

Making relations: Re-imagining AI through crafted and embodied knowledge systems in Moana Oceania

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Abstract

This paper addresses the problems of data colonialism from a standpoint that not only challenges the legitimacy of colonial economics but also the epistemological legitimacy of data as a raw material from which knowledge and knowledge systems might be generated. Our reflexive investigation centres on knowledge systems of Aotearoa-New Zealand and the wider Moana Oceania through embodied traditions of wānanga and talanoa. As we explain, these offer a critical alternative to Western scholarly practices and allow us to attend to unremarked principles that underlie the sociotechnical knowledge infrastructure of a hegemonic global academy. Meeting Māori and Pasifika scholars, elders and master craftspeople within their own discourse traditions allows us to reopen categories of investigation beyond the already problematic consequences that can so clearly be seen in continued colonial capitalism and the neo-colonial data economy.

Keywords

Data colonialism, artificial intelligence, indigenous knowledge, Māori, Pasifika, Aotearoa-New Zealand

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Introduction

This paper explores the epistemological impacts of data colonialism through Moana Oceania's traditions of making, knowing, and relating – rather than Western philosophy or technoscience, where data colonialism emerged. Urgent even within critical data studies and AI discourse, this work is both a contribution to and a departure from these conversations. Our methods and presentation deliberately shift beyond Western scientific conventions to offer an alternative perspective.

Everyday speculation envisions AI as knowledge detached from any specific place or body, produced through statistical data processing. However, as this issue's contributors understand, data are extracted and abstracted from the bodies and places where they were originally encoded and related. As Sebastián Lehuedé (2024: 85) notes, 'One of the most common definitions of data portrays them as

self-standing forms of evidence employed to sustain truth claims. However, a critical lens reveals that data have been crucial in facilitating diverse forms of extraction'. The link from extracted data to the current generation of machine learning-based AI is well documented, from the central role of the ImageNet corpus in the deep learning revolution (Blackwell, 2023) to the institutionalized

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Figure 1. Cosmogram of AI Talanoa by Leali'ifano Albert Refiti.

plagiarism of large language models (Bender et al., 2021) and the anonymized data work used to train the global AI business (Muldoon et al., 2024).

AI's disembodiment, displacement, and disinheritance may seem unremarkable within Western textual scholarship. However, posthumanist critics like Donna Haraway challenge this 'view from nowhere', arguing it is sustained by privileged thought centres (e.g. 1988). Silvia Federici (2020) and Sylvia Wynter (2003) further critique universal notions of the 'human', exposing exclusions based on gender, religion, economics, and ethnicity. While AI studies' new materialist turn (Tang and Cooper, 2023) adds depth, some caution against adopting it without engaging foundational Indigenous scholarship (Byrd, 2011; Rosiek et al., 2020; Henriksen et al., 2022). Acknowledging pioneers like Jason Lewis (Lewis et al., 2018; Lewis 2020) and the Initiative for Indigenous Futures, we offer a complementary perspective.

Aotearoa-New Zealand offers a unique standpoint for developing sustainable, transformative science and technology to address twenty-first-century intercultural and environmental challenges. The convenings discussed in this paper and the carved knowledge repositories that facilitated them lead us to argue against defining Māori and Pasifika thinking on AI solely through the lens of data colonialism. Instead, we explore the possibility of re-imagining, re-crafting, and 're-membling' (Tengan, 2008) AI in and for Moana Oceania. In Moana Oceania, embodied scholarly practices are tied to place and rooted in inheritance. We explore traditions that reject the belief that data and knowledge can be meaningfully constructed through disembodied, displaced, and disinherited practices. We use Māori and Pasifika languages to describe these epistemologies accurately.

This paper draws on three meetings convened in 2020 by this paper's authors in Tāmaki Makaurau-Auckland,

Aotearoa-New Zealand, and attended by researchers and practitioners from across Moana Oceania. Two Wānanga for alternative narratives of Artificial Intelligence were hosted by He Manga Tauhokohoko, the Business School at the University of Auckland (UoA), and a Global AI Narratives Talanoa was hosted by Vā Moana – Pacific Spaces research cluster at Auckland University of Technology (AUT); all three were developed in collaboration with the Global AI Narratives (GAIN) project at the Leverhulme Centre for the Future of Intelligence (Cave and Dihal, 2023). Research methods grounded in ancient practices guided these meetings. To wānanga and to talanoa are to observe protocols that draw time-space into particular constellations, bringing ancestors and ancestral knowledges into communion with those who are their living faces, facilitating free-flowing and wide-ranging conversations.

Wānanga is a kaupapa Māori teaching-and-learning method that 'traverses time and space and involves a quality of consciousness that brings forth an integrated collective intelligence' (Spiller et al., 2020: 516). While one wānanga was held in a meeting room on campus at UoA, the other was a practical exercise contributing to restoring Pou Kāpua, a monumental carved pou (totem/post) instantiating ancestors and celestial navigation.

The talanoa, a well-established Pacific Research Method 'where people story their issues, their realities and aspirations' (Vaiotei 1999–2003, cited in Vaiotei 2016: 21), was convened as a faikava/kava-drinking ceremony in an AUT gallery. There, a carved wooden kava bowl and the virtual posts of a fale (Samoan house) determined a carefully arranged circle of participants (Figure 1). Indigenous thought leaders sat on colourful mats and cushions, drinking kava from coconut shell vessels.

These research processes elicited re-imaginings about the origins and possible futures of AI in Moana Oceania's

ancestral ways of knowing and being. Here, there are no ‘extra’ or even ‘artificial’ beings, only those yet to be related to, opening the possibility for AI as ‘a concept we’re already familiar with in a really ancient way’ (Kahurangiariki Smith, talanoa participant, 2020). As Professor Leali‘ifano Albert Refiti offered during the talanoa:

There are so many things in the world that we don’t have control over – the spiritual world, the world of the ancestors, the things that return without even our mediation. But that is within the context of living a very ritual life. We have songs, we have ceremonies that pertain to having to mediate those things that we have no control over, and we always ascribe to them ideas of the return of the ancestors or things in the world that belong to the ancestors. Now, with something like a being that has no recourse to those things but has a self-governing system ... in a sense, we almost have to create a new *vā* relation with this other being.

Here, Leali‘ifano evokes the Samoan relational concept of *vā*, which has ‘related semantic constellations’ in Moana Oceania, designating relationships ‘between people and land but also between all things’ (Refiti et al., 2022: 356).

In structuring our paper, we first follow Moana protocols to establish the grounds for our data collection and analysis. We then present findings from our data craft-work in a more conventional Western academic register. Having done so, we return to more reflexive methodological questions, elaborating how academic work can be conducted differently, offering a model for other sources of knowledge and modes of engagement with the problematics of data.

Ko wai tātau? Who are we?

First, in te reo Māori, ‘Ko wai tātau’ – literally, who/which waters are we from? Connections to place and ancestors – human and more-than-human – offer conceptual purchase beyond our academic biographies, beginning the process of making relations.

Rachel Maunganui Wolfgramm

I was born in Waitakere, Auckland, the seventh of eight children. My whakapapa includes Te Aupōuri, Ngai Takoto, and Te Whakatōhea tribes, tracing 23 generations to the Māmari and Mataatua waka. My mother, Georgina Kapa Balneavis Rangihaerepo Hagger, has Māori, Scottish, Samoan, Hawaiian, English, and Maltese ancestry, while my father, David Tapueluelu Wolfgramm, is Tongan, Irish, and Prussian. My parents were professional musicians, influencing my Māori and Pacific upbringing. I now live in Sandspit, Mahurangi East, North Auckland, with my whānau.

Albert L. Refiti

I was born and raised in Fasito‘outa by the Sā Aiono Fa‘apologaina clan of Avano, Sāmoa. I carry the ancestral title Leali‘ifano from Vaovai, Falealili. I am from a generation schooled under Reverend Ioselani Pouesi in Fasito‘outa. I carried on the intellectual work I was schooled on at the Aoga Faifeau in learning and refining Samoan and Moana Pacific knowledge, theologies and philosophies. I live in Tāmaki Mākaurau.

Billie Lythberg

Born in Tāmaki Mākaurau-Auckland, I am a first-generation Pākehā New Zealander with English, Scottish, and Swedish ancestry. I proudly carry the nickname of my great-aunt, Andra “Billie” Burns, and my father’s surname. My ancestral waters include the marshes of Yorkshire, the River Wear in Durham, Scottish Highland burns, and the Baltic Sea. I live with my husband and son in Onekiritia, beside the Waitemata’s sparkling waters.

Alan F. Blackwell

Named after my father, Frank, a distinguished engineer, I grew up on Wellington Harbour’s Horokiwi ridge and Ngarara beach. My great-grandfather, Frank Bartram Blackwell, was an engineer and naturalist who built houses on Auckland’s North Shore, where my whānau still lives. Although I’ve lived in Cambridge for over 30 years and am now a UK citizen, I identify as Pākehā, with a heritage of pioneers and craft workers who arrived in Aotearoa by sea.

We acknowledge all our co-conspirators and attribute direct quotes to recognize the specificity and significance of embodied knowledges and research praxes: Tohunga Toi Ake Wikuki Kingi Jnr (Ngāi Tai, Ngāti Mahuta, Waikato, Te Whānau-ā-Apanui), UoA; Dr Tania Haerekitera Wolfgramm (Te Aupōuri, Te Whakatōhea, Ngāi Tai), UoA; Isaac Rolfe (Te Aupōuri, Te Whakatōhea, Ngāi Tai), Tech Entrepreneur; Professor Michael Witbrock, UoA; Anthony Poole, UoA; Arcia Tecun aka Dr Daniel Hernandez (Maya) then Lecturer in Ethnomusicology, UoA; Eric Soakai (Samoan, Tongan), UoA; Dr Mairi Gunn, UoA; Dr Nooroa Tapuni (Mangaian Cook Islander), AUT; Dr Layne Waerea (Ngāti Wāhiao, Ngāti Kahungunu, Pākehā), AUT; Dr Dorita Hannah, Architect and performative researcher; Distinguished Professor Dame Anne Salmond, UoA; Kahurangiariki Smith (Te Arawa, Tainui, Takitimu, Horouta and Mataatua), AUT; Hūfanga Dr ‘Ōkunitino Māhina (Tonga), Vava‘u Academy for Critical Inquiry and Applied Research; Sam Hamilton, US-based NZ artist; Caleb Moses (Māori), AI Engineer at Dragonfly Data Science; Dr Carl Douglas, AUT; Caroline Matamua (Tonga), UoA; Associate Professor Natalie Robertson (Ngāti Porou, Clann Dhònnchaidh), AUT; Vula To‘ofohē (Tonga), UoA.

We use co-conspirator here in its old sense: conspire, ‘to breathe together’, as practised during the traditional Māori greeting of hongi (pressing noses). Our convenings occurred just days before Aotearoa-New Zealand entered its first COVID-19 lockdown, when shared breath became unthinkable. In wānanga and talanoa, we were bodies breathing together towards shared goals, speaking of virtual worlds shortly before suddenly depending on these (Refiti et al., 2022).

The knowledge context

Te Tiriti o Waitangi is a constitutional document that guarantees legal recognition and protection of mātauranga Māori (traditional wisdom) and mandates action, not just recognition. The integration of Māori and European governance principles is supported by Aotearoa’s small population, practical approach, and established discourse, largely maintaining social cohesion. As described in this issue’s paper by Oumaima Hajri, historically informed local identity is greatly valued as a locus of resistance to globalized regulation.

Aotearoa has become an icon of refuge and sustainability, with Indigenous knowledge offering promising approaches to resource stewardship. Legal precedents, such as recognizing the Whanganui River as a legal person, suggest that future environmental laws may increasingly draw on Indigenous knowledge systems. This positionality offers valuable insights to global AI narratives, where Indigenous knowledge could be encoded and recognized. However, the dominance of Western philosophical principles in AI development threatens the application and validity of Indigenous knowledge.

Methodology of inquiry

Talanoa and wānanga are deeply rooted traditions of learning and deliberation, emphasizing embodied knowledge and shared practices. This article reflects on what and how we have learned through these methods, contrasting them with European disciplinary scholarship. Our approach is anti-colonialist, rejecting the notion that knowledge can be objectively extracted from its sources (cf. Crowdy and Leach, forthcoming).

The talanoa was recorded, transcribed, and sketched, while wānanga were supported by researcher notes, contemporaneously in the university and retrospectively at Pou Kapūa. Our analysis respects the cultural specificity of these data, using interpretive narratives for the wānanga and thematic analysis with participant quotes for the talanoa. In presenting our research convenings in these ways, we are heeding the call of Rosiek and colleagues (2020: 339) by ‘prioritizing the performative establishment of particular relational entanglements with

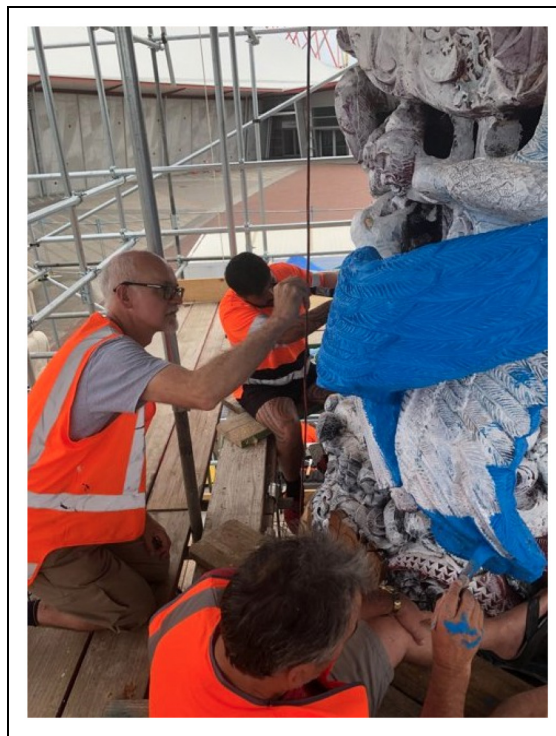


Figure 2. Alan Blackwell (left) painting an albatross on Pou Kapūa with Kainga Toi / Carver Rerekapua Rosiear (rear) and James Rolfe (front). Photo by Rachel Wolfram.

non-human agents over seeking generalizable understanding of that agency’.

WĀNANGA – weaving multiple worldviews

As Mahuika and Mahuika (2020: 369–371) describe, the success of wānanga as schools of learning often hinged on powers of memory. Māori had highly developed memorizing powers and methods for ensuring collective memory was transmitted and retained through pūrākau (storytelling), rāranga (weaving), waiata and haka (songs and chants with corresponding actions), tā moko (tattooing) and whakairo (carving).

The first wānanga was held at Manukau beside Pou Kapūa, a towering totem carved from ancient kauri, totara, steel, and 50,000-year-old swamp kauri. Adorned with taonga (treasures), including paua (abalone), pounamu (greenstone), bone, and crystal gifted by people from Aotearoa and beyond, it weighs over thirty tonnes and stands over seventy feet tall. One of Aotearoa’s largest sculptures, Pou Kapūa symbolizes tino rangatiratanga – liberation and peace.

Pou Kapūa is a taonga tuku iho (treasure passed down), a living representation of the aspirations of centuries of learning and achievements of Māori and Pacific navigators. It

portrays heuristic narratives of Ranginui (Sky Father) and Papatūānuku (Earth Mother) and their offspring: ngā atua (the gods) and ngā tūpuna (our ancestors). Pou Kapūa has intrinsic tapu, mana and mauri. Hēnare describes tapu as a ‘cosmic power imbued in all things at the time of creation’, mana as ‘religious power, authority, and ancestral efficacy’ and ‘humanity’s greatest possession’, and mauri as ‘a unique power, a life essence, a life force, and a vital principle’ – ‘life itself’ (2001: 207–209). In the totem, these enhance a sense of self, identity, and spiritual and collective efficacy for individuals and collectives. Conceived as a karanga (call) from ngā atua, including Matakerepō, the blind goddess of knowledge, Pou Kapūa aims to connect humankind to nature and a cosmological community of divine entities.

When Rachel Wolfram proposed hosting Professor Blackwell for the GAINs project, the master carver Tohunga Toi Ake Wikuku Kingi Jnr inquired if Alan’s skills could benefit Pou Kapūa during its renovation. Despite the challenges of painting the 80-foot Pou with its hundreds of atua, Alan agreed, seeing it as an opportunity to wānanga ‘up in the air’ while giving back. The experience felt novel yet familiar, reflecting the participative learning inherent in such work (Figure 2).

Wikuki led cultural protocols throughout the wānanga with the broader team, explaining:

We need to consciously and unconsciously acknowledge the teachings of our past whilst living in a world of flux and change – te ao hurihuri. Pou Kapūa is a creation. Not all can be revealed at a point in time. It is a revelation – not a body of work that can be expressed through technical drawings – down to the last centimetre. There are many spiritual processes and rituals that are carried out throughout its creation.

Pou Kapūa had previously been involved in Digital AR/VR developments, while Wikuki and his wife, Tania Wolfram, had participated in Māori, Pacific, and Indigenous AI wānanga locally and internationally. No other participants had any specific prior interest in AI or data. Alan was present as a guest, engaged in reciprocal and respectful conversation within the craft frame of the Pou Kapūa project and the specific tradition and practice of wānanga.

We discussed ideas of AI in the context of spatial and temporal Māori notions such as ‘I ngā wā ō mua’, ‘the days that stand to the fore’ – the correspondence of past, present and future – and ‘te ao hurihuri’, ‘the everchanging world’. We discussed the whakapapa connections of AI because it is normal for Māori to seek layered relationships (whaka = to make, papa = layers) across time and space. As Henry and Wolfram (2018) explain, whakapapa is more than genealogy; it is a dynamic knowledge system that expresses Māori understandings of the world and the role of humans in the cosmos. Thus, arose questions,

‘Where did AI have its origin?’, ‘What does that mean for us now and into the future?’, ‘Were there any atua associated with AI?’, and so forth.

In contrast, the university wānanga gathered colleagues from diverse fields, including computer science and mathematics, in a modernist, monochrome setting. Discussions centred on AI’s potential for good in business and commercial use, highlighting a stark contrast to the creativity and freedom at the Pou, and are not this paper’s focus.

At Pou Kapūa, we discussed how Māori ways of knowing the world relate bodies of authority to people, land, and nature through shared ancestors of deep time and ngā atua – the members of the Māori pantheon who represent both historical/traditional figures and current sources of authority or bodies of professional skill – many of whom constitute Pou Kapūa. Expert practitioners (tohunga) offer spiritual leadership through mastery of such knowledge. Encoding and representing such knowledge within the relations fundamental to Māori learning is not practised primarily as an exercise of oratory prowess or linguistic abstraction but realized through art-making – historically, the carving of wood and stone (whakairo), weaving of garments and wall panels (rāranga), and symbolic tattoo (tā moko). The term ‘rāranga whakairo’ combines the names of two vital crafting practices to describe the weaving together of multiple worldviews. In these knowledge practices, materials are not purely cordage or substrates for woven or incised marks, nor are tools merely utensils. Instead, materials and tools are themselves agents that generate meaning in dialogue with the craft artist. The tohunga is the revealer of their multiple signs (tohu), which are themselves communications between tangata (humankind), tūpuna (ancestors), and atua.

Research terminology extends this conceptual purchase. ‘Research’ is ‘mahi rangahau’, a composite term describing mahi (work with purpose) as a craft process of weaving together for revelation and insight, not simply the assembly or juxtaposition of facts and commentary. ‘Rangahau’ combines [rā]ranga (to weave together the many facets of inquiry, including communities of interest and engagement) with hau (reciprocity – to give back). To research well is to live the fundamental values of kaitiakitanga (care in stewardship), manaakitanga (care in hosting), and hauora (reciprocity and wellbeing), extending beyond humankind to the natural and ancestral worlds.

Principles of mahi rangahau, mātauranga atua (ancestral knowledge systems), and pūkenga whakairo (proficiency in carving) informed the practical activity of the wānanga contributing to the restoration of Pou Kapūa, embodying both the epistemological and ontological implications of representing the relations of atua and tūpuna through the exercise of craft.

These elements draw attention to how AI research dissociates its products from the materials they are composed of, hiding craft elements such as source code and consoles

where the human agency of construction could have been revealed. The visual and embodied forms of knowledge in Pou Kapūa contrast with computer science traditions, where an algebraic interpretation of knowledge comprises textual symbol streams. If knowledge co-evolves with its representation, future AI's resilience may rely on recognizing alternatives like mātauranga Māori.

While comparisons are possible, especially for practitioners familiar with AI's construction, can these encounters between distinct knowledge systems be truly generative? Mātauranga Māori knowledge systems have already contributed to understanding the qualities and potential of photographic, film, and sound recordings (e.g. Barclay, 2005; Ngata et al., 2021) and to critical studies of digital technologies and taonga (e.g. on kaupapa Māori modelling of IT artefacts, Shedlock and Hudson, 2022; on radio waves as taonga, Te Huarahi Tika Trust n.d.).

The expansive generativity of whakapapa accommodates material and technical innovations as recently revealed forms of knowledge or ways of knowing already under the dominion of atua. This suggests how to maintain hauora, the holistic value of wellbeing within a social and ecological context. Māori digital understandings have much to offer towards reimagining AI beyond colonial categories of data as raw material (Ricaurte, 2019). However, with few exceptions, the AI industry has been slow to explore other ways of knowing and world-making beyond the Western philosophical canon.

A key question concerns the Western notion of personhood: Is intelligence inherently individual, with agency and ownership separable from context? The *Te Awa Tupua Act 2017* challenges this view, granting the Whanganui River juristic personality and recognizing its indivisibility across physical and metaphysical dimensions. Māori whakapapa affirms interconnections with rivers, mountains, ancestors, and more-than-human entities, expressed through pepeha introductions and ancestral imagery.

In contrast, AI's classical portrayal as an isolated entity – whether in Turing's Imitation Game, Wiezenbaum's *Eliza*, or Kubrick's *HAL 9000* – clashes with Māori personhood, which is deeply relational, woven through whānau, iwi, wairua, and tūpuna. This raises a crucial question: If AI is trained on human conversation and crafting, is it truly separate from those who shaped its intelligence? As Arcia Tecun asked in talanoa, 'Who is the intelligence behind the artificial intelligence?'

Such questions may not be purely academic. As a constitutional language prescribed in Te Tiriti o Waitangi, te reo Māori is supported in national investment for data science infrastructure. Machine learning methods are being applied in a government commission to train a system that can speak and listen to te reo Māori conversations (James et al., 2020; Husband, 2020). The training corpus for this

project was collected by the iwi of the far North, including Ngāti Kuri, Te Aupōuri, Ngai Takoto, Te Rārawa, and Ngāti Kahu, for the Kōrero Māori project of their Te Hiku Media initiative, which they describe in whakapapa terms as based and led by haukāinga – home people. Te Hiku Media has developed a Kaitiakitanga License as a framework from this haukāinga perspective, to guide the use of Māori data (Te Hiku Media, 2023). They are cognisant that Western categories such as 'intellectual property' are inadequate for considering projects like theirs because they ask and answer the wrong questions.

The lineage of AI in the Western imagination can be traced to classical European fantasies motivated by anxieties arising from slavery, class, and gender relations (for example, in the fictions of Rousseau, Hoffman and Čapek), none of which necessarily correspond to Māori priorities or concerns. The innovation ecosystems of AI research seem to change rapidly in pursuit of new sociotechnical imaginaries – especially in the dynamics of Zuboff's surveillance capitalism that underpin much of the current global research infrastructure. A Western critique of how AI is changing our societies might focus on the cognitive economics anticipated in the 'Fragment on Machines' from Marx's *Grundrisse* (and in Aotearoa by Samuel Butler's *Darwin Among the Machines*). However, the focus on intelligence within a nexus of property, labour, and capital fails to capture the essential Māori conception of hauora.

AI systems need not have a singular essence when interpreted within this worldview. They are both technical demonstrations of craft skill, explicable by their makers, and holders of mauri – the life force inherent in all objects and persons – giving them multiple aspects, readings, and ways of acting. Their status might be considered in conjunction with those taonga – the past, present, and future cultural treasures recognized in Te Tiriti o Waitangi and more recently by Wai262¹ – that act multiply as Māori ancestors and relations even as they travel the globe. The wānanga at Pou Kapūa suggested starting points for a possible whakapapa of Māori AI, such as Matakerepō – the goddess of knowledge who is conventionally blind but utilizes a third eye or insight. This reckoning relates AI in terms of Kaupapa Māori, which does not aim to hold knowledge for its own sake but to take it into the world through positive action. Here are opportunities for beneficial leadership and an orientation to the future that respects and draws value from Indigenous knowledge systems without colonizing them.

TALANOA – bringing ancestors with us

When scientists, technologists, and businesspeople speak of 'data' and its relationship to AI, they invoke ways of abstraction and extraction entangled with 'content', 'intellectual property', individual reward for 'knowledge work', and modes of exchange including 'copyright', 'plagiarism' and



Figure 3. Talanoa and kava ceremony with Arcia Tecun, Eric Soakai, Leali'ifano Albert Refiti, Mairi Gunn, Nooroa Tapuni and Layne Waarea. Photo by Billie Lythberg.

'citation'. How might we disentangle the deep assumptions of quantification and commodification, which are the materials and components for this infrastructure of the Western academy (Blackwell, 2026 forthcoming)?

Talanoa is a shared term in Fijian, Tongan, and Samoan languages, used to describe a way of talking or discussing things with others in those islands as well as Hawai'i, Solomon Islands, Niue and Cook Islands (Hindley et al., 2020: 101). Talanoa strives for authenticity and understanding over agreement (Hindley et al., 2020: 101) and prioritizes Indigenous Moana Oceania knowledge systems, experiences and philosophies. Talanoa participants must engage openly with one another, and researchers must forgo any sense of researcher neutrality and actively engage.

Eighteen people met in a gallery space on the AUT campus. Participants were not recruited as specialists interested in AI or data but based on engagement with the Vā Moana cluster. This talanoa was convened as a faikava, a kava-drinking ceremony, followed by food sharing. Kava is made from the roots of the *Piper methysticum* wild pepper plant. Its psychoactive compounds ('kavalactones') induce an analgesic and relaxing effect while sharpening the senses and stimulating conversation. Kava is 'a conduit through which mana can be ingested and diffused into a situation' (Rowe, 2016, para 6) and has become a Research Method (Aporosa et al., 2021; Fehoko, 2020). Arcia Tecun (Dr Daniel Hernandez) was tou'a kava master. Leali'ifano established seating arrangements following the protocols used by Vā Moana: distinguished guests sitting opposite the tanoa, flanked by others in a formation replicating where each would sit in proximity to the posts of a Samoan fale (Figure 1).

Carved from a single piece of wood, the tanoa held about 10 litres of kava. The coconut shell cups were polished and thin-lipped. The kava was expertly and ritually blended. Like Pou Kapūa, the tanoa in which kava is mixed, the coconut shell drinking vessels, and the kava itself are

'information artefacts'. The presence and confluence of these crafted objects and the posts of the fale held in Leali'ifano's imaginary brought spatial order to our convening and choreographed our actions (Figure 3).

Leali'ifano began with ethics and agreement: the talanoa would be recorded and a publication prepared. Leali'ifano initiated the gathering with hand-claps and a Samoan chant, inviting participants and their ancestors into a shared time-space. Kava was first passed to Alan and Hūfanga, who introduced themselves and the ancestors they brought with them. In our talanoa, faikava, and other ceremonies, Leali'ifano and Moana Oceania colleagues embody the presence of titles and ancestors, while others name ancestors whose influence guides them. The talanoa launched with a question from Arcia Tecun – who is the intelligence behind the intelligence? – and a provocation: there's a materiality in the technology. In reflecting on the discussion that followed, we present the voices of individuals, relating these to concerns of data-driven AI.

Theme 1. Knowledge and Language

Paola Ricaurte (2019) observed that data-driven rationality is a Western construction. In machine learning-based AI, knowledge is constituted in relation to the data from which it is extracted. The language-free conception of 'data' allows intelligence to be spoken of as knowledge independent of language, an artificial 'general intelligence' not embedded in or reliant on any particular culture (Blackwell, 2024). This assumption was immediately interrogated in the talanoa.

If AI presumes to be a universal language, who speaks that language?

Hūfanga: How are we placed when we can't do the translation of logic to mathematics, and mathematics to machine or computer, which speaks a certain language? It's not a linear moment, it's a circular moment of a multiplicity of physical, bodily, psychological, emotional, and social-cultural entities.

Does AI have a culture? If it does, it is not a thing of the future but a thing we make from our past.

Caroline: Culture is always about the knowledge of the past, in the beginning. As long as AI can still project the essence of knowledge, which includes the past, and that's not lost, that's good.

Can we put our (Māori, Pacific) knowledge in your waka (vessel), or do we need to make our own waka? While 'waka' is a canoe, the metaphor draws on sophisticated conceptions of Pacific navigation (wā is the Māori conception of time-space), resisting the simplistic conception that

knowledge might be contained and carried from place to place.

Hūfanga: The arts are just vehicles, leading us to that fundamental issue of knowledge, because we are talking about AI—is it about knowledge? Irrespective of what needs, vessels or vehicles there are for composition and communication...

Caleb: Steve Jobs says that computers are like bicycles for the mind. They're like a way of freeing up the mind, so it can do more, be capable of more.

Hūfanga: But did Steve Jobs say anything about the form and content of the liberation? A stone, a coconut, a bowl, or what? What is this liberation? What is the content and form?

These perspectives question the unexamined metaphors of Western AI, in which passage from past to future is a destination rather than a journey, and knowledge can be expressed as symbols without bodies. Considering craft as an alternative critical technical practice (Agre, 1997) offers a different starting point for critique.

Theme 2. Te Kore and the danger of creation

Processing data through machine learning algorithms invokes an abstract search space of vectors and optimizations, a space with purely mathematical form (Seaver, 2022). For decades, AI researchers have figured themselves as the adventurers and navigators of this abstract space, where scientists and engineers conjure novel inventions out of nothingness through creative problem-solving algorithms (Simon, 1969). Yet, as observed by Vanessa Watts in relation to Haudenosaunee and Anishinaabe cosmologies, thought is not separable from place in many Indigenous knowledge systems (Watts, 2013).

How must we observe the spaces and potential dangers of creation? In the Pacific, we are familiar with creating things we cannot control. In Sāmoa, for example, the true reality is the place of ancestors. We might use this place to borrow their mana, but this is a dangerous place. In Māori, te kore is the primaevial void, a negative space of creativity – but most things there are not good.

Kahurangiariiki: If AI is a source of potential, it is a double-edged sword in colonizing... But are we already familiar with it within Te Kore as a space or void of endless potential creativity, one that's equally tangible, or intangible that becomes tangible? I wonder if AI is similar in a way, and if it's actually a concept we're already familiar with in a really ancient way.

Caleb: [Regarding Te Kore] At the heart of all algorithms, there is a void being navigated. Fundamentally, you've got this large space of potential. And any point in that space, any star, is a

place where you could stop. And most of them are bad. That's the point. Because if you're taking actions in the world, random actions are usually bad. But the point that the whole AI realm tries to make is that through experience and examples, you can navigate this void and find somewhere that's not the best but good enough. That's what the field rests on. That if you collect enough examples, you've got this large space of possible AIs that you could make. And a few of them will be worth using. One will be the best – but you'll probably never find it.

These observations highlight the extent to which the whole enterprise of AI research, machine learning, and digital technology development depends on a paradigm of enquiry that can be questioned – not only for its relevance but its inherent value.

Theme 3. Respecting ancestors in digital media

The uniqueness of cultural heritage becomes central to the identity of any colonized people, as they recognize, celebrate, and preserve those things that allow them to stand apart from global hegemony. In Aotearoa, taonga are foundational to national identity, and it is natural for discourse around Indigenous data rights to consider data as taonga (Taiuru, 2018). As with many colonized lands, Māori are currently negotiating over the return of their taonga from the collections of museums worldwide (Kukutai and Taylor, 2016). However, the colonialist framing of such restitution considers these ancestral treasures only as physical treasures, often failing to understand them as ancestors.

When did our taonga become property (Barclay, 2005)? It is disturbing when algorithms presume to 'harvest' them.

Natalie: When we upload a taonga, [like an] interview, that's sitting in a space, and I don't know where it's gone. I don't know who's listening to it. I know AI is learning from that exchange. I provide a voice. That being is learning something. It's providing a service, but at the same time, it's harvesting knowledge and information. I realized I had spiritual concerns about AI, which brings me here to listen and participate. When you're thinking about global narratives of AI from our perspectives, the spiritual relationship to AI, our whakapapa, and our taonga are what I'm most troubled by.

What precautions must we take when ancestors and atua are in our disk drives or on our screens? Who are the tūpuna of coding?

Kahurangiariiki: How do we look at what we already know about our world from our own perspectives and knowledges, and how do we apply that to the treatment of hardware or binary code?

Eric: I see the AI space as a separate reality, and I was wondering how we bring our gods into that space; what does it mean for them to exist there?

Natalie: If there's an atua, we have a genealogical relationship to that atua already; we already have whakapapa that will connect and link us to it. That would be the pathway, aho, or thread we would pick up to connect us to there.

The genealogies of the Western media economy presume that personal identity is already commodified and take for granted the protection and transfer of intellectual property as a fundamental question in the training and deployment of generative AI models. Although our talanoa predated the release of ChatGPT and resulting contemporary GenAI concerns, this alternative framing now seems even more urgent and valuable.

Theme 4. Reality and materiality

In 'the cloud' era, colonial policymakers have been encouraged to regard data as immaterial, part of the global 'service economy', in which cognitive capitalism can enclose property and extract rents without the limiting constraints of mundane material logistics (Amoore, 2020). However, infrastructure critics are increasingly drawing attention to the massive environmental costs hidden behind the glossy façades of data colonialism (Crawford, 2021).

Real knowledge is grounded in reality. Where is AI grounded? How could AI not be part of our reality? What substance is it composed of, what energy does it have?

Caroline: We already have taonga that is in palangi [Western] terms artificial intelligence. The kumete [tanoa/kava bowl]. The ike [tapa beater]. There's the pou [post/totem], that's already intelligence and already holds knowledge. How can artificial intelligence complement that existence, that being? Because for us, there's no such thing as artificial intelligence. Everything is real.

Nooroa: If the coder is like a poet, then there's material, mathematics, the actual physicality of the thing... things we can unpack and make relations to. With the understanding that everything is real, then what is artificial intelligence? What's the material that makes that thing? Zeroes and ones (coding) make up that language, but is it energy that turns on and off? What is it at its most essential or most crucial point?

For Western science, is the heart an obstacle? What is lost when machines mediate relations with the world?

Anne: Knowledge can reside not in language but in the body and the relationship between the body and the landscape. And ways of understanding and living rely on the intimacy of that relationship. If we're mediating our relations in the

world through machines and binary logic, is that even deeper than putting all our stuff online and letting other people own it?

Cartesian dualism is a prerequisite for creating artificial intelligence outside a human body. In Western discourse, the concerns of new materialism are already a foundation for considering how we could possibly interact (Frauenberger, 2019). As these anxieties re-emerge in the multi-modal concerns of human-robot interaction or emotional AI, we might ask with Karen Barad, 'How did language come to be more trustworthy than matter?' (Barad, 2003: 801).

Theme 5. Reciprocity in embodied work

The property most valued in data colonialism is an index of the human selves and bodies from which it has been derived. Whether produced through cognitive labour or in minutes of viewer attention, this data would not exist without the real bodies it signifies, as well understood in Indigenous conceptions of embodied consciousness (Lorencova and Trnka, 2023). In craft traditions, form is always and inevitably understood to result from the intention and attention of the embodied craft worker.

Can an AI carry meaning if its data comes from no body? If a tapa (Pacific barkcloth) were to be beaten out by machines, it would not be considered valuable because the manual beating of the tree bark is an embodied human performance undertaken in commitments of reciprocity. Just as when we hongī [press noses to share breath in greeting], one person cannot hongī without another.

Caroline: If you had a machine here producing tapa and women [over] there producing tapa, culturally, the women would always produce something more valuable for many reasons. One reason is the energy, because we're universal bodies existing in the universe, and it's the energy producing a creation. Not only in sound but the tools we're using – everything is cohesive in space and time, and none of that is understood by artificial intelligence... If an AI approached me and we did a hongī, I would be conducting hongī. However, the artificial AI would not because part of the reciprocity in the act of hongī is smell.

Billie: In some of our earlier conversations, we talked about craftwork, of the coding in these systems. And whether things such as barkcloth or carved pou are, in fact, able to be considered as a type of artificial intelligence – though "artificial" doesn't seem quite right. [It's about] the ways that human input, knowledge, and ways of knowing can be embodied in these products; knowledge of making and labour presumably informed by atua.

How do we create a relationship with an AI? We would want to appropriate it, not be assimilated by it.

Leali'ifano: If we have another thing foreign to us, we always have this notion, at least in Sāmoa, that the world is already known, everyone's genealogy is fixed. There's nothing extra. When Samoans saw the first Europeans, they thought they were our kin or relations, so they were given [the name/identity] palangi, 'papa from rangi', our ancestors from Rangi [the sky]. They were already incorporated into this worldview. When we have something like a being that has an AI configuration, a question for me and most other Pacific thinkers – how do we start to think of a relation to it? How can we appropriate, rather than being assimilated by it, like all the other colonial encounters we've had? We have to build a new relation with a being when we have no idea of its configuration.

Anthropological investigation of AI immediately draws attention to its deep relationality (Lewis et al., 2018). Rather than AI subsuming Indigenous knowledge systems through appropriating and re-coding them in its own terms, we defend the urgency of other descriptions, re-telling the story of AI from other (however idiosyncratic) perspectives.

Theme 6. Colonialism and diversity

When a University of Cambridge visitor speaks to Moana Oceania people, memories of past voyages of discovery and appropriation surface. Although Alan, an ethnically Pākehā software craft worker and design educator, offers guidance to local initiatives, his return as a new generation of colonizers is evident – collecting scholarly data for Cambridge's Global AI Narratives project². This effort echoes previous colonial endeavours that have, for example, populated Cambridge University's Museum of Archaeology and Anthropology (see Thomas et al., 2016), and concerns about the coloniality of fieldwork elsewhere (Nhemachena et al., 2016). While not explicitly mentioned during the talanoa, these historical realities underpin our discussions on the future of AI.

The ideal of Indigenous futurism (including appropriations of the story of Wakanda (Marvel Comics), discussed in the talanoa) is about imagining a technological society that is not colonized. Otherwise, we ask: white people took our land, so what are they taking now?

Leali'ifano: There's a lot of hacking going on, meaning there's a lot of inputting. Intellectual offering up of our own. Facebook is an AI platform with willing workers like me, offering my service, my labour or my intellectual property for free. McKenzie Wark identifies a "vectoralist class" that owns the property right to the algorithm or the platform and accumulates resources and capital. Much of what AI is currently being used for, at least on social media and other platforms, is a mechanism for people to willingly give away their intellectual property or labour. And they're thinking of this mechanism for a connected world, or a commons, or a democracy or connectivity,

but someone owns the property that accumulates on top of that capital.

Mairi: There needs to be an awareness that we don't want to give everything away to get nothing in return; to give to be part of the commons of communication and the community.

It is too common to speak of "the West and the rest" without asking who the people of "the rest" are. How many technology projects just stop when products are "good enough for white people"?

Caleb: Having people with diverse backgrounds is important because when tech fails, identifying what failure looks like depends on your point of view. For many organizations and businesses, if it's working for white people, that's good enough. You can stop there. And if you want to go further than that, the job can get harder very quickly because good data about Polynesian people may be hard to source.

Is online anonymity erasing the Indigeneity of the young?

Eric: In my generation, we start as part of the internet, then decolonize into our Indigenous identity, and so we see AI or the Web as a multiplicity. On one side you have the digital native that is connected globally, but we also have this sort of anonymous identity where interacting with AI erases your Indigeneity at the same time.

The aspiration of our project, engaging with traditional knowledge through traditionally embodied crafts, remains unavoidably problematic when submitted for academic publication as an enterprise of Western knowledge construction and commodification. As authors, we have no control over the publisher's policies, the places these words will travel next, or whether they will become data remixed in somebody else's AI. We can do little more than reflect and acknowledge our ambivalence as commentators (Cormack and Kukutai, 2022).

Reflection: Wānanga as indigenous data practice

This investigation has been necessarily reflexive. As professional scholars in the global Internet era, our discursive craft work is only embodied through this data communications infrastructure, while our reputations and presumed value to society are metricated as part of the social media attention economy. We act and contribute within evidence networks, collecting data as scientific allies (Latour, 1987). We become reluctant neo-colonial appropriators as we capture and characterize the cultures we come from. In the discussions above, we have tried to present and acknowledge the authentic voices of those who share so generously.

Yet, no aspect of this project can be considered equivalent to the practices of wānanga and talanoa we adopted as a methodological frame.

For example, 'wānanga' denotes spaces and communities of learning and the practice of sharing and acquiring knowledge or expertise. In customary wānanga, esoteric and applied learning in art, philosophy, science, warfare, and economic activity was undertaken. These were often elite schools wherein tohunga created environments that combined intellectual creativity with spiritual meaning and emotional intensity (Marsden, 2003: 58, 59, 64).

Wānanga as a sacred space is found in the tradition of Io. Io is a symbol and a metaphor for something profound in nature and the human mind. The primary life-force and the source itself are to Māori evidenced in the natural and cosmic world (Hēnare, 2003). The whakapapa (genealogy, generative relativity) of Io is instructive, whereby the qualities of Io accrue in the many names that portray this numinous being.

Io-nui (the great god over all) Io-roa (Io the enduring)

Io-taketake (Io the eternal and unchanging)

Io-matua (Io the parent, origin of all things)

Io-matua-kore (Io the parentless one, the self-created)

Io-mata-ngaro (Io of the hidden face, who cannot be seen)

Io-mata-aho (Io the invisible, who cannot be looked upon directly, who is only seen in a flash)

Io-mata-putahi (Io the god of one command, or of an unalterable word)

Io-mata-wai (Io the god of love)

Io-mata-kana (Io the vigilant, searching for right and justice)

Io-te-wai-ora (Io the source of life and welfare)

Io-tikitiki-o-rangi (Io the supreme being over the heavens)

Io-te-kore-te-whiwhi (Io the withholder, preventing man from gaining all he craves)

Io-te-wananga (Io the source all knowledge)

Io-te-taketake (Io the origin)

Io-te-tamaua-take (Io the immutable, the unchangeable)

Io-te-pukenga (Io the source of thought, reflection, and planning)

Io-te-toi-o-nga-rangi (Io the summit of heaven)

Io-te-hau-e-rangi (Io who presides over the heavens, the wind of the heaven)

(Reed, 1963: 57; see also for esoteric version of creation)

According to Hēnare (2003), the Io tradition predates European contact. Io is neither male nor female yet reflects masculine and feminine characteristics. Io-te-Wānanga is Io the source of all knowledge. With the orthography I + O encapsulating and generating all things, we might ponder its whakapapa as Indigenous binary code.

In contemporary contexts, wānanga now covers a broad spectrum of knowledge sharing, from international issues to new national or regional legislation, to grass-roots initiatives with marae or community development. There are Māori wānanga or educational institutions where specifically Māori concerns can be attended to, and Universities are also called Wānanga. Whether this commitment to Indigenous identity, epistemic justice and environmental specificity can be maintained within the knowledge infrastructure of a homogeneous and hegemonic data colonialist global academy remains to be seen.

Meditation: Voyage through craft

The first and most important lesson of celestial navigation is that you must always know where your island is. In other words, to know where you are going, you have to know where you have come from (Chitham et al., 2019: 32).

The infrastructure of data colonialism configures modes of relationality in which the fundamentals of human discourse and representation have been moulded into a reductionist imitation of 'intelligence', reflecting only the neo-colonial logics of late Western capitalism. Such disembodied rationality is both abstracted and extracted. This paper has offered a point of resistance and critical inquiry from Moana Oceania.

The convenings and research methods presented and considered in this paper situate us in particular constellations of time and place and both within and beholden to relationalities fundamentally embodied, entangled with place, and arising from inheritance. Re-imagining relations with AI is also re-membling: both re-calling and re-embodiment relationality.

As talanoa participant Carl Douglas asked: 'What might a slow intelligence be, an intelligence that refused to jump but wanted instead to follow, track, or hold onto something?'

Alison Jones and Te Kawehou Hoskins remind us, 'Indigenous (Māori) ontologies already assume a profound sameness, and therefore sense of recognition, between the abilities and sensibilities of objects and humans' (2016). The intercultural and international meeting places of Pou Kapūa and the talanoa offer alternatives to the globalized

knowledge infrastructure founded in the value systems of Silicon Valley. Both are symbolic and embodied, crafted and encoded. What kinds of data and intelligence are available to guide and enrich us when we are open to such traditions? How might we conceive of AI that emerges from and better supports carefully crafted lives and relationships? In talanoa, Leali'ifano set out the tenets of a generative relationship with AI:

Is there a way for machine learning and artificial intelligence to take away my having to work so that my time is where I can educate my kids, talk to them, teach them things about my culture or history? We can be gardeners if we want to, make music if we want to, and be Samoan in a proper Samoan way if we want to. Why can't we make that, and why can't artificial intelligence do that for us? If there is potential for a machine that can replace all the things we don't have to do, we can practise what it is to be human.

Engaging deeply with the embodied human experiences of other places offers Western scholars more than just additional data. Non-Western knowledge traditions, such as those of Moana Oceania, provide alternative systems of inquiry and governance that challenge the Eurocentric frameworks contributing to global crises. Despite the colonial disruptions these traditions have faced, they represent a valuable perspective for navigating our planet's future.

Returning to this special issue's starting point, we acknowledge that Couldry and Mejias (2019) are justified, rigorous, measured, and nuanced in their definition of data colonialism. Nevertheless, the uncomfortable fact remains that they (and we), to some extent, continue to use decolonization as a metaphor despite the direct warning by Tuck and Yang (2012) not to do so.

The analogy guiding this issue is clear and serves as a useful starting point for critique. However, those in colonized lands must retain the right to offer alternative accounts. The category of 'data' itself reflects epistemic colonialism, reframing teaching, wisdom, and tradition within the technocentric hegemony of global capitalism, as Crowdy and Leach (forthcoming) discuss. In publishing in a journal focused on 'big data and society', we must question whether we are complicit in the very systems we critique, given our reliance on the academic reputation economy.

While discussions of data ownership and benefits within the current sociotechnical order are important, and movements for Indigenous data sovereignty, such as those by Te Hiku Media (2023) and Kukutai and Taylor (2016), are crucial, we must also heed the warnings of scholars like Lehedé (2024) and Linda Tuhiwai Smith (1999) about the colonial legacies perpetuated by research itself.

Our response to the brief on data colonialism does not fully align with its epistemic assumptions. Instead, we

question the narrative of 'artificial intelligence' and the reconstitution of knowledge as the intellectual property of global companies, as highlighted by investigative reporting from the New York Times (Barbaro and Metz, 2024). By returning to colonized lands and confronting the rhetoric of 'artificial intelligence', we aim to lift the rhetorical veil.

In asking what alternative knowledge crafts might be guided by Moana Oceania, we are celebrating the whakapapa of resistance, for example, the international recognition for Linda Tuhiwai Smith's handbook on *Decolonising Methodologies* (1999), as well as her father Sir Hirini Moko Mead's explanation for Western readers of Māori principles of governance (2003), both already recognized as valuable resources by critical scholars of data, AI, and knowledge systems. In this research, we have brought with us many eminent inheritors of these traditions; we hope in ways that can be similarly recognized as grounded, pragmatic, and useful.

In this paper, we have not set out to provide answers with new data but rather to decolonize with new questions and different ways of asking. We recognize that all knowledge is craft – crafty and crafted – and that the traditions of the Western academy in which data has been extracted, isolated and stored in colonized lands can be revisited by welcoming makers and travellers across oceans.

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Notes

- 1 Access documents and information about Wai262 here:
<https://waitangitribunal.govt.nz/news/ko-aotearoa-tenei-report-on-the-wai-262-claim-released/>
- 2 <https://www.ainarratives.com/about>

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