigenous people and lands, while correctly and even sympathetically applying regulation that is foundationally inimical to other forms of nation-nation relations.[40]

To conclude this section, the Doctrine of Discovery continues to shape how governments, policy-makers, and Indigenous people think of sovereignty. In CANZUS nations, limited or ’soft’ forms of sovereignty (*dominium*) have become the default setting for sharing limited forms of power. It is against such sovereignty arguments that I now turn to the particular matter of Indigenous data sovereignty and its policy implementation in Aotearoa New Zealand. But first, I provide a brief overview of Aotearoa New Zealand’s constitutional arrangements set in place by the Treaty of Waitangi, and the place of *taonga* within these arrangements.

II

Te Tiriti o Waitangi / Treaty of Waitangi and *Taonga*

The Treaty of Waitangi, or *Te Tiriti o Waitangi* as it now increasingly is called in the Māori language, was signed in 1840 between representatives of the British monarchy (the Crown) and some Māori tribal leaders. It is sometimes referred to as Aotearoa New Zealand’s founding document.[41] However, matters of sovereignty had already been addressed by the earlier 1836 “He Whakaputanga o te Rangatiratanga o Niu Tirene (He Whakaputanga): Declaration of Independence of the United Tribes of New Zealand,” developed by Māori chiefs mostly from northern tribes that declared all sovereign power and authority was held by the chiefs.[42] With increasing settlement of the country, with British settlers

[39] City of Sherrill v. Oneida Nation of N.Y., 544 U.S. 197, 214 (2005).

[40] Nichols, *supra* note 18, at 180-81.

[41] Giselle Byrnes, *“Relic of 1840” or Founding Document? The Treaty, the Tribunal and Concepts of Time*, 1 Kotuitui: N.Z. J. Soc. Sci. Online 1 (2006).

[42] *See* Mānuka Hēnare, He Whenua Rangatira: A Mana Māori History of the Early-Mid Nineteenth Century (2021).

increasingly 'disorderly', and with other nations, such as the French, having their own territorial ambitions, the British went about developing more comprehensive constitutional arrangements.[43]

Te Tiriti o Waitangi was a dual language document but the English and Māori versions were not translations of one another. Consisting of three key clauses, the Māori language version signed by most tribal leaders stated that Māori would retain *tino rangatiratanga* (sovereignty) over their lands and treasures (i.e., *taonga*) but gave *kāwanatanga* (governance) rights to the British Crown. In contrast, the English version states that Māori ceded sovereignty but retained full exclusive and undisturbed possession of their lands, estates, forests, fisheries and other properties.[44] If we reflect on McHugh's argument,[45] we see here, in the very genesis of Aotearoa New Zealand constitutional arrangements, the problem: *imperium* and *dominum* intertwined in the Māori version, but divorced in the English translation. This contrasts with the 1836 He Whakaputanga declaration where *imperium* was reserved to Māori. Unsurprisingly, the dual notions of sovereignty and what was agreed to has been a matter of interpretation, activism and litigation since that time.

While Te Tiriti has been honoured more in the breach than in its observance, with violations of Te Tiriti lodged as early as 1849 by the author's own tribe,[46] since the 1970s the document has been given more serious consideration in Aotearoa New Zealand's constitutional arrangements. This has been due to a mix of reasons including the post-colonial Indigenous rights movement that in New Zealand took the form of direct action and sovereignty protests.[47] In 1975 under an Act of Parliament the Waitangi Tribunal was formed to examine Te Tiriti breaches. Over the years, the Tribunal has developed Treaty principles that should inform State decision-making. These principles include active protection of taonga (treasures), partnership, the duty to consult, the right to development, and the

[43] *See* Billie J. Lythberg, Jamie Newth & Christine R. Woods, *Engaging Complexity Theory to Explore Partnership Structures: Te Tiriti of Waitangi/The Treaty of Waitangi as a Structural Attractor for Social Innovation in Aotearoa-New Zealand*, 18 Soc. Enterprise J. 271 (2022).

[44] *See* Hēnare, *supra* note 42.

[45] *See* McHugh, *supra* note 26.

[46] Tipene O'Regan, Lisa Palmer & Marcia Langton, *Keeping the Fires Burning: Grievance and Aspiration in the Ngai Tahu Settlement*, *in* Settling with Indigenous People: Modern Treaty and Agreement-Making 44 (Marcia Langton ed., 2006).

[47] *See* Erueti, *supra* note 31.

recognition of self-determination.[48] These principles have found their way into various government policies and Te Tiriti itself increasingly is referenced in law, with decision-makers required to consider its intent.[49]

At this point, it is worthwhile to reference some meanings of taonga from a Māori perspective. Taonga are key to understanding Māori claims to data sovereignty as distinct to other, nation-based notions of data sovereignty.

A simple definition of taonga is "property" or "anything highly prized,"[50] while a more comprehensive, legal definition defines taonga as "both tangible, such as *mere* and *heitiki* (greenstone weapons and ornaments), and intangible, such as language and knowledge. They belong to a descent group but at any given time are held by individuals on its behalf, in trust for future generations."[51] Craig, Taonui and Wild, through reference to various legal findings, go onto distinguish taonga that fall into the tangible and intangible cultural categories: land, natural resources, sacred places, canoes, meeting houses (tangible); Māori language, *tikanga* (customary principles and practices) and stories and oral traditions (intangible). Into the latter category also fall concepts such as *mauri* (life essence), as the *mauri* of a tangible resource derives from its genealogy or *whakapapa* that links the intangible to the tangible, with all animate and inanimate things descending from Rakinui (Skyfather) and Papatūānuku (Earthmother) and their children. A key attribute is that taonga are relational, not just to an individual, but to the collective, and as such there is a duty of care and obligation to future generations.[52] That is, current generations act as *kaitiaki*, or guardians, of taonga, specifically the *mātauranga* Māori (Māori knowledge) imbued in taonga. This latter point has become particularly pertinent in relation to data, as I will discuss shortly.

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[48] *See* Byrnes, *supra* note 41.

[49] Jacinta Ruru & Jacobi Kohu-Morris, *'Maranga Ake Ai' The Heroics of Constitutionalising Te Tiriti O Waitingi/The Treaty of Waitangi in Aotearoa New Zealand*, 48 Fed. L. Rev. 556 (2020).

[50] *Cf.* Herbert W. Williams, A Dictionary of the Maori Language (1971).

[51] Russell Craig, Rawiri Taonui & Susan Wild, *The Concept of Taonga in Māori Culture: Insights for Accounting*, 25 Acct. Auditing Accountability J. 1025, 1028 (2012) (quoting Justice Gendall in *Temple v. Barr and Holborn* [2010] NZHC 1476 (HC)).

[52] *Id.*

When it comes to the nature of ownership and protection of *taonga*, a claim known as the "indigenous flora and fauna and cultural and intellectual property" claim (i.e., Wai 262), was put forward to the Waitangi Tribunal in 1991. The claimants sought recognition and protection of *tino rangatiratanga* (sovereignty and self-determination) over *mātauranga* Māori, and Indigenous flora and fauna including genetic material.[53] Eventually, in 2011, the Tribunal found that the government had not complied with "its obligations under the Treaty of Waitangi to ensure that guardian relationships between Māori and taonga were acknowledged and protected."[54] Key findings included that:

- *kaitiakitanga* and property rights are different ways of thinking about the ways different cultures decide the rights and obligations of communities in their created works and valued resources;

- the balance of intellectual property rights should be struck in favor of protecting the cultural integrity of *mātauranga* Māori taonga works, and the Māori elements of taonga-derived works; and

- while Māori have no proprietary rights in taonga species, the cultural relationship between *kaitiaki* and taonga species is entitled to reasonable protection.

The Tribunal made several recommendations that included changes to government intellectual property, laws, policies and practices relating to indigenous flora and fauna, resource management, conservation, the Māori language, arts and culture, heritage, science, education, health, and the making of international instruments.[55]

Geismar argues that the Tribunal's findings are radical in that they challenged the State to incorporate Māori concepts of *tino rangatiratanga* (sovereignty) and *kaitiakitanga* (guardianship) into its economy as well as its governance

[53] Maui Solomon, *An Indigenous Perspective on the WIPO IGC*, *in* The WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore 219, 228 n.25 (Daniel F. Robinson, Ahmed Abdel-Latif & Pedro Roffe eds., 2017).

[54] Barbara Sullivan & Lynell Tuffery-Huria, *New Zealand: Wai*, 9 J. Intell. Prop. L. & Prac. 403 (2014).

[55] Te Puni Kōkiri, Wai 262 – Te Pae Tawhiti: the Role of the Crown and Māori in Making Decisions About Taonga and Mātauranga Māori: Preliminary Proposals for Crown Organisation (2019).

arrangements.[56] By doing so, the absolute *imperium* of the New Zealand government is being modified while at the same time broadening the boundaries of Māori authority. Some have argued that this might be seen as *Lex Aotearoa*, an evolving type of law where the first law of Aotearoa New Zealand (Māori systems of governance) is modifying the current legal frameworks based on British law and hence are creating a new system of power distribution.[57]

The government's policy response to the Tribunal's recommendations has been slow, and it was only in 2019 that any government activity started to deal with issues of *mātauranga* Māori and taonga works; *mātauranga* Māori and taonga species; and international aspects of *mātauranga* Māori, taonga works and taonga species.[58]

However, since the time of the initial Wai 262 claim in 1991 and the findings in 2011, notions of taonga have broadened to incorporate the data about such taonga. And more recently, discussions have focused on Aotearoa New Zealand's mechanisms to ensure that *kaitiaki* are able to protect or control use of taonga when the knowledge or *mātauranga* about or derived from taonga has been transformed into data residing in a myriad of data storage facilities in commercial and State-owned institutions in Aotearoa New Zealand and internationally. In turn, this raises issues of Indigenous and Māori data, and increasingly, data infrastructure sovereignty.

III

Māori Data Sovereignty – Policy and Practice

> While indigenous peoples have long claimed sovereign status over their lands and territories, debates about 'data sovereignty' have been dominated by national governments and multinational corporations focused on issues of legal jurisdiction. Missing from those conversations have been the inherent and inalienable rights and interests of indigenous

[56] Haidy Geismar, *Resisting Settler-Colonial Property Relations? The WAI 262 Claim and Report in Aotearoa New Zealand*, 3 Settler Colonial Stud. 230 (2013).

[57] *See* Ruru & Kohu-Morris, *supra* note 49.

[58] Jayden Houghton, *The New Zealand Government's Response to the Wai 262 Report: The First Ten Years*, 25 Int'l J. Hum. Rts. 870 (2021).

> peoples relating to the collection, ownership and application of data about their people, lifeways and territories.[59]

Scholars have noted that discourses of sovereignty in relation to the digital are not new, with notions such as 'technological sovereignty,' 'cyberspace sovereignty' and 'digital sovereignty' found since the 1960s.[60] There is no one definition of data sovereignty, but issues of control and power over data at the individual, collective or nation level predominate. Hummel et al., for example, found that discourses of Indigenous data sovereignty provided rich and innovative aspects only touched on or not found in other discourses.[61] This included the link between data sovereignty and Indigenous culture and identity; data sovereignty as continuous with Indigenous nationhood; discussion not only of control of data, but also governance and the harnessing of benefit; and discussions on asymmetries of power. As the quote that begins this section indicates, Indigenous data sovereignty touches on all aspects of Indigenous life. And as the discussion of taonga in the previous section has shown, the tangible and intangible are interrelated components that bind things to each other, people and land. In this section, I briefly look at how Māori notions of taonga have translated into the concept that data too is a taonga and how that has affected Aotearoa New Zealand's policy, and by implication, notions of sovereignty.

The call for Māori data sovereignty is relatively recent, with network *Te Mana Raraunga* forming in 2016 to "advocate for Māori rights and interests in data to be protected as the world moves into an increasingly open data environment."[62] The network's purpose is to advance Māori aspirations for collective and individual wellbeing by, amongst other things, asserting Māori data rights and interests are safeguarded through Māori involvement in the governance of data repositories and supporting the development of Māori data infrastructure and security systems to support development of sustainable Māori digital businesses and innovations.

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[59] Indigenous Data Sovereignty: Toward an Agenda 1–2 (Tahu Kukutai & John Taylor eds., 2016).

[60] *See, e.g.*, Stephane Couture & Sophie Toupin, *What Does the Notion of "Sovereignty" Mean When Referring to the Digital?*, 21 New Media & Soc'y 2305 (2019).

[61] Patrik Hummel et al., *Data sovereignty: A Review*, 8 Big Data & Soc'y 1 (2021).

[62] *Our Data, Our Sovereignty, Our Future*, Te Mana Raraunga, https://www.temanararaunga.maori.nz/ (last visited Mar. 10, 2023).

The idea that 'data is a living *taonga*' and of strategic value to Māori, was first articulated by *Te Mana Raraunga*. There have been several discussions as to why data is a taonga, including by *Te Mana Raraunga* itself. The most considered is that given in a 2021 Waitangi Tribunal finding (Wai 2622) on the e-commerce chapter of the free-trade Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), signed in 2016 by the New Zealand government and 10 other nations. The claim sought to establish the consistency with *Te Tiriti* principles of certain provisions in the CPTPP and raised issues of the governance and control of Māori data. While coming to no firm definition of Māori data, the Tribunal found that "the Māori relationship to data...is part of *mātauranga* – the Māori knowledge system", and that therefore, "the way that the digital domain is governed and regulated has important potential implications for the integrity of the Māori knowledge system, which is a taonga."[63] The Tribunal cited the United Nations Special Rapporteur on the Right to Privacy as relevant, particularly "that data is a cultural, strategic, and economic resource for indigenous peoples" and that "existing data and data infrastructure does not 'meet indigenous peoples' current and future data needs'."[64] The Tribunal found that the government had failed to "understand and actively protect *te Tiriti*/the Treaty interests of Māori, both procedurally and substantively" downplaying "the risks to Māori interests arising from the e-commerce provisions, particularly those concerning cross-border data flows, data localisation, and source code."[65]

While the Waitangi Tribunal findings related to e-commerce, there are broader implications. The immediate impact caused the government to make "substantive changes to FTA [free trade agreement] negotiating practices to enable Māori to exercise more and genuine influence on negotiations, resulting in adjustments to e-commerce provisions in FTAs."[66] Additionally, there have been substantive impacts on domestic policy, including:

- the launch of a Digital Strategy for Aotearoa (DSA) that aims to give effect to the Treaty and its principles;

[63] Waitangi Tribunal, Report on the Comprehensive and Progressive Agreement for Trans-Pacific Partnership 52–53 (2021).

[64] *Id.* at 183.

[65] *Id.* at 186, 188.

[66] Ministry of Foreign Affairs Trade, Wai 2522 E-commerce Report – Findings and Proposed Response 2 (2022), www.mfat.govt.nz....

- a Māori Data Governance model being co-designed by Statistics New Zealand and tribal data leaders to bring a cross-government approach to data governance;

- Māori Data Sovereignty for Cloud use, also being co-designed with tribal data leaders[67]

At a legislative level, changes to the Data and Statistics Act 2022, have seen *Te Tiriti* clauses inserted into the Act. Clauses include recognizing the interests of Māori in the "collection of data, the production of statistics, and access to, and use of, data for research as tools for furthering the economic, social, cultural and environmental well-being of Māori."[68]

While these legislative and policy level actions have been underway, there has also been a flurry of activity at the level of various government organisations. For example, the Tertiary Education Commission in its advice on ethical use of student data recommends that education providers examine guidance not just on privacy but also on Māori data sovereignty.[69] The Ministry of Business, Innovation and Employment has funded a Tourism data leadership group, whose terms of reference includes ensuring that "best practices regarding Māori data sovereignty" are observed.[70] The Ministry of Health has published a set of standard protocols for collecting and recording Māori descent and *iwi* affiliation. The protocol recognises the need for the Ministry to understand its "obligations and responsibilities with respect to Māori data sovereignty and governance."[71] To "give effect to the principles of the Treaty of Waitangi," the New Zealand Conservation Authority

[67] *Id.* at 9–10.

[68] Data and Statistics Act 2022, s 3(e)(i) (N.Z.).

[69] *Māori Data Sovereignty*, Tertiary Educ. Comm'n (Feb. 4, 2021), https://www.tec.govt.nz/teo/working-with-teos/analysing-student-data/key-components/community-perspectives/maori-data-sovereignty/.

[70] Ministry of Bus., Innovation & Emp., Tourism Data Leadership Group Terms of Reference 4 (2022), www.mbie.govt.nz. . . .

[71] Ministry of Health, HISO 10094:2022 Māori Descent and Iwi Affiliation Data Protocols 1 (2022), www.tewhatuora.govt/. . . .

intends to observe the "principle of active protection of Māori interests, including Māori data sovereignty."[72]

In the University sector, Auckland University's commercialisation entity, UniServices, has developed a new intellectual property policy to protect Māori knowledge and data.[73] At the University of Otago, Christchurch, the Christchurch Heart Institute "recognise their Te Tiriti obligations and that Māori Data is a Taonga. Therefore, the CHI will treat Māori Data as a taonga and recognise that all data whether digital or biological, identifiable or deanonymized has a whakapapa."[74]

Māori data is now accepted as a taonga, at least in the public sector, and within Aotearoa New Zealand's domestic setting.

IV

Māori Data Sovereignty and Protection of *Taramea*: Commercial Implications

As the previous section indicates, many of the impacts of the call for Māori data sovereignty have been found in the State sector, in both international and domestic policy, in revisions to laws such as the Data and Statistics Act 2022, in implementation into State governance practice, and into organisations such as Universities. However, what of the commercial sector? As the Waitangi Tribunal stated in its findings on the CPTTP, "Māori engage in e-commerce and benefit from the convenience of doing so. Māori are also engaged in the digital domain as users and developers of digital products."[75] Moreover, the Tribunal noted that "Māori ideas about the protection of *mātauranga* captured or expressed in a digital format . . . are different from Western conceptions of intellectual property and its protection, at least in terms of how such conceptions are captured or represented in law, including international law." The Tribunal further stated that the primary

[72] N.Z. Conservation Auth., Giving Effect to Section 4 of the Conservation Act 1987 (2021), https://www.doc.govt.nz/about-us/statutory-and-advisory-bodies/nz-conservation-authority/policies/section-4-of-the-conservation-act/.

[73] *New UniServices Intellectual Property Policy Protects Māori Knowledge and Data*, UniServices (May 16, 2022), www.uniservices.co.nz. . . .

[74] 2 Christchurch Heart Institute, Māori Data Sovereignty Statement and Commitment 3 (2021), https://www.otago.ac.nz/chch-heart-institute/otago834389.pdf.

[75] *See* Waitangi Trubunal, *supra* note 63, at xiii.

difference was that Māori concerns typically extend beyond commercial protection to "matters fundamental to Māori identity such as whakapapa, mana, mauri, and Mātauranga." [76]

How can such 'different' conceptions of property protection be implemented, particularly in international commercial contexts? There are numerous examples, from Aotearoa New Zealand and other nations, where use of Indigenous tangible and intangible property has provided commercial opportunities to non-Indigenous.[77] In relation to biological taonga, Mead views the 1980s–early 1990s as the "heyday" of unethical behaviour of a lot of pharmaceutical companies and food production companies.[78] Such behaviour gave rise to the UN Convention on Biological Diversity 1992 (CBD) and the Nagoya Protocol to provide a legal framework for the fair and equitable sharing of benefits arising from exploitations of a nation's genetic resources, including the traditional knowledge associated with genetic resources.[79] While these international developments are welcomed, they are not sufficient to protecting or allowing for development of Indigenous taonga. Hudson, Anderson and Stirling argue that data is key to e-commerce, and international regimes like the World Intellectual Property Organisation (WIPO) and local IP laws are still grappling with how best to provide protection and governance of Indigenous-identified data that may have commercial application. They further suggest that Indigenous people need a range of tools, including "extra-legal tools," to protect the knowledge and know-how that is, according to the Waitangi Tribunal, potentially a property of such data.[80]

What are such tools as they pertain to data? An example of a taonga species, *taramea*, from the author's tribe of Ngāi Tahu is one way to think through this issue. Through the Ngāi Tahu Settlement Claims Act, Ngāi Tahu are accorded a

[76] *Id.* at 181.

[77] Katharina Ruckstuhl & Maria Amoamo, *Science, Technology, and Indigenous Development*, *in* The Routledge Handbook of Indigenous Development 267 (Katharina Ruckstuhl, Irma A. Velásquez, John-Andrew McNeish & Nancy Postero eds., 2022); Aroha Mead & Sequoia Short, *Reflections on a Career in Indigenous Intellectual Property Ngā Taonga Tuku Iho*, *in* The Routledge Handbook of Indigenous Development 144 (Ruckstuhl et al. eds., 2022).

[78] *See* Mead & Short, *supra* note 77, at 147.

[79] *About the Nagoya Protocol*, Convention on Biological Diversity (Sept. 6, 2015), https://www.cbd.int/abs/about/.

[80] Maui Hudson, Jane Anderson & Rogena Stirling, He Pou Hiringa: Grounding Science and Technology in Te Ao Māori 164 (Katharina Ruckstuhl, Merata Kawharu & Maria Amoamo eds., 2021).

special relationship with taonga species such as *taramea*.[81] *Taramea* (*Aciphylla aurea*) is a sub-alpine plant with a resin traditionally used by Ngāi Tahu to create a fragrance. Over the last 10 years, there has been scientific research into the plant, and commercialisation of the resin to create an oil-based perfume, under the trade name Mea.[82]

Of current local and international IP protections, only trademarking has been applied to the word 'Mea,' a derivative of *taramea*. The word *taramea* itself is unlikely to be trademarked, evidenced recently where Aotearoa New Zealand *mānuka* producers have withdrawn from a trademark battle with Australian producers to use the name outside Aotearoa New Zealand.[83] From a copyright perspective, the commercial website that contains narratives associated with the plant is copyrighted, however other websites, including those of government departments such as Manaaki Whenua (Landcare Research) make no mention of Ngāi Tahu's special relationship with this taonga.[84] Journal articles that contain precise geographic, scientific or cultural narrative information about the plant, with some narratives going back to the 19th and early 20th centuries, are copyrighted to the individual authors, with nothing that suggests that there may be an ongoing Ngāi Tahu *mātauranga* interest.

As we see in this example, trademarking and copyright can only go so far in asserting Ngāi Tahu rights and ongoing *kaitiakitanga* interest in a taonga. Digitization of scientific, geographical and cultural information allows open access to this information. Moreover, this information, which is overwhelmingly from a non-Indigenous and often colonial perspective, circulates in perpetuity and across national borders, embedding particular regimes of understanding and remaining largely silent on Indigenous others. For example, the Smithsonian Institute has an extensive collection of botanical samples, including *taramea*, collected from

[81] Ngāi Tahu Settlement Claims Act 1998, ss 287–96 (N.Z.).

[82] *Mea*, Kāti Huirapa Rūnaka ki Puketeraki, http://www.puketeraki.nz/MEA.html (last visited Mar. 13, 2023).

[83] Liv Casben, *'Sweet' Victory for Aussie Honey Producers*, W. Australian (Jan. 23, 2023, 3:27 AM), https://thewest.com.au/business/agriculture/sweet-victory-for-aussie-honey-producers-c-9536773.

[84] Aciphylla spp. *Taramea. Papaī. Speargrass*, Ngā Rauropi Whakaoranga, https://rauropiwhakaoranga.landcareresearch.co.nz/names/11c60d30-777a-40cd-9ba6-d3ccd073d8bd (June 22, 2020).

Aotearoa New Zealand in the 1930s by A.W. Anderson.[85] None of this information refers to Māori or Ngāi Tahu. Hence, IP law cannot, and was not designed to take into consideration ongoing Indigenous relationships with their taonga.

One way to get around this issue from a data perspective is through asserting Indigenous sovereignty rights within data infrastructures. This includes both data warehousing and data provenance. In reference to the former, Māori have raised the issue of offshore cloud storage of government-collected data as presenting potential risks to Māori data sovereignty. Hence there has been the suggestion that onshoring should be the preferred option for storing Māori data wherever possible and that Māori data sovereignty should be incorporated into policies and practices of Cloud services, such as Microsoft or Amazon Web Services.[86] While this may not have an immediate impact for the commercial protection of *taramea*, it would ensure that future data that is gathered and held through government funded research contracts and/or government funded research institutions such as universities, would be subject to Māori jurisdiction or *rangatiratanga* if taonga data was required to be held within Aotearoa New Zealand's jurisdiction.

In relation to data about *taonga* species like *taramea* that are already circulating through research cataloguing systems, data sets, scientific publications, or open access databases, extra-legal digital rights management tools like traditional knowledge (TK) and biocultural (BC) labels might be used.[87] At the Ngāi Tahu end, this might include appending such labels to any open access information on their websites and approaching organisations, such as the Smithsonian to modify the metadata to include a field that notes the Ngāi Tahu interest.[88]

Another recent approach that the author has been involved in is the IEEE Working Party on a Recommended Practice for Provenance of Indigenous Peoples'

[85] *Search Results: "A. W. Anderson" / place: "New Zealand"*, Smithsonian Inst., (last visited Mar. 13, 2023), https://collections.si.edu/search/results.htm?q=%22A.+W.+Anderson%22&fq=place%3A%22New+Zealand%22&start=0.

[86] Tahu Kukutai et al., *Māori Data Sovereignty and Offshoring Māori Data*, Te Kāhui Raraunga 2 (July 27, 2022), https://www.kahuiraraunga.io/ng%C4%81-hua-i-resources.

[87] *See, e.g.*, Hudson, Anderson & Stirling, *supra* note 80.

[88] Jane Anderson & Kimberly Christen, *Decolonizing Attribution: Traditions of Exclusion*, 5 J. Radical Librarianship 113 (2019).

Data.[89] The intention is that there will be a recommended standard that will embed Indigenous data provenance into metadata fields that can be used across public and industry sectors. Such an approach is intended to connect data to Indigenous people and places, potentially supporting future benefit sharing.

Provenance is also important within commercial approaches to ensuring that a product is what it claims to be. In this case, Mea is an Indigenous-controlled product with a verifiable narrative that is culturally significant to its tribal group. Consumers are reliant on claims to such authenticity; however there are many cases where Indigenous "allure" is merely a guise to commodification. For example, there are reports that two-thirds of Aboriginal-style souvenirs are fake, with a consequent loss of millions of dollars to Aboriginal and Torres Strait people.[90] Increasingly, consumers want to know that their product purchases are authentic, which in turn relies on standard verification processes such as supply chain auditing, which in turn is increasingly a digital process. Indigenous data provenance standards, as those recommended by the IEEE Working Party, might assist such auditing. Blockchain has also been suggested as a potential authentication mechanism, with some suggesting that blockchain might help Indigenous people assert rights, particularly over digital art.[91] However, such claims are largely untested, and may in fact consolidate different types of digital imperialism.[92]

Conclusion

This paper has argued that Indigenous data sovereignty, while a recent phenomenon, in fact has a long struggle against colonising constructs such as the Doctrine of Discovery. As scholars have argued, claims for Indigenous sovereignty challenge nation states, and hence are rejected, even into recent times. However, as this paper has also argued, sovereignty as *imperium* or absolute power of decision-making and sovereignty as *dominium* and the right to make decisions about owning and disposing of property are both under review, at least in Aotearoa New Zealand.

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[89] IEEE Society on Social Implications of Tech., *Recommended Practice for Provenance of Indigenous Peoples' Data*, IEEE Standards Ass'n (June 3, 2020), https://standards.ieee.org/ieee/2890/10318/.

[90] Lorena Allam, *Majority of Aboriginal Souvenirs Sold are Fakes with No Connection to Indigenous People, Report Finds*, Guardian (July 18, 2022, 1:30 PM), www.theguardian.com/…/majority-of-aboriginal-souvenirs-sold-are-fakes-with-no-connection-to-indigenous-people-report-finds.

[91] Michael Rogerson & Glenn C. Parry, *Blockchain: Case Studies in Food Supply Chain Visibility*, 25 Supply Chain Mgmt. 601 (2020).

[92] Olivier Jutel, *Blockchain Imperialism in the Pacific*, 1 Big Data & Soc'y 1 (2021).

While New Zealand's governance is still framed within British legal traditions, Māori data sovereignty claims, founded on the concept of taonga, have called into question the absolutism of both the *imperium* and the *dominium*. This can be seen in Aotearoa's New Zealand's international free trade agreements, as only nations and not "diminished" dependencies make such agreements. Māori data sovereignty claims have forced such changes into these international documents, with the sub-text now being that Māori must be at the negotiating table ensuring that Māori law — the first law of Aotearoa New Zealand — is being upheld. Māori data sovereignty claims likewise have affected how institutions view and account for their use and re-use of Māori data. Government and increasingly other publicly funded agencies now are required to put in place policy measures to ensure appropriate governance, protection and use of Māori data.

From a commercial perspective, understanding data as a taonga has led to conversations with commercial data infrastructure providers to enable systems of appropriate Māori governance. At the level of commercialization of a specific taonga such as *taramea*, IP mechanisms offer only limited protections. Therefore, other extra-legal mechanisms are being developed. As briefly discussed, TK and BC labels, standardisation of Indigenous metadata, supply chain auditing, and potentially blockchain offer alternate protective and governance pathways for a specific taonga as it moves through a life cycle from physical bio-specimen to product in the market, and all the phases in-between and beyond.

From *datum nullius* to data *taonga* is a conceptual leap. The fact that this leap is being practically developed globally and at scale responds to the understanding that the ongoing relationship of Indigenous people to their tangible and intangible taonga — their prized treasures and property — is in perpetuity, across-borders, multi-jurisdictional, and across the public-private divide.