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IntechOpen Series  
Social Sciences, Volume 18

# Indigenous People

Surviving and Reviving in the 21st Century

*Edited by Jack David Eller*





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# Indigenous People - Surviving and Reviving in the 21st Century

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Published in London, United Kingdom

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Indigenous People – Surviving and Reviving in the 21st Century

<http://dx.doi.org/10.5772/intechopen.1011271>

Edited by Jack David Eller

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First published in London, United Kingdom, 2026 by IntechOpen

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#### British Library Cataloguing-in-Publication Data

A catalogue record for this book is available from the British Library

Indigenous People – Surviving and Reviving in the 21st Century

Edited by Jack David Eller

p. cm.

This title is part of the Social Sciences Book Series, Volume 18

Series Editor: Sandro Serpa

Print ISBN 978-1-80631-748-6

Online ISBN 978-1-80631-747-9

eBook (PDF) ISBN 978-1-80631-749-3

ISSN 2977-6473

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# IntechOpen Book Series

# Social Sciences

## Volume 18

### Aims and Scope of the Series

The social sciences, as a form of scientific knowledge anchored on epistemological foundations, theories, and specific methodologies, both in their fundamental and applied dimensions, are paramount for understanding and, consequently, developing instruments that contribute to improving social and environmental living conditions. This Social Sciences book series, based on the concept of the social sciences as key elements in the promotion of scientific knowledge and its inherent consequences, has as its primary goal to be a space for the dissemination of relevant information on various objects of study, aimed at specialists, students, policymakers, and others interested in the challenges facing humanity. Thus, the aim is to promote scientific progress through the sound and rigorous dissemination of studies that, from the perspective of the social sciences, either through a specialised disciplinary approach or through interdisciplinary perspectives, foster a deeper understanding of the objects under analysis, clarifying the issues addressed and their implications.



# Meet the Series Editor



Sandro Nuno Ferreira de Serpa (PhD, FRSA, FRSS, FRGS, FR-SPH, FRAI, FISDS, GLO Fellow), is an Associate Professor with tenure in the Department of Sociology at the University of the Azores and a Senior Integrated Researcher at the Interdisciplinary Centre of Social Sciences (CICS.NOVA.UAc). With over 25 years of experience in higher education, in 2025 Dr. Serpa is ranked by ScholarGPS as the 8th scholar worldwide in Sociology (Prior 5-Year category) and 1st in Portugal. His career is distinguished by encompassing over 400 scientific publications published in Brazil, Canada, China, Germany, India, Kazakhstan, the Netherlands, Pakistan, Poland, Portugal, Romania, Spain, Switzerland, Turkey, the United Arab Emirates, the United Kingdom, and the United States of America with a high research impact, as evidenced by a Google Scholar h-index of 29 and a Scopus h-index of 14 (with 79 documents indexed). His international prestige is underscored by his status as a Fellow of five distinguished British Royal Societies: the Royal Society of Arts (FRSA), the Royal Statistical Society (FRSS), the Royal Geographical Society (FRGS), the Royal Society for Public Health (FRSPH), and the Royal Anthropological Institute (FRAI), alongside being a Fellow of the International Society for Development and Sustainability (FISDS) and Fellow of the Global Labor Organization (GLO). Registered Vetted Expert for the European Commission and the United Nations. Dr. Serpa's research focuses on the sociotechnological co-evolution of Society 5.0, Artificial Intelligence in Education, and Algocratic Governance. An expert in strategic editorial leadership, he currently serves as the Series Editor for Social Sciences Series at IntechOpen, Editor for SAGE Open, and is a member of the Editorial Board for International Studies in Sociology of Education (Taylor & Francis) and Societies (MDPI). His extensive administrative background includes roles as Department Head, Degree Director, and Deputy Director of CICS.UAc, reflecting a profile that harmonizes scientific excellence with high-level academic management.



# Meet the Volume Editor



Jack David Eller is a Distinguished Professor of Anthropology at Woxsen University, Hyderabad, India. His areas of specialization include anthropology of religion, psychological anthropology, anthropology of violence, and anthropology of contemporary politics and culture. He is the author of numerous articles and over twenty books, including most recently *Beyond Liminality: Ontologies of Abundant Betweenness* and *Apisteology: The Study of Not-Believing*. He is also the editor or co-editor of several volumes, including *Nonbelievers, Apostates, and Atheists in the Muslim World*, and, for IntechOpen, *Gun Violence and Prevention – Connections, Cultures, and Consequences* and *Anthropology—History, Theory, Practice, and Engagement*.



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# Preface

Some 370 million individuals, roughly 5 percent of the world's population, claim or can claim the label of "indigenous people." Although there are exceptions, indigenous societies or "indigenous peoples" (recognizing the term "people" as a collective singular noun for persons who share an indigenous identity) are small, remote, non-state groups with more or less traditional cultures and strong, even spiritual, connections to their land. They are typically regarded as the original inhabitants of their territories or, at least, the current inhabitants when invading and colonizing societies arrived, as in North and South America, Australia, and New Zealand, and were subsequently overwhelmed and displaced (if not, in many instances, exterminated) from their homelands. In places that were less thoroughly colonized, like most of Africa and Asia, the term is more problematic. It tends to indicate "tribal" peoples who are politically and economically marginalized in their states, states dominated by peoples who themselves often claim the mantle of "indigeneity."

This opening paragraph already suggests the diversity of the experience often called "indigeneity" and, therefore, the problem of speaking about it in a single voice. At the same time, indigeneity has become a potent international concept, with major institutions such as the United Nations promoting indigenous identity and indigenous rights. Furthermore, equally if not more interestingly and importantly, indigenous peoples themselves have organized internally and cooperatively to meet the challenges of the modern world. Again, it bears emphasizing that many indigenous peoples have long since disappeared under the pressures of colonialism, war, disease, cultural loss, migration, and intermarriage. In the United States, where "Native American" status depends on federal recognition, the "Termination Act" of 1953 (officially known as House Concurrent Resolution 108) officially ended that recognition and the collective rights it conferred on native/indigenous groups. Fortunately, by the late 1960s, opposition to termination was mounting, and many terminated tribes recovered their native/indigenous status, although termination was not officially abolished until 1988.

The history and experience of indigenous peoples differ across countries, and even within particular peoples within the same country. The present volume explores a small sample of these cases, with implications far beyond the specific peoples discussed. What emerges is a collage of local societies that continue to suffer marginalization and subordination but have made adaptations, often quite clever and remarkably successful, to modernity. Indeed, binaries like traditional/modern or Western/non-Western or local/global are no longer viable, and not only in the domain of indigeneity. Culture, technology, and political concepts and movements circulate to, between, and often enough from indigenous peoples, which they accept and modify selectively for and in their own interests. Moreover, this is not a one-way process: the ideas and actions of indigenous peoples frequently impact non-indigenous, state and trans-state, and Western societies in their politics, educational systems and curricula, and histories and self-knowledge.

The present volume explores the situations of struggle, survival, and revival of indigenous peoples in Anglophone settler-colonial states, including the United States, Canada, and Australia, as well as in non-Anglophone and non-Western states such as South Africa, Taiwan, Fiji, and Brazil. Several chapters examine education in indigenous contexts, or more accurately, in contexts of the intersection of indigenous and non-indigenous societies and their respective knowledges. Other chapters approach the question of indigenous knowledge in diverse ways, describing, for instance, how indigenous knowledge is applied to modern or non-indigenous projects or, conversely, how indigenous groups employ modern or non-indigenous techniques and technologies to preserve and promote their unique knowledges and cultures.

In no way do we imply that all is well in the world of indigenous peoples. They remain not only “the other” to the states that control the international system but the subordinate other, the subaltern, with less wealth and power to achieve their own goals and express their own identities. What we do most emphatically imply is that indigenous peoples are not, and never have been, passive victims of national and global forces but are and have been active and often quite articulate and passionate defenders of their cultures and identities and critics and commentators of those oppressive forces, while emerging as effective agents in the construction of their own modern indigenous cultures and identities. If “modern indigenous” sounds like a contradiction, hopefully this volume will dispel that false dichotomy as well.

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## Chapter 1

# Introductory Chapter: Who Are Indigenous Peoples?

*Jack David Eller*

### 1. Introduction

In 2025, the International Work Group for Indigenous Affairs published its 39th annual report on the Indigenous World [1]. A human rights NGO founded in 1968 to promote and defend the individual and collective rights of Indigenous Peoples – the organization and some entities and scholars capitalize the term while others do not – its report provides a summary by country of Indigenous Peoples, starting with Algeria, where only the Amazigh are named, followed by Botswana, where three groups (San/Basarwa, Balala, and Nama) are specified, although the government does not recognize them as such, asserting instead that “all citizens of the country are Indigenous” [1, p. 37]. This last point is important and will figure prominently below, as well as the fact that the 700-plus-page text never specifies how it classifies a society as indigenous nor offers a definition of indigenous.

As Feyissa and Zeleke rightly assert in their study of the struggle of “the indigenous” in Africa, “the big elephant in the room” of indigenous studies and activism “is the issue of definition – who are the ‘indigenous people’ anyway, and how to find them, and where?” [2, p. 117]. This is a critical question because how we define such a social category determines who qualifies under it and, in the contemporary global regime, who is eligible to benefit from it. Various individuals and institutions have defined “indigenous people” differently – or, as we will see, not at all. Some observers apparently consider it self-evident who indigenous people are; others want to keep the label strategically vague; others recommend discarding it altogether; and still others have argued, often vociferously and aggressively, about who should and should not be accepted as indigenous.

Contrary to those who treat “indigenous people” as self-evident, this introductory chapter explores the debate or contest over the often eagerly-sought status, which is, in a sense paradoxically, quite a recent status. Also paradoxically, while indigenous people are often imagined or stereotyped as the most local of populations, we will discover how the concept or status has been shaped and promoted by translocal forces and institutions. The fundamental difficulty is that we cannot proceed to say anything meaningful about indigenous people unless we know who we are talking about. However, those who are expecting the chapter to settle the question will be disappointed; the position taken here, and by many, if not most, parties to the controversy, is that “indigenous people” is not an objective or scientific concept – that is, there is no single trait or set of traits that unproblematically assigns a group to the category – but a political or legal one, forged in the struggle for various rights and

prizes. Ultimately, we will agree with Niezen that “Debates over the problem of definition are actually more interesting than any definition in and of itself” [3, p. 19].

## **2. The terminological Universe of the indigenous**

“Indigenous” or “indigenous people” is a term of relatively recent usage and occupies a privileged place today in the constellation of vocabulary about particular kinds of human beings or groups. The word derives from the Latin *indigena* for “born in” (*indu*, in/within + *gene*, to give birth) and implies origination in/from a certain place. As such, it shares a meaning with “native” (also connoting birth), an earlier term for the same kinds or class of people. Related to both words is “aboriginal” (from the Latin *ab*, out of + *origo*, descent, birth, beginning), which is applied to some indigenous people and has become essentially the default collective name for the indigenous people of Australia (the Australian Aboriginals).

At some times and places, the people commonly dubbed indigenous have also been called “tribal,” on the assumption that they have a characteristic social organization, ordinarily perceived as small, local, linguistically distinct, and territorially defined kinship-based communities; however, technically speaking, “tribe” refers to one specific form of prestate social organization, which is not indicative of all indigenous people, some of whom inhabit band or chiefdom systems. Furthermore, as the roots of “indigenous” and “aboriginal” suggest, the general sense is that such people are the original and primordial inhabitants of their areas, leading to other labels such as First People or First Nation. “Indigenous” also substitutes for what was formerly and pejoratively known as “primitive” or “savage,” and, in the worst case, as some antagonists of the term have complained, it perpetuates that same distinction or division.

The invocation of *nation* in the form of First Nation highlights the essential factor, always to bear in mind, that the primary significance of “indigenous people” is not as the plural of “indigenous person” but as a mass singular – *an* indigenous people – for which the plural is “indigenous peoples.” That is, while there are inarguably indigenous individuals, the thrust of the term and concept is a collective identity and subsequent collective claims premised on that identity. So, the Warlpiri or Pintupi are an indigenous people of Australia, just as the Lakota or Cherokee are an indigenous people of North America.

If we now tackle the meaning of “indigenous people,” we find an evolving and shifting semantic field, which Chandler and Reid call an *ontopolitical* field [4]. They construe the concept as ontopolitical – combining being and power – because being, or being labeled and accepted as indigenous, confers a degree of power or legitimacy on a group or nation as it presses its claims, especially since those groups or nations must press those claims against the central agents of modern politics, namely states. Thus, recognition as an “indigenous people” is a valuable asset in political struggles, raising the stakes over who is or is not indigenous.

Niezen sheds a great deal of light on the development of thought about “indigenous people,” as does Coates [5]. A cognate to “indigenous” was used in French (*indigène*) no later than 1830 to mark the local population of Algeria, leading to the governing apparatus known as the *Code de l'indigénat* or Native Code. Niezen picks up the story, though, after World War I, when the International Labour Organization adopted the phrase in regard to the laboring natives of European

colonial possessions who, the ILO granted, were compelled to work for their colonial masters but should be treated humanely. In 1952, the ILO released a study literally titled “Indigenous Peoples” but still envisioned their eventual assimilation or disappearance in modern societies and states. More famous and momentous was the 1957 Indigenous and Tribal Populations Convention, which begins to articulate what it means to be an indigenous people: they are (1) “members of tribal or semi-tribal populations in independent countries whose social and economic conditions are at a less advanced stage than the stage reached by the other sections of the national community,” (2) “whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations,” and (3) who “are regarded as indigenous on account of their descent from populations which inhabited the country. . . at the time of conquest or colonization and. . . live more in conformity with the social, economic, and cultural institutions of that time than with the institutions of the national to which they belong.” By “semi-tribal” groups, the ILO meant peoples who “are in the process of losing their tribal characteristics” but not yet fully integrated into the dominant society/state [6]. The document then commends administrations to protect *but to integrate* such peoples.

Several of the essential components of future definitions of indigenous people are present in this statement:

- They are disadvantaged or underdeveloped relative to the mainstream of the state in which they are circumscribed.
- They are distinct from the mainstream by their customs or traditions.
- Their cultural uniqueness is also a matter of descent or blood relation.
- Their ancestors occupied the territory prior to colonization.

Some variation of these features figures, in more or less reworked form, in virtually all later definitions, such as that proposed by UN official Julian Berger, for whom indigenous peoples “are the descendants of the original inhabitants of a territory which has been overcome by conquest”; They are further described as “nomadic and semi-nomadic peoples” lacking “centralized political institutions” but sharing language, culture, religion, etc., and – importantly – having “a different world view” toward nature and a subjective sense of being indigenous [5, pp. 5–6].

Of all the preliminary definitions, none has been more influential than that of José Martínez Cobo, who stipulated in a 1986 UN report that

Indigenous communities, peoples, and nations are those which have a historical continuity with preinvasion and precolonial societies that developed on their territories, consider themselves distinct from other sectors of societies now prevailing in those territories or parts of them. They form, at present, nondominant sectors of society and are determined to preserve, develop, and transmit to future generations their ancestral territories and their ethnic identity as the basis of their continued existence as peoples, in accordance with their own cultural patterns, social institutions, and legal systems [7, p. 38.]

He proceeded to base such historical continuity on the current occupation of ancestral lands, common ancestry from the original occupants, culture, language, or other unspecified “relevant factors.”

Around the same time, the UN Working Group for Indigenous Peoples (more on that agency below) drafted a definition to the effect that

Indigenous populations are composed of the existing descendants of the peoples who inhabited the present territory of a country, wholly or partially, at the time when persons of a different culture or ethnic origin arrived there from other parts of the world, overcame them by conquest, settlement, or other means, and reduced them to a nondominant or colonial condition; who today live more in conformity with their particular social, economic, and cultural customs and traditions than with the institutions of the country of which they now form part, under a state structure that incorporates mainly national, social, and cultural characteristics of other segments of the population which are predominant [8]

It also attached a self-identification clause, bestowing indigenous status on any individual who claims it and whose group accepts the claim. Soon thereafter, the World Bank also embraced a definition that extended indigenous identity to a people who “can be identified in particular geographical areas” by some nonspecific measure of attachment to ancestral land, language, social and political institutions, subsistence-level production, and, of course, self-identification.

It is not difficult to see how these definitions introduce vagueness or contingency to indigenous status. For instance, what if a group has lost its connection to or knowledge of its ancestral territory – for instance, if some, most, or all of its population is now urban? What if it has changed its language, customs and traditions, or economic activities? Does it cease to be indigenous? Consequently, Survival International (<https://www.survivalinternational.org>), an organization dedicated to the indigenous cause, disqualified such groups as no longer following their ancient traditions. According to it, not all descendants of original inhabitants are automatically “indigenous peoples”; as Coates quotes the organization, “‘indigenous peoples’ are only those who live in distinct indigenous societies. For instance, all Aborigines in Australia are ‘indigenous,’ but only some still live in indigenous societies and see themselves as indigenous people,” adding in his own words that Survival International ascribes indigenous status “in terms of current lifestyle; an indigenous person living in a city and pursuing a professional career” would sacrifice their indigenous identity [5, pp. 10–11]. Perhaps to avoid just such outcomes, the UN’s Draft Declaration on the Rights of Indigenous Peoples, while listing the rights to which they are entitled, judiciously but illogically dodged completely the question of who these rights-bearing populations are.

So, “indigenous people” emerges as a label that is acquired – after all, as we will discuss in the next section, no society or nation called itself “indigenous” traditionally, that is, “indigenous” is not an indigenous category – and it can be lost or stripped away. This relativity of ascription is one reason why some observers object to the concept. Another objection, especially in liberal democracies, is the demand for communal or collective rights, which conflicts with their values of individual and universal human rights. A third objection, lodged by Kuper among others, is that “indigenous” is an essentializing concept and one that basically serves as a more polite version of “primitive,” “tribal,” or “nomadic” [9]. Kuper saw no need for it in the academic lexicon. Barnard engaged Kuper’s critique, wondering what term would ever satisfy his objections. The problem, or perhaps misunderstanding, according to Barnard, is that “indigenous people” is not – and is not intended to be – an academic or analytical concept but rather a *legal* one, “an ideological and social construction” and “a useful tool” for political purposes, like

*refugee* in international law or *colored* in South African apartheid law [10]. There is not and cannot be a clear and simple definition of “indigenous people,” he concluded, but that is not a fatal argument against it.

Likening “indigenous people” to “ethnic group,” he recognized the concept’s nebulousness and flexibility, as well as its circumstantial or situational nature: just as a group is not *ethnic* until it is in a certain social situation (i.e., a cultural minority in a plural society/state), so a group is not *indigenous* until it finds itself in particular circumstances, usually as a result of conquest, subordination, or colonization. For better or for worse (probably worse), the analogy between indigenous and ethnic leads to a notion of *indigeneity* analogous to that of *ethnicity*, converting an adjective into a noun, a relation into a quality. At the extreme, insofar as “indigeneity” is more than a convenient scholarly shorthand for a complex matter, a group or people is indigenous because it has the quality of indigeneity; on a less extreme reading, as Merlan asserts, indigeneity “connotes belonging and originariness and deeply felt processes of attachment and identification” [11, p. 304]. This approach solves one question but poses another: positively, it offers “to embrace a diversity of experience” across groups, societies, or cultures of tremendous difference – from small forager peoples to million-member nations, from isolated tribes in jungles to urban or diasporic populations – while negatively or problematically, it “is ultimately a cultural and political performance” and a demand to “conform to and perform a mode of being” that is not entirely natural or traditional to the group/society/nation [12].

### 3. Indigeneity as a translocal project

All of these references to the ILO, the UN, Cultural Survival, and similar organizations highlight the fact that indigeneity is not only a status and (questionably) a quality but also a *movement* – one that is *for* indigenous peoples but not entirely *of* them. This too should be self-evident: if indigenous peoples are as small, isolated, and “traditional” as proponents often insist, they could not sway the world community as successfully as they have. Indeed, the advance of the concept of “indigenous peoples” and the achievements by and for them have depended on a complex translocal network of actors. Lee, writing on the subject of “twenty-first century indigenism” (now turning an adjective-become-noun into an ism), names several categories or types of players in the translocal indigenous universe, starting, of course, with indigenous groups themselves – singly but more impactfully in concert – but extending to the states where they reside, national and international institutions, the general public who tend to sympathize with and endorse such initiatives, and scholars in many disciplines who (with the exception of detractors like Kuper) concur that “the concept of indigenous has become a powerful tool for good” [13, p. 458].

For immanent reasons, states or governments are key actors on the indigenous scene, because it is states that initially marginalized or erased – in more than a few instances, attempted to genocidally eliminate – indigenous peoples and that, as the holders of sovereignty on the political stage, are ultimately in the position to address indigenous grievances. Hodgson is correct when she explains that “the paradox is that indigenous groups must demand recognition from the very nation-states that have historically treated them as second-class citizens (if citizens at all)” [7, p. 6].

After World War II and during the Cold War, slowly and grudgingly, Western or Westernized states began to speak the language of self-determination, particularly as colonial holdings attained independence; it became difficult, if not embarrassing, to defend freedom and democracy while oppressing entire segments of their own populations. Indigenous peoples in the United States, Canada, Australia, and elsewhere appealed to, and sometimes (as in the 1970s Wounded Knee standoff) raised arms against, state authority, forming interpeople organizations like the American Indian Movement (AIM, [aimgrandgoverningcouncil.org](http://aimgrandgoverningcouncil.org)). In 2007, one indigenous people in the United States actually quixotically declared its independence as the sovereign Republic of Lakotah (see <https://declarationproject.org/?p=72>).

Into the 1970s and 1980s, indigenous peoples largely confronted their states separately or through national-level associations like AIM or, in 1994, the Zapatista Army of National Liberation in Mexico. Around that era, international and nongovernmental organizations also came to the aid of indigenous peoples, not only championing their cause but providing a crucial forum for these peoples to meet and plan. We have already mentioned the United Nations, which established its Working Group on Indigenous Populations (UNWGIP) in 1982. In 1992, the UN proclaimed an International Year of the World's Indigenous People, followed by an International Decade of the World's Indigenous People from 1995 to 2004. Part of the goal of these proclamations, according to the United Nations itself, was to educate indigenous (and nonindigenous) groups about "the rights and aspirations" of the peoples, implying that they did not already understand their rights and aspirations, which is probably somewhat true. At various forums and events, indigenous representatives met international leaders and each other, where they learned or practiced "to think beyond the specifics of [their local] circumstances to a deeper understanding of the exploitative relationships between nation-states" and peoples like (and often quite unlike) themselves [7, p. 28].

Hodgson describes this process in some detail with respect to the Maasai, an iconic pastoral society in East Africa. In 1989, a Maasai activist addressed the UNWGIP for the first time. Through exposure to other African and non-African indigenous groups, they realized that "the Maasai experience of land alienation, forced settlement, deep disparities in the provision of social services such as education and health, cultural disparagement, and, at times, forced assimilation first by the colonial and then by the postcolonial state were not unique, but part of a global pattern" [7, p. 28]. This experience inspired the society to create Korongoro Integrated People Oriented to Conservation; it also encouraged them to forge alliances with other peoples, as in the Pastoralists Indigenous Non-Governmental Organizations Forum (<https://pingosforum.or.tz>), founded in 1993 to unite more than 50 local groups. Interestingly – illustrating that indigeneity is not a one-way process – most Maasai activists eventually shifted their strategy "from the language of 'indigenous rights' to that of 'pastoralist livelihoods,'" which was more attuned to their interests (and to the internal politics of Tanzania). Hodgson notes that a few individuals continued to participate in UN meetings and regretted the dominant choice to focus on "pastoral livelihoods" to the exclusion of cultural issues [7, p. 213].

Baird finds similar experiences and processes in Laos, which officially acknowledges 49 ethnic groups within its borders, but the foreign concept of indigenous peoples (*xon phao pheun meuang*) is a recent product of "non-governmental organizations (NGOs), multilateral banks (the World Bank and the

Asian Development Bank), and United Nations organizations” [14, p. 54]. Such external forces not only introduced new discourses but also the regulations and money to make them appealing; Baird himself took the lead in setting up the Global Association for People and the Environment to explore creating an indigenous nonprofit in the country. NGOs funded organizations in Laos and neighboring countries through the Asian Indigenous People’s Pact (which supported exchange visits between Laos, Thailand, and Myanmar), Camkid, and more; the World Bank and the Asian Development Bank promulgated “Operational Directives on Indigenous People,” compelling the government to consider indigenous interests in development schemes. Baird also notes the role of the Laotian diaspora, especially the Congress of World Hmong People, in promoting indigeneity in the home country. Meanwhile, in Thailand, Leepreecha recounts how groups or societies formerly cast as “tribal peoples” or “ethnic minorities” have come to be classified as indigenous peoples due to the efforts of international organizations and “the global Indigenous People’s Movement.” Leepreecha sees these indigenous peoples-in-the-making as “communities of becoming,” in which indigenous “desires, needs, and imagination” are actively being created [15] – an instance of the ontopolitics (a new kind of power- and rights-bearing personhood) mentioned above. At both sites, the penetration of “indigenous peoples” discourse among villagers has been slow and imperfect, with many not understanding what the concept means or avowing it of themselves.

Precisely because it is both local and translocal, thinkers like Castree contrast indigeneity with ethnicity or ethnonationalism: the latter tends toward separate actions or movements for specific groups within specific countries, without an international network of group cooperation or institutional support (there is, for instance, no Working Group for Ethnic Groups). Hence, Castree distinguishes between *indigenous peoples* and *indigenism* in the sense that indigenism “describes those indigenous groups who are consciously building translocal solidarities as a means of achieving local aims and ambitions” [14, p. 151]. Thus, the dual ironies of indigeneity/indigenism are that it mobilizes and is mobilized by the translocal to serve the local, and that it exploits the modern to defend the traditional. Or, in Castree’s words, it “is both a reaction to and an embrace of translocal connectivity (or ‘globalization’ as it is now commonly termed)” [16, p. 156] – and perhaps at the same time a reaction against the translocal in a celebration or reclamation of the local.

Hence, for Clifford, a better analogue to indigeneity/indigenism than ethnicity and ethnic movements is the twentieth-century *négritude* movement, which sought to solidify Blacks or people of African descent around the world into a united force for change and liberation in the postcolonial context. To this kindred initiative among the world’s indigenous peoples – operating simultaneously through “local traditions,” “national agendas and symbols,” and “transnational activism” – Clifford gives the name *indigénitude* [17]. Sidaway, Woon, and Jacobs go still further, coining the term *planetary indigeneity* for the process by which, “through the collective global agency” of networking with each other, state officials, and transstate and nongovernmental organizations, “they have become, like all of us, planetary subjects” [18, p. 10]. Ultimately, the authors opine, planetary or globalized indigeneity or indigenism combines, in roughly equal measure, “the postcolonial political aspirations of indigenous people” and various scholarly, legal, and popular “ideologies about indigenous people” [18, p. 8].

#### **4. The construction of, and competition over, indigenous peoples**

The one thing that indigenous peoples and their advocates agree on is that the category encapsulates groups, societies, or nations of incredibly diverse cultures and histories; indeed, it has been difficult, if not impossible (and perhaps inadvisable), to define “indigenous people” authoritatively, exactly because, as Niezen appreciates, “there are no distinctions that enable us to place societies unambiguously” in the category [3, p. 5]. As mentioned more than once above, some indigenous peoples and the international nexus of proponents of indigenous interests defer or evade defining the term as tactical ambiguity. However, because there are real prizes to be won from asserting indigeneity – land, money, power, rights, privileges, respect, recognition, and more – and because any term or concept creates insiders and outsiders (i.e., those who are indigenous peoples and those who are not), Castree is correct that “the real issue then becomes exactly who is included/excluded in identity claims and what specific resources (physical and immaterial) are sought after by those adopting the valorized identity” [16, p. 155]. “Indigenous,” therefore, becomes more than a label or an academic concept, even more than a tool to build a new and better world, but, as the controversial Native American scholar Churchill [19] grasps, a *weapon* with which to beat the postcolonial world system. If, along with Castree [16], we think of “indigenous peoples” as communities not only of *descent* but of *dissent*, then who gets to wield this weapon is consequently of paramount importance.

The confrontation over who qualifies as “indigenous people” has two fundamental, intertwined but disparate dimensions. The first pertains to the relativity of indigeneity, that is to say, in the absence of any substantive or “criterial” means (i.e., in regard to their traits or properties) to assign a group to the indigenous category, many definitions and actions turn to a “relational” perspective, invoking the circumstances that such groups find themselves in vis-à-vis nonindigenous entities, primarily states and the global state system [11]. (Curiously, this is another way in which indigeneity parallels ethnicity, at least since the reorientation to ethnic boundaries and relations instead of purported ethnic features.) The crux of the relational approach to indigeneity is *authenticity* and *subalternity*: first, there is something (culturally, racially, or both) unique and genuine about the group that has survived from premodern to modern times and continues to characterize the group today; second, because of these authentic differences, the group has been and remains marginalized, victimized, and disempowered. As the word “subaltern” suggests, they are not only other but lower-other.

A problem then arises if, as noted above, the group loses some of its cultural uniqueness or authenticity (say, its language, religion, dress style, etc.) or its intimate connection to place. More problematically still, a group may achieve economic success, either through integration into the mainstream economy or through group-specific opportunities like Native American casinos; moreover, intermarriage may dilute its racial and cultural distinctiveness. Finally, while it has seldom, if ever, happened, a group may attain power in its state or, more rarely, win its own state. By many (particularly relational) definitions, such a group would disqualify itself as an “indigenous people” or at least would no longer need the kinds of considerations that indigeneity confers.

The second problem is more common, contentious, and inescapable. It is that indigenous peoples are conventionally envisioned as suffering from Western colonialism, presently trapped within settler colonial states. Many commentators

have remarked, then, that the appellation applies best and most naturally to native, precolonial populations in North and South America, Australia, and New Zealand. As a result, Barnard is generally right that it is comparatively simple to determine who the indigenous peoples of Australia (the Aboriginals), New Zealand (the Maori), the United States and Canada, and the various Latin American countries are: they are the physically and culturally divergent populations from the dominant white settler-descendants. Yet, even in those cases, the matter is not quite so simple: for one thing, not all of the groups are in their autochthonous territories today or were at the time of colonization (native/indigenous societies move or migrate too), and they have mixed and blended with neighboring tribes and nations. For instance, before Europeans arrived, several waves of “indigenous peoples” flowed across northern Canada and Greenland, including the Thule, Inuit, and Yupik. Which of them is “the indigenous people” of those regions, and which is “a people” at all? Outside these settler colonial states, the “indigenous people” of Oceania sometimes arrived in their current homelands only in the last 1,000 years or so – the Maori as recently as 1250–1300 CE. Then there is intermarriage with the white settler populations: the US Census reveals that Native Americans have higher rates of marriage outside their societies/nations than any other group. This naturally complicates the classification of subsequent generations as indigenous (as we will examine below in the case of the Cherokee).

Outside of the English and Spanish settler colonial states, the situation is much murkier. To be sure, Africa, the Middle East, and Asia were colonized by the West, but settler-descendants are much fewer there. More problematic still is that “native” individuals, groups, or parties rule in most of those countries; additionally, such countries tend to have their own terminological systems for categorizing populations. In India, as discussed below, domestic minorities might be labeled as Scheduled Castes or Scheduled Tribes. In Laos, the salient categories prior to “indigenization” – but only since the 1950s – were, and often remain, *Lao Loum* (lowlands tribes), *Lao Theung* or *Lao Kang* (midlands tribes), and *Lao Soung* (upland tribes) [14]; likewise, in Thailand, geographical divides between “hill tribes” (*chao khao*) and lowland and urban people are more familiar. At the extreme, each people, society, or nation prefers to go by its specific local/tribal name.

Not surprisingly, therefore, the incipient indigenous movement did not pay much attention to, nor did it have much appeal to, native groups beyond the settler states listed above. This hesitation to extend indigeneity to other countries’ native peoples emanated both from the countries themselves and from the international web of organizations. Hodgson notes that as the UN’s Year of Indigenous People approached, “Africa was not even considered as an appropriate site for activities” [7, p. 32], and Asia, Polynesia, Melanesia, and the Middle East were likewise neglected. Understandably, state governments have also resisted the discourse of “indigenous peoples” for two reasons. The first, relatively innocuous reason is that they argue, with some justification, that “we are all indigenous in Africa” [7, p. 26], or in Bangladesh [20], or in India, Thailand, or elsewhere. The second, less innocent reason is the fervent desire among state authorities to avoid the divisiveness, potential conflict, and secessionist threat of recognizing some groups as indigenous, with all of the protections and advantages attached to the label. This is one reason why most Maasai abandoned the rhetoric of “indigenous people” in favor of “pastoral livelihoods,” as witnessed above.

To attempt to resolve the dilemma of indigenous identity in two very different circumstances, Lee suggests refining the indigenous category into two subclasses, which he refers to as Indigenous One and Indigenous Two:

Indigenous One describes the Americas after 1492, Australia after 1788, and probably Siberia after 1600 in the period of Russian eastward expansion; small peoples facing Eurocolonial invasion and conquest. Native Americans, from the Arctic to Tierra del Fuego, are the classic cases.

Indigenous Two deals with the parts of the world where those claiming to be indigenous are encapsulated, not by European settler states, but by agrarian polities in which the dominant ethnicity situates itself in one or another of the Great Traditions from which the indigenes are excluded. Thus we have India and its scheduled tribes, Malaysia with its Orang Asli [Malay for “original people,” comprising more than a dozen societies bundled into three main categories – Negrito or Semang, Senoi, and “Aboriginal Malay”], and Indo-China and its Montagnards [13, p. 459].

He even ponders the value of an Indigenous Three “for groups reclaiming lost identities,” like the Taíno of Puerto Rico (see below).

The thrust of such revisions to “indigenous peoples” discourse is that the *sine qua non* of indigeneity (having already dispensed with substantive or criterial markers) is not necessarily the historical experience of Western settler colonialism but “divisions of power and control over territory that involve a domineering population and others whose way of life has secondary status,” whatever the source and contours of that domination may be. Underlying the power differential is still a sense, if not an explicit assertion, of first-ness by the subordinate group. This is a worthwhile reminder, as Nietschmann emphasized over four decades ago, that postcolonial regimes in Asia, Africa, the Middle East, and Oceania have “replaced European colonialism as the principal global force that tries to subjugate indigenous peoples” [21, p. 89], often in the name of nation-building and economic development in a process that has been called *internal colonialism*.

Of course, finally, because indigeneity is, among other things, a restitution system, various unlikely groups can step forward with their own claims of indigenous-ness. Kuper mentions that South African Boers attended the Forum of Indigenous Peoples in 1996, seeking indigenous status [9]. Barnard adds the vexing fact that white settlers reached the Western Cape of South Africa before Bantu-speaking Africans did, arguably bolstering the former’s claim to indigeneity in that territory, while in Botswana the more incontestably indigenous San people were long in cultural interaction with nonforaging Bantu neighbors [10]. The remainder of this introductory chapter, therefore, will investigate in greater depth some ethnographic cases that demonstrate just how incorrigible the concept of “indigenous people” is and will probably always be.

#### **4.1 Kandha versus Pana in Eastern India**

Since late colonial days, India has recognized the concept of *Adivasi*, derived from the Hindi words *adi* (original/beginning) + *vasi* (inhabitant), applied to more than 200 local groups. India’s postindependence Constitution enshrined the designations of Scheduled Tribes and Scheduled Castes, both eligible for protection and reserved benefits such as jobs, education, and guaranteed seats in the legislature. In the eastern state of Odisha, two groups or peoples – Kandhas and Panas – have a long history of coexistence and interaction. Kandhas have received the boon of Scheduled Tribe status and, with it, recognition as the traditional owners of the land; the price for this status is what Hota calls “legally encoded primitivity and isolation” [22, p. 8].

Panas, however, are classified as a Scheduled Caste; this designation positions them within mainstream Indian society but at the bottom (as a Dalit or untouchable caste), not entitled to land rights. Worse for them, many have converted to Christianity, which is not only anathema to contemporary Indian nationalism but also disqualifies them from any legal protections.

To be sure, Kandhas regard themselves as the original occupants of the territory, the true *adivasis* and indigenous people of the region. Yet, Hota makes it clear that the Panas “have lived in close proximity to Adivasi groups for generations,” serving as intermediaries between the local tribes and precolonial Hindu rulers (p. 23). She goes so far as to insist that “Pana identity could never be extricated from Kandha identity, because no one could narrate the history and social positions of Panas without explaining their role in the Kandha community” (p. 21). The conceptual and practical separation of Kandhas and Panas began under British colonialism, which recognized (and romanticized) Kandhas as the authentic (but primitive) people of the area and the Panas as their *chaakaras* or servants, attaching a stigma to the latter as “canny mercenaries” who exploited their simpler neighbors.

Colonialism naturally dispossessed both groups, a condition that persisted into the postcolonial era. The Indian government dislocated them and other *Adivasis* in pursuit of development, seizing their land and conscripting their labor. The status of Scheduled Tribe offers some relief, though, especially for Christian Panas, for whom the *Adivasi* or tribal moniker “emerges as the sole category through which recognition may be secured regardless of religious affiliation” (p. 8). Accordingly, some Pana activists have appealed to the government for protected/privileged *Adivasi* status, renaming themselves “Kandhariya Panas.” Predictably, Kandhas object strenuously to this application, insisting that they, and only they, are the *Adivasis* or native/indigenous people of the area. Panas, they complain, are pretenders, displaying their cunning once again by attempting to usurp the “proprietary indigeneity” of the authentic autochthons of the state. For their part, Kandhas have founded a political organization, Kui Samaj (*samaj* means association or society, and Kui is the name of the local language, *shared with the Panas*), instituted for “the preservation of Kandha cultural practices and rituals” while aligning themselves with Hinduism as sort of pre-Hindus or aboriginal Hindus versus the religious treason of Panas Christianity.

#### **4.2 When a forest-dwelling indigenous people loses their forest, are they still indigenous?**

The IWGIP annual report describes Cameroon as a country containing several indigenous peoples, such as Pygmies (subdivided into Bakola, Baka, and Bedzang), Mbororo (including Wodaabe, Jafun, and Galegi), and Kirdi. The country recognizes “indigenous people” but does not clearly delineate them [1, p. 46]. Of course, we already confront the issue of the scope of indigeneity: are, for instance, Pygmies (an unsavory term today) an indigenous people, or are Bakola, Baka, and Bedzang indigenous peoples – that is, at what level does “a people” apply?

Setting aside that insurmountable question, in her study of Cameroon, Lueong indicates 250 ethnic groups, not all of them claiming indigeneity [23]. Two of these groups and their contentious relations occupy her attention: Baka and Bantu. Baka inhabit part of the country as well as cross-border lands in Gabon, Congo, and the Central African Republic; they are categorized as hunter-gatherers and “forest

people.” Bantu, who live widely throughout sub-Saharan Africa, are sedentary village-based farmers. Bowing to the international consensus, since 2007, Cameroon has inconsistently granted indigenous status to Baka (and Bakola and Bedzang), although more often they are classified as “marginalized people” [23, p. 11]. Yet another local word floating in the political discourse is “autochthony,” which connotes “rootedness in the soil” or a strong connection to a place (p. 16).

The problem for contemporary Baka is that, since the late 1990s, they have been progressively displaced from their former forest home and resettled in camps along the roads to Bantu villages, where it was hoped they would assimilate into settled agricultural life. Unfortunately for these forced migrants, the roadside encampments were treated as adjuncts to the nearby village, transforming the newly sedentary Baka into settlers on Bantu land. In their prior forest domain, they were officially accepted as indigenous on the premise that they were the aboriginal people or “first comers” to that territory, but they could not justify that status in their new destination, relegated to “latecomers” and *allogènes* (others/strangers) in Bantu country. Now, the difference between indigenous and autochthonous kicks in: because Bantu farmers, although likely later historical arrivals in the area, are settled on the land, they are recognized as the autochthonous or native people of the villages, whereas Baka were only indigenous in their forests. Accordingly, Bantu see themselves as hosts to nonautochthonous Baka. Yet, while Bantu perceive Baka as only living in but not *belonging to* the village, many Baka have begun to view the village as their home – especially the younger generation, who were born at the roadside and never knew the forest. Thus, the two groups interpret their shared history differently: for Baka, history is a tale of invasion by Bantu, but for Bantu, the story is one of “non-occupation” of the land by Baka, who were brought to the roadside to learn the ways of “civilized” farming people [23, p. 103]. It does not help their cause, naturally, that internal differences among Baka make their identity and indigeneity precarious. Some Baka have inevitably become assimilated or “civilized” in the eyes of Bantu, which separates them from what Bantu label “typical” or real or indigenous Baka. A “real” Baka – one who deserves the name “indigenous” – is often hard to find in the roadside camps, Bantu say.

#### **4.3 You are not a Cherokee!**

In most clashes over indigeneity, like the two just presented, the dispute is between two groups who advance contradictory claims for the privileged position or between a group and state or transstate officials concerning whether the group merits being marked as indigenous. In other instances, though, it is not in (hot) dispute whether a group is indigenous but rather who exactly counts as a member of “the people.” The Cherokee were inhabitants of southeastern North America at the time of Spanish and British exploration and colonization of the area, but their own oral history tells that their ancestors migrated from the Great Lakes area in pre-Columbian days (their language is in the Iroquoian family); so, they are not quite the primordial residents of the Southeast and through the 1700s displaced other local peoples like the Muscogee. Once in contact with Anglophone settlers, they quickly acculturated in selective and locally useful ways, earning the moniker as one of the “five civilized tribes”; among these changes were the invention of a native writing system (with a written constitution and a newspaper) and the diffusion of slaveholding.

In the 1830s, the Cherokee and other southeastern peoples were finally removed from their homeland; as early as 1815, a reservation was founded for them in Arkansas, and most of the rest were marched westward in 1838–39 during the infamous Trail of Tears – some taking their slaves with them – to “Indian Country” in the Oklahoma Territory. Fairly acculturated and separated from their ancestral land of two centuries, critics might object that they have already lost their indigeneity. Nevertheless, under American jurisdiction, they were and are among the 574 federally recognized tribes – actually *three* of the federally recognized tribes: the Eastern Band, the United Keetoowah Band, and the Cherokee Nation. According to its official website (<https://census.cherokee.org>), the Cherokee Nation, “a sovereign tribal government,” is the largest indigenous tribe in the United States, numbering 141,000 members on their Oklahoma reservation and “more than 450,000 tribal citizens worldwide.” This means that less than one-third of the Cherokee Nation lives on Cherokee land, which only became their land about a century before losing it anyhow.

The Cherokee Nation operates its own “tribal registration” process (<https://www.cherokee.org/all-services/tribal-registration>), since, in the United States, a person is considered “Native American” if they are inscribed on a tribal roll. This became a source of major controversy in 2011, when the Supreme Court of the Cherokee Nation, based in Oklahoma, ruled that it was legal to expel the African-descended members of the tribe. According to the 2000 census, there were 2,800 so-called “Freedmen” among the Cherokee, descendants of Africans who had intermarried with the tribe; there may be 25,000 additional Freedmen who could potentially qualify as tribal members. However, the Cherokee court’s decision prevented their enrollment in the tribe and disqualified existing members, rendering them ineligible for the benefits that pertain to Indigenous Americans, like free health care, educational programs, and, of course, a share in tribal revenue. Of course, while the tribe or nation declared the right to regulate its membership, Black Cherokees condemned the move as racism and apartheid, breaking a generations- if not centuries-long chain of kinship.

#### 4.4 The “Indians of Greece”

Europe is not usually included in discussions of indigenous peoples, especially because, by the standard of colonization, Europeans were the colonizers, not the colonized. It is also popularly assumed that all people, say, in France are ethnically French or in Spain are ethnically Spanish. We know that this is not true: there are ethno-nationalist and even separatist identities in Spain (e.g., Catalans, not to mention Basques) and, of course, in the United Kingdom (Irish, Scots, Welsh). Furthermore, the rise in many parts of Europe of “pagan” or “native faith” groups and movements challenges the comfortable sense that those countries are satisfied with their common modern culture and identity.

In Greece, some neo-pagans or citizens proclaiming pre-Christian identities have absorbed the discourse of indigeneity. The first thing to acknowledge is that they do not call themselves “pagans” but rather *Ethnikos*, an obvious cognate of “ethnic” (which itself vaguely refers to a people or a nation). According to their official organization, the Supreme Council of Ethnikoi Hellenes (YSEE in Greek; <https://www.ysee.gr/index-eng.php>), they are Greeks “who live and conduct themselves in accordance with their native identity and values, particularly the ancient faith that

they call Hellenic Ethnic Religion.” They speak the language of indigeneity when they declare, as they do on the YSEE website, that they uphold “the Hellenic Indigenous and Ancestral Tradition,” which “is the same tradition that existed before the coming of Judeo-Christianity.” In the 1997 press release announcing the formation of the YSEE, they decried “the systematic (and not at all coincidental) negligence and degradation of our monumental and living ethnic heritage” and their enslavement “by an economico-religious giant whose cultural and logical interests promote the open scorn for our real (i.e, pre-Christian) ethnic tradition.”

They also align with the classic indigenous experience in maintaining that they too have been subjected to conquest, colonization, and “cultural occupation,” which began with the Roman Empire 22 centuries ago, was consolidated with the violent and bloody imposition of Roman Christianity 16 centuries ago, and continues today [22, p. 220]. Charging discrimination and erasure by the dominant Christian Greek population, they seek many of the same redresses as familiar indigenous peoples: formal recognition as a distinct group or people (although they are physically or racially indistinguishable from the majority), respect for their religion, protection of their culture and faith as part of the “national heritage” of Greece, and equality of rights. They do not pursue independence and are not political, rather regarding their movement as cultural and religious revitalization. At the same time, they have built translocal alliances, as with the European Congress of Ethnic Religions and their message “to the elders of all the indigenous, tribal, or ethnic traditions across the globe.” In the end, it is an understatement that, as Fotiou judges, the case of the Greek Ethnikoi challenges “the way we usually use the term indigenous” [24, p. 231].

#### **4.5 The return of the Taíno?**

Conventional wisdom suggests that the indigenous people of Puerto Rico, sometimes called the Taíno, became extinct soon after the Spanish invasion of their island. However, the 112,682 people who reported Taíno identity on the 2020 US Census – ranking them as the tenth-largest Native American population – would beg to differ. Indeed, “We are still here,” proclaimed a 2023 item on UCTP Taíno News, published by the United Confederation of Taíno People [25].

Whether the reemergence of the Taíno is the revival and reclamation of a long-dead identity (making them an instance of Lee’s Indigenous Three above) or the survival of an identity despite centuries of denial and suppression is a point of contention. Some Taíno advocates, who often prefer the moniker Boricua or Jíbaro-Boricua, hold that their people and culture persisted in the remote rural areas of the island; others grant that the historical link between precontact and contemporary Taíno/Boricua was broken but that it can legitimately be reestablished. In other words, on this argument, indigeneity need not be historically continuous. Sagely, and entirely consistent with the stance of this chapter, Feliciano-Santos does not enter the fray of “whether Taíno/Boricua claims are true or false” but instead investigates “how Taíno/Boricua histories circulate, how their activities are framed, how Taíno/Boricua frame belonging, and what futures Taíno/Boricua work toward building” [26, p. 12]. Sensibly and profitably, she treats the matter via the lens of *contested epistemologies of possibility*: whether it is possible to be Taíno/Boricua, to know Taíno/Boricua-ness, and how precisely that possibility is brought into reality.

The fact that there is more than one way to be and know Taíno/Boricua is reflected in the proliferation and competition of activist groups and movements.

Chief among them are the United Confederation of Taíno People (already mentioned), the Taíno American Indigenous National Organization (T.I.A.N.O., [www.tainonatives.org](http://www.tainonatives.org)), Liga Guakía Taína-ké (Our Taíno Land League, <https://urukudaguakiatainake.blogspot.com>), Consejo General de Taínos (General Council of Borincan Taínos, <https://naciontaino.blogspot.com>), Guaka-Kú, and several others. Each construes Taíno/Boricua culture and indigeneity somewhat differently or focuses on different aspects of that culture. For instance, some (e.g., T.I.A.N.O.) trace their roots to the Arawakan peoples of the island and surrounding lands, while others (e.g., the apparently shuttered Movimiento Indígena Jíbaro Boricua) relate themselves to Mayan ancestors.

Part of the effort of Taíno/Boricua mobilization has been language revitalization or, some would say, (re)creation. Guaka-Kú has gone so far as to design an alphabet, playing with common Latin script (each letter mirrored back-to-back), while Liga Guakía Taína-ké champions a pictographic writing system. More ambitious is the project of Ra Jikotea Niaku'no Ruiz León (<https://www.raruizleon.com>), who offers the Wuru Taíno School/Institute to foster language and culture through “presentations, history courses, language classes, workshops, and community gatherings.” Finally, Taíno organizers cannot avoid the question of genealogy and race, since the island has long housed European/Spanish and African/Black populations along with, and intermixed with, Indigenous/Taíno peoples. This so-called “Puerto Rican racial triad” challenges any claim to genealogical/racial purity, but fortunately for many proponents of Taíno indigeneity, that identity does not depend on such purity. Rather, they acknowledge their plural ancestral or genetic history and stake their indigeneity on “identifying as and seeing the world as” Taíno/Boricua [26, p. 95]. This may entail family traditions and memories or, ultimately, merely possessing or acquiring “a spiritual Taíno consciousness” (p. 151).

## 5. Conclusion

These five empirical cases, and all of the discussion preceding them, return us to the question: who are indigenous people? The cases and the discussion demonstrate that the question cannot be easily, if possibly, answered. “Indigenous” does not name any specific objective cultural, biological, or historical quality or criterion; for that matter, neither does “people” or “a people.” Converting the adjective *indigenous* into the putative noun *indigeneity* or, worse, the ism *indigenism* does not help and may actually impute false clarity and concreteness. There is no single factor or set of factors that unifies the nearly half-billion individuals in the world circumscribed as indigenous or distinguishes them unambiguously from the nonindigenous [27].

We can say with some confidence that, in nearly every approach to “indigenous peoples,” certain assumptions are prevalent and potentially relevant: they are typically smaller, nonstate groups with distinctive cultures and languages who are marginalized, if not subjugated, in their states. They are often survivors of Western colonial systems and residents or citizens of postcolonial settler states. But, as we have witnessed, there are exceptions to all of these conditions, making the determination of who is or is not indigenous problematic at best. Worse, the term can be, and often is, stretched to the point of uselessness: if, especially in contemporary African or Asian states, everyone is deemed indigenous, then nobody warrants any special recognition as indigenous. And this last point is important

because, among other things, the discourse of indigeneity is not merely about recognition (which is nice) but about various forms of restitution – of land, power, money, and so forth. Castree reminds us that recognition as indigenous does not automatically entail any particular benefit, such as “redistribution of economically valuable resources and assets” [16, p. 160].

The unself-conscious use of “indigenous people” or any other social category is unwise and perhaps untenable, but if so, what, in particular, should we be conscious of? This brings us back again to Niezen’s remark, quoted at the outset of the chapter, that the *debate* about the meaning and contours of “indigenous people” is more interesting than any actual *definition*. If this is true – and I would posit that it is – then what exactly is interesting about the debate? More explicitly, what does it teach us about social identity, social classification, and mobilization in general in the twenty-first century? I offer the following suggestions.

First, as for who is (or is not) *really* indigenous, there is no “really.” Being indigenous, or indigeneity, is not an objective reality waiting to be discovered and named, but something constructed – with the caveat that “constructed” does not mean false or inauthentic. Scholars are justified in being more interested in this construction process, including the legal wrangling over it, than in any putative solution or settlement on the question.

Second, “indigenous” is, among other things, *and like all other social labels*, a boundary-drawing exercise. Whatever definition is forwarded and accepted, some peoples will qualify and some will not; furthermore, some will be paradigmatically indigenous (perhaps Native Americans and Australian Aboriginals), and some will be contentiously (non)indigenous. These boundaries may (and we witness that they do) shift over time.

Third, like all social constructions, “indigenous people” or “indigeneity” is constructed, and boundaries are drawn and disputed under a particular discursive and political regime. This is why Niezen could accurately state that “‘being indigenous’ is a product of the past several decades” and not a status from time immemorial [28, p. 120]. As presented above, this discursive and political – and, as we commented more than once, ontopolitical – regime consists not only of indigenous peoples themselves but also their local organizations, state authorities, and translocal institutions, all working to produce specific visions of indigeneity. And because “indigenous people” and “indigenism” are products of this lively and crowded field of actors, during the few decades since roughly the 1980s, the meaning and boundary of the concept have inevitably evolved and will likely continue to evolve.

Fourth and finally, “indigenous people” and “indigeneity” are neither local nor global, traditional nor modern. As a phenomenon of the modern world, they are both – a new composite, an emergent concept that spawns an emergent identity. Authenticity or cultural and genealogical continuity are part of the rhetoric of indigeneity but, as the empirical cases illustrate, not essential to it: Taíno/Boricua indigeneity, for instance, transcends cultural or genealogical discontinuity or plurality. At the same time, indigeneity as an emergent identity or a novel discourse about identity does not undermine older “traditional” identities nor foreclose newer “modern” identities. The entire field of “indigenous people” or “indigenism” exposes the interpenetration of supposed dichotomies like traditional/modern or local/global – or their inapplicability to the contemporary social world altogether.

Maybe the mistake that scholars have made is attempting to adopt “indigenous people” as an analytical or technical term rather than appreciating it for what it is –

a legal and political one, and an inherently contested and competitive one at that – which means that our mission is not to resolve the debate over who is or is not indigenous or to take this or that group's claim at face value, but to examine the dynamics by which it and similar terms are created, circulated, fought over, revised, and perhaps someday replaced by others.

## **Acknowledgments**

The author acknowledges Woxsen University for facilitating this research.

## **Conflict of Interest**

The author declares no conflict of interest.

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## Chapter 2

# Jurisdictional Challenges Facing Indigenous People in Cases of Gang Crimes

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### Abstract

Indigenous persons living on U.S. reservations remain disproportionately vulnerable to organized crime, partly due to fractured legal authority shared across federal, state, and tribal jurisdictions. These structural divides carry profound human consequences, enabling organized criminal groups to embed themselves in reservation communities and inflict harm with intergenerational impacts. Despite this, the topic remains critically understudied. Building on our research regarding missing and murdered Indigenous women, men, girls, and boys, this chapter analyses litigated legal cases revealing the emergent themes of gang infiltration through kinship networks (e.g., Red Skin Kingz, Jesus Sagaste-Cruz); delayed, reactive investigations initiated in response to violent crime (e.g., Mescalero Apache Meth Ring); and profound community harms (e.g., Sinaloan Cowboys, Native Mob). We illustrate how overlapping jurisdictional structures can delay investigations, heighten risk, and compound trauma for families and communities on Indigenous reservations. We conclude by exploring forward-looking research and policy priorities for enhancing safety across Indigenous reservations.

**Keywords:** native American, Indigenous, tribal land rights, trauma, gangs, trafficking, community safety, tribal-federal relations, traditional culture, political movements

### 1. Introduction

In his book *Of Course We Are Crazy: Discrimination of Native American Indians Through Criminal Justice*, Scott S. Tighe quotes an anonymous female Native American as saying, “Of course we are crazy. First, the Whites conquered us, took our best land, sent us away to become White, then sent us back home to be Indian again, then told us how much Indian we are, and then left us on the reservation with nothing” [1, 2]. This testimony offers critical insight into the question of why Indigenous communities within the United States have historically experienced a variety of social and other challenges. These include:

- **Conquest and land loss:** The process of European colonization involved military conquest, forced treaties, and legal manipulation, which resulted in the widespread dispossession of Native American tribes from their ancestral homelands. These actions disrupted traditional ways of life, severed spiritual and cultural connections to the land, and confined many tribes to geographically isolated and resource-poor areas.
- **Forced assimilation:** Government-enforced policies, most notably the boarding school system, sought to erase Native American cultures by prohibiting Indigenous languages, traditions, and spiritual practices. Native children were removed from their families and communities and compelled to adopt Euro-American customs, values, and identities, often under harsh and abusive conditions, with the explicit goal of making them conform to White American society.
- **Identity crisis:** As a result of colonization and assimilation policies, many Native Americans experience an ongoing struggle with identity, navigating between traditional Indigenous cultures and dominant Western society. This “two worlds” reality can create internal conflict, social alienation, and challenges in maintaining cultural continuity while attempting to succeed within mainstream institutions.
- **Reservation conditions:** Many Native American reservations continue to face significant social and economic hardships rooted in historical oppression and systemic neglect. These conditions often include high poverty rates, limited access to quality education and healthcare, chronic unemployment, and scarce opportunities for economic mobility and self-advancement, reinforcing cycles of marginalization across generations.
- **Gang activity:** To date, there have been two seminal, well-funded studies explicitly examining gang activity on reservations: the 2008 Indian Country Drug Threat Assessment conducted by the National Drug Intelligence Center (NDIC) of the DOJ, and the 2000 Survey of Youth Gangs in Indian Country conducted by the National Gang Center [2]. Though these serve as invaluable foundations for future inquiry and a meaningful effort to address pervasive challenges on reservations, there have been few meaningful follow-up efforts from the federal government. Law enforcement agencies from federal to local levels frequently suggest that inadequate data collection and information-sharing practices across different jurisdictions commonly impede investigative practices. Here again, we see a promising point for intervention that will be explored later in this chapter. Following the 2008 NDIC gang threat assessment, no federal agency has produced such a comprehensive, focused national analysis of gang activity on reservations. Since then, evidence has largely emerged as part of a fragmented ecosystem of partial updates from DOJ advisories, threat assessments from the Federal Bureau of Investigation (FBI), regional studies, and personal accounts from tribal members. Though these efforts have produced some meaningful insights, there is a great need for a focused, systematic investigation of organized gang activity across Indigenous reservations to identify commonalities, causal factors, and points of policy intervention.

- **Jurisdictional barriers:** Investigating cases that involve jurisdictional barriers presents significant challenges for law enforcement and prosecutors, particularly when crimes cross city, county, state, or federal boundaries. These barriers can create delays in determining investigative authority, coordinating evidence collection, and aligning legal procedures across agencies with different policies and resources. Offenders may exploit these gaps by operating in multiple jurisdictions to reduce the risk of detection or prosecution. To address these challenges, agencies often rely on task forces, interagency agreements, and shared intelligence systems that improve communication and clarify responsibility. Strengthening collaborative frameworks and establishing clear protocols can help ensure investigations proceed efficiently, protect victims, and increase the likelihood of successful prosecution despite jurisdictional complexities.

### 1.1 Interest in the topic

The authors of this chapter collectively conduct research regarding missing and murdered Indigenous people. Though our present research aims have focused on criminal enterprises and jurisdictional challenges compromising safety on Indigenous reservations, original interest in this area of inquiry might be traced to early work by one of the authors (A.W.B.). In the 1970s, she was introduced to the victimization and trauma of Mi'kmaq (sometimes spelled Micmac) individuals in Boston, Massachusetts, during a study with Lynda Holmstrom on rape and sexual assault [3]. Later, around the onset of the COVID-19 pandemic, A.W.B., accompanied by an expanded team of researchers from various institutions in the United States, was drawn to return to this work after a team member, V.P., discovered a database known as *Women*, developed by Mak Mar. Mar, an Ojibwe descendant and Oneida enrollee, has been working in the Native American community since 2007, serving as a tribal social worker, domestic violence advocate, Ojibwe language teacher, child protection investigator, and Systems Advocate for a nonprofit that assists survivors of any kind of sexual violence. Mar developed this database of missing and murdered Indigenous women to raise awareness of the atrocities suffered by Indigenous communities. Our original research on this topic used this database to begin better understanding the nature of violence against Indigenous women and, importantly, identify points of intervention [4]. Though our original work focused on violence against women, we quickly discovered that a complex tapestry of laws and Supreme Court decisions has been quietly putting Indigenous reservations at risk for decades [4–6]. Despite being recognized as sovereign nations, Indigenous tribes are still subject to federal oversight by the U.S. government, owing to a long and complex history of legal disputes, creating a legal tapestry pieced together by sporadic foreign policy shifts, historic treaties, Supreme Court decisions, and occasional federal bills. This present legal structure produces overlapping authority between tribal, state, and federal agencies, creating critical gaps in legal authority that reduce tribal law enforcement's ability to arrest and prosecute non-Indigenous offenders and leaves Indigenous reservations vulnerable to violent crime and exploitation by criminal organizations. Herein, we coin these legal gaps “jurisdiction loopholes” to reflect the structural disadvantage Indigenous reservations are placed in under this current legal framework.

## 1.2 Cases in point

The unsolved case of Emily Pike illustrates how criminal jurisdiction loopholes can complicate investigations and delay justice in serious crimes. In both matters, overlapping authority between local, state, and, at times, federal or cross-county agencies created challenges in determining which entity held primary responsibility for investigation and prosecution [7]. These jurisdictional gaps can slow information sharing, create inconsistencies in investigative priorities, and allow offenders to exploit boundaries between enforcement agencies. The circumstances surrounding these cases highlight the need for clearer jurisdictional protocols and stronger interagency cooperation, demonstrating that when communication and authority are fragmented, the effectiveness of criminal investigations and victim protection efforts can be significantly hindered.

## 1.3 Unsolved Emily Pike case

Emily Pike was a 14-year-old Native American girl from the San Carlos Apache Indian Reservation whose life was tragically cut short in February 2025. Prior to her death, Emily reported two sexual assaults in 2023 – one near Whiteriver, Arizona, on the Fort Apache Indian Reservation under the jurisdiction of the White Mountain Apache Tribe, and another involving a relative. Despite these reports, the July 2023 case was never forwarded to the U.S. Attorney’s Office, and no charges were filed [8]. Because of instability at home, her mother’s struggles with substance abuse, and her father’s incarceration, Emily was placed in the Sacred Journey, Inc. group home in Mesa, Arizona. On January 27, 2025, she disappeared from the facility. Two search attempts failed, and on February 14, 2025, her dismembered remains were discovered in two plastic bags along a service road between two reservations [7, 8].

A critical aspect of Emily’s case lies in the location where her body was ultimately found; upon investigation, Emily’s body was discovered in a territory that bordered Arizona state and tribal reservation grounds, introducing jurisdictional ambiguity as to who is ultimately responsible for the investigation. Investigations spanned tribal, state, and federal authorities, including the San Carlos Apache Tribal Police, the Bureau of Indian Affairs, and the FBI. These overlapping jurisdictions can result in a diffusion of responsibility, miscommunication, and delays in reporting that compromise justice for victims such as Emily [8].

Emily’s death became a catalyst for legislative reform. In response, Arizona lawmakers passed *Emily’s Law* (House Bill 2281) [9], creating the **Turquoise Alert System** to rapidly notify the public about missing Indigenous persons. This law represents an effort to close systemic gaps in interagency coordination, raise public awareness, and honor the cultural responsibility of protecting Indigenous communities [10].

## 2. Criminal jurisdiction

As we studied the motives of crimes against missing and murdered Native American females [4, 6], we observed that jurisdictional concerns have, in some

instances, affected Indigenous peoples. Generally, this was related to the fragmented and overlapping system of criminal jurisdictions that govern Native American tribal lands. Depending on the location of a crime and the respective identities of the victim and the perpetrator, legal authority may fall to tribal, federal, or state governments, or else be shared among them. This complexity is driven by laws such as the Major Crimes Act and Public Law 280 [11–15], which might limit tribal authority over serious offenses or non-Indigenous perpetrators. As a result, legal cases can be delayed, declined, or lost altogether, as agencies determine who has the authority to investigate and prosecute. This has the effect of leaving victims and their families without timely access to justice.

These jurisdictional gaps are particularly harmful in crimes such as murder, sex trafficking, and drug offenses, which frequently traverse geographic and political boundaries and involve non-Native perpetrators operating on or near tribal lands [4–7]. Tribal law enforcement may be the first to respond but lack prosecutorial authority, while federal agencies may be geographically distant or underequipped, and states may have inconsistent obligations depending on jurisdictional status [11, 14, 15]. This convoluted system undermines accountability, enables offenders to exploit legal loopholes, and erodes trust in justice systems. Addressing this concern would require strengthening tribal sovereignty, expanding tribal criminal jurisdiction, improving cross-deputization and data sharing, and ensuring that tribal nations are treated as equal partners in the investigation and prosecution of serious crimes [16, 17].

While coordinated investigations and improved jurisdictional cooperation have strengthened the ability of law enforcement to address organized crime, not all cases reach resolution. Some investigations stall due to limited evidence, uncooperative witnesses, or the complexity of crimes that span multiple regions and involve highly organized offenders. These unresolved cases often raise concerns about potential gang involvement, particularly when patterns of violence, trafficking, or drug-related activity resemble known criminal network operations [2, 18]. Examining unsolved cases through the lens of possible gang activity can help investigators identify connections that may have been previously overlooked, offering new investigative directions and reinforcing the importance of continued collaboration and intelligence sharing [19].

Gang activity plays a significant role in many serious crimes, particularly those involving drug trafficking, sex trafficking, and violent offenses, such as murder [3, 20]. Organized gangs often operate as structured criminal enterprises, using violence, intimidation, and territorial control to protect illegal markets and maximize profit. Drug distribution networks frequently serve as a primary source of income, while sex trafficking exploits vulnerable individuals through coercion and force [21, 22]. Competition over resources, territory, and authority within and between gangs further fuels cycles of violence, making gang-related crime a persistent threat to public safety and community stability [1, 18]. Thus, we have focused on gangs, informal and organized, and their effects on Native American peoples as a research topic.

The goal of the present chapter is to identify themes in litigated cases as related to jurisdictional matters in serious crimes of substance abuse, sex trafficking, and murder. We reviewed over 20 cases of gang activity on reservations and identified three major themes: gang infiltration through *kinship networks* (e.g., Jesus Martin Sagaste-Cruz, Red Skin Kingz); *delayed investigations* initiated in response to violent

crime (e.g., Mescalero Apache Meth Ring); and *profound community harm* from gang involvement (e.g., Sinaloan Cowboys, Native Mob). These litigated cases emphasize the positive effect that coordinated efforts in law enforcement had on managing the criminal crisis. Though there are a great number of gangs operating on reservations, we chose to highlight these five for their unique illustrative potential.

## **2.1 Kinship networks and gang infiltration**

The case of Jesus Martin Sagaste-Cruz illustrates how community vulnerabilities expose some Indigenous reservations to infiltration by predatory and opportunistic gangs[21]. A successful Mexican drug trafficker in the late twentieth century, he was operating as part of a larger meth network running along the western regions of the United States. Though already enmeshed in a functional trafficking system, Sagaste-Cruz's business plan changed dramatically upon gaining knowledge of the troubles that beset the Wind River Indigenous Reservation of Wyoming. He read a *Denver Post* article chronicling how small liquor stores in Whiteclay, Nebraska, were selling massive quantities of alcohol to nearby tribal residents of the Pine Ridge Reservation of South Dakota. These establishments reported routinely selling \$4 million per year in beer and malt liquor alone, suggesting that reservation communities were facing a substantial problem with alcohol. Members of Sagaste-Cruz's ring quickly surmised that communities susceptible to alcohol addiction could easily be converted to methamphetamine, the gang's more potent drug of choice [23].

To execute their plan, members of Sagaste-Cruz's organization began relocating to communities in close proximity to the reservations. He then instructed members to develop romantic relationships with women on these lands, intending to infiltrate the community through kinship networks. Some members went so far as to have children with Indigenous women, demonstrating their blatant disregard for community wellbeing. The investigation reported that Sagaste-Cruz procured meth for this operation from "super labs" in California and Mexico. To quickly disseminate their drugs, his gang used a free sample technique in which women were offered free methamphetamine on a trial basis. The intent of these samples was to get community members dependent on the highly addictive substance, encouraging them to become distributors to maintain this chemical dependence. During the investigation, all low-level distributors told investigators that they became dealers to support their severe addictions, using free samples to recruit new customers from the community.

This pyramid growth scheme ravaged the community, as local outlets reported that from 2003 to 2006, cases of child neglect increased by 131%, drug possession increased by 163%, and spousal abuse rose by 218%. Sagaste-Cruz was eventually apprehended by an extensive collaborative task force comprised of tribal and local law enforcement agencies, the Rocky Mountain Division of the Drug Enforcement Administration (D.E.A.), and the Wyoming Division of Criminal Investigation. Sagaste-Cruz was eventually sentenced to life in prison for conspiracy to distribute more than 100 pounds of methamphetamine, and 21 additional members of his organization were also apprehended and charged as part of this inter-jurisdictional investigation [23].

Upon reviewing the case, District Attorney Matthew Mead noted that cooperation between law enforcement agencies and support from tribal leaders were

integral in the dismantling of Sagaste-Cruz's drug ring. He equated the political boundaries of legal jurisdiction to having "one hand tied behind our back." In addition to jurisdictional challenges, Mead noted that investigations of gangs on reservations are further obfuscated by historical mistrust between Indigenous persons and the U.S. federal government, technological challenges limiting the utility of wiretaps, and the intense pressures of intimidation that tribal members feel, knowing that law enforcement responses are greatly protracted in rural reservation environments.

### *2.1.1 Red Skin Kkingz*

Having considered how opportunistic outsiders expose structural vulnerabilities on reservations, we now present an Indigenous people-led gang operation, the Red Skin Kingz (R.S.K.). In a 2018 F.B.I. news bulletin discussing the group, Mike Caputo, Assistant Special Agent in charge of the bureau's Phoenix Field Office, noted that the violent crime rate on the nearly 200 Indian reservations within its investigative jurisdiction is approximately three times the national average [7], but R.S.K. "was one of the most violent gangs we have ever seen." Founded in 2003 in the Arizona portion of the Navajo Nation Indian Reservation, which also traverses parts of Utah and New Mexico, R.S.K. members – whose main leaders included the mother-and-son team Lucille and Devan Leonard – were infamous for their ability to create an environment of fear within rural reservation communities. From Del Muerto, Arizona, operations eventually moved to the remote town of Lukachukai in that state, where R.S.K. dominated with the knowledge that tribal law enforcement responders often took more than 45 minutes to respond to emergency calls. Unlike Sagaste-Cruz's trafficking operation, R.S.K. operated according to more traditional gang customs, whereby members were subjected to a "beat-in" initiation ritual and gained rank by selling drugs, collecting debts, and assaulting members of the community. Importantly, R.S.K. was known to grant membership to relatives of active members through a kinship recruitment pattern. This technique might prove particularly powerful in reservation communities that are family-oriented and often remain in close proximity to one another, as this opens more recruitment opportunities for youth who may have relatives and role models involved in gangs. These challenges are compounded by the lack of economic opportunity on some reservations as a result of generations of forced displacement.

In their indictment, R.S.K. were accused of engaging in murder, aggravated assault, witness intimidation, sexual assault, and firearm and drug trafficking. Although the gang had been active since 2003, it appears there had been no serious investigation prior to 2014, after Devan and Gray Leonard shot and killed a man from Gallup, New Mexico, following a drug deal near Wheatfields Lake, Arizona, on December 16, 2014. The victim was brought to a remote camp on the Navajo Nation, dismembered, and burned, reflecting the gang's penchant for severe violence. As an interstate case, this investigation was led by the Safe Trails Task Force, comprised of local, state, federal, and tribal authorities.

This investigation established a link between one of the accused and two other murders that occurred just four days before the one in Wheatfields Lake. These also involved the dismemberment and immolation of the victims. After indicting Devan and Gray Leonard for the Wheatfields Lake killing, the Safe Trails Task Force conducted hundreds of interviews in the area. Authorities noted that the

reservation's residents were initially skeptical of external law enforcement agencies, requiring tribal support and buy-in for the investigation's successful conclusion. Upon earning the residents' trust, the investigation quickly unveiled a long history of violent crimes propagated by R.S.K. Residents revealed that they were afraid to report crimes they had witnessed due to concerns about retribution by the gang. This fear was compounded by their isolation from law enforcement responders on their remote reservation. Caputo, mentioned previously, described the Lukachukai.

Reservation community as being "held hostage" by R.S.K. through the gang's use of terror.

Through their investigative efforts and heroic collaboration with reservation residents, the prosecution leveraged Racketeer Influenced and Corrupt Organizations (R.I.C.O.) charges against R.S.K. leadership. R.I.C.O. cases are exceedingly rare, as they require a substantial amount of evidence to prove the existence of an organized criminal enterprise. To date, there have been only two successful R.I.C.O. cases mounted against gangs on Indigenous reservations, both of which are reviewed in this chapter [18, 24–28]. R.S.K. leadership was all subject to lengthy sentences, destabilizing the organization and greatly reducing gang activity on the Lukachukai reservation – a testament to the power of effective collaboration.

## **2.2 Delayed investigations initiated in response to violent crime**

### *2.2.1 The Mescalero Apache meth ring*

In May of 2014, an increase in violent crime on the Mescalero Apache Reservation, perpetrated by methamphetamine users, prompted federal and tribal charges. The investigation initially targeted a drug trafficking organization that was allegedly distributing meth within the reservation and later expanded to include two other drug trafficking organizations in southeastern New Mexico that served as off-site suppliers. It was designated as part of the Justice Department's Organized Crime Drug Enforcement Task Force (O.C.D.E.T.F.) program, which combines the resources and unique expertise of federal agencies and their local counterparts in a coordinated effort to disrupt and dismantle major drug trafficking organizations. The investigation is one of the first by O.C.D.E.T.F. to utilize electronic surveillance (i.e., wiretaps) in Native Country. More than 10 kilograms of methamphetamine were seized during the course of the investigation.

Glen Joel Lester, 39, was one of 34 individuals charged in December 2015 with federal and tribal drug offenses as a result of an 18-month multi-agency investigation led by the D.E.A. and B.I.A. into meth trafficking on the Mescalero Apache Reservation. The federal and tribal cases were investigated by the Las Cruces office of the D.E.A., District IV of the B.I.A.'s Office of Justice Services (Mescalero Agency), B.I.A.'s Division of Drug Enforcement, Mescalero Tribal Police Department, Hatch Police Department, F.B.I., and Lea County Drug Task Force. In all, 18 defendants, including five members of the Mescalero Apache Tribe and 13 non-Natives, were charged in six federal indictments and a federal criminal complaint [7]. Seventeen other members of the tribe were charged in tribal criminal complaints approved by the Mescalero Apache Tribal Court. All but one entered guilty pleas. Charges in indictments are merely accusations, and defendants are presumed innocent unless found guilty in a court of law.

Drug-related crimes have had a severe impact on the Mescalero Apache Reservation, a 720-square-mile area in south-central New Mexico. According to Danny Breuninger, president of the Mescalero Apache Tribe, the reservation – located about two hours north of El Paso, Texas, near the Mexico border – is home to approximately 5,000 people. Breuninger noted that while federal authorities have not disclosed the origin of the drugs, methamphetamine has been present on the reservation for over a decade. Over time, its impact has steadily worsened, now significantly affecting young adults and teenagers. The reservation has experienced rising levels of violent crime, suicide, and serious health issues. These include birth defects linked to meth use during pregnancy.

Breuninger believes a federal investigation intensified after a brutal assault on a 13-year-old girl by two individuals under the influence of meth. Although the girl survived, she continues to recover from her injuries. This incident served as a catalyst, drawing national attention to the severity of meth abuse among the tribe's youth. Breuninger described meth as having “poisoned and devastated” the community. While recent arrests have acted as a wake-up call, the long-term effects of drug abuse remain deeply damaging. The tribe continues to struggle to preserve its culture, language, and identity in the face of this ongoing crisis.

Finally, Breuninger emphasized that this issue extends far beyond the Mescalero reservation. Meth addiction affects communities across the country, urban and rural alike, and Native nations are facing this challenge together. Mescalero, he noted, is not immune.

## **2.3 Profound community harm**

### *2.3.1 The Sinaloa Cowboys*

Indigenous reservations in Wyoming and Montana, particularly the Wind River and Blackfeet Reservations, have been targeted by organized criminal networks linked to the Sinaloa Cartel and regional distribution gangs. Historical and recent cases reveal sustained exploitation of tribal communities through methamphetamine, heroin, and fentanyl trafficking. Smaller quantities of cocaine and prescription-controlled substances have also occasionally been trafficked. Wind River was historically infiltrated by the “Sinaloa Cowboys” in the 2000s and saw a 2025 federal meth trafficking conviction [29, 30]. In the Blackfeet Reservation in 2024, Operation Overdrive led to the indictment of 11 individuals for meth and fentanyl distribution [31]. Furthermore, Utah transit routes serve as historical smuggling corridors connecting Mexican super labs to Northern tribal communities [21, 23]. Disruption of these trafficking rings is essential for addressing the exploitation of socioeconomically vulnerable communities.

Building on this context, the Sinaloa Cartel and its affiliates trafficked methamphetamine, fentanyl, heroin, and other drugs into the Wind River and Blackfeet Reservations, as well as Fort Peck in Montana and Tohono O’odham in Arizona. They exploited social connections and jurisdictional gaps to establish drug distribution networks on these reservations [32, 33]. While drugs were smuggled in from Mexico, cartel-linked traffickers caused rising addiction, overdoses, and community harm. Most cases were prosecuted under drug trafficking and conspiracy laws, with limited use of R.I.C.O. charges.

In response to these challenges, Operation Overdrive was developed as a coordinated effort between federal, state, local, and tribal law enforcement agencies. The rise in methamphetamine and heroin distribution linked to Utah suppliers triggered multi-agency attention after local law enforcement in Wyoming and tribal police on reservations reported surges in overdoses and drug-related crimes. Authorities utilized surveillance, intelligence gathering, and undercover operations to identify individuals involved in drug trafficking on the Yakama Nation Reservation and in the Yakima Valley. The operation culminated in arrests; the seizure of thousands of pounds of drugs, firearms, and cash; and efforts to dismantle the broader trafficking network. As these efforts unfolded, federal case outcomes and sentencing implications became clear.

Operation Overdrive proved to be a notable multi-jurisdictional success, as a joint task force of federal, local, and tribal authorities collaborated to dismantle a major drug trafficking network. The case highlights how drug traffickers exploit jurisdictional complexities between tribal and non-tribal lands to evade detection, making such unified law enforcement methods crucial for addressing public safety issues on Native lands. The successful prosecution of individuals involved in trafficking drugs sourced from major cartels drives home the need for continued partnerships to combat this type of organized crime.

In another significant crackdown on organized crime within the Yakama Nation Reservation and Yakima Valley, a multi-jurisdictional investigation beginning in late 2024 culminated in a 15-year sentence, followed by deportation and the arrest of 13 individuals in July of 2025. This effort was part of a broader push to secure tribal lands, mirroring similar successes such as the 2024 Blackfeet operation and ongoing enforcement at Wind River. These coordinated strikes resulted in massive seizures, including more than 7,100 pounds of marijuana, 336 pounds of methamphetamine, significant quantities of cocaine, and several thousand fentanyl-laced pills. Law enforcement also recovered 12 firearms and over \$22,000 in drug proceeds. As of September 2025, several guilty pleas have been entered, signaling progress in the legal proceedings against those who fueled this instability. Beyond legal outcomes, drug trafficking structures and community-level effects reveal deeper harms.

Offenders infiltrate communities like the Yakama Nation and Yakima Valley by exploiting existing social and familial networks to establish trust and distribute illicit drugs. The groups discussed targeted areas with high demand or limited law enforcement presence and often leveraged the complexity of tribal, local, and federal jurisdictions to evade detection. Traffickers may have recruited local couriers or associates, disguised operations through legitimate businesses or social events, and used online channels to reach buyers anonymously. Vulnerable populations, including individuals struggling with addictions or economic hardships, are often exploited as both customers and intermediaries, allowing trafficking networks to embed themselves deeply within a community.

Consequently, the drug trafficking network targeted by Operation Overdrive had a profound impact on the Yakama Nation and Yakima Valley communities. The widespread distribution of fentanyl, methamphetamine, cocaine, and marijuana contributed to rising overdose deaths, violent crime, and social instability, while placing a heavy strain on law enforcement, healthcare systems, and community resources. The operation disrupted this network by removing large quantities of drugs, seizing firearms, and arresting key offenders. This reduced immediate risks to

public safety and signaled law enforcement's commitment to protecting the community. While the operation addressed the supply side of the crisis, it also highlighted the ongoing need for prevention, treatment, and community-based programs to address the underlying social and public health challenges caused by substance abuse.

Taken together, the Sinaloa Cartel's operations on Native American reservations have deeply harmed these communities by fueling widespread drug addiction, increasing overdose deaths, and exacerbating social and economic challenges. Their exploitation of jurisdictional complexities and vulnerable populations has strained tribal law enforcement and undermined public safety. Collaborative efforts between tribal, federal, and state agencies remain critical to addressing this ongoing crisis.

### *2.3.2 Native mob*

Our final complex case study involves the Native Mob and its impact on tribal and urban communities. This group represents a significant Indigenous-led enterprise that bridged the gap between urban centers and tribal lands [18]. Founded in Minneapolis in the early 1990s, this gang grew to approximately 200 members and operated primarily in Minnesota and Wisconsin. While it was based in Minneapolis, its geographic infiltration reached across multiple areas, and the gang maintained a heavy presence on the Red Lake, Leech Lake, and Mille Lacs Reservations, with an alleged base of operations on the Cass Lake Reservation. The Ojibwe tribe and multiple neighboring Minnesota tribes were directly affected by the gang's nearly 20-year span of operations. The primary operational objective was to preserve and enhance the gang's power, territory, and finances through a structural criminal hierarchy [24, 26].

The dismantling of the gang's leadership involved a massive, cross-jurisdictional effort and the application of federal racketeering laws. This case was prosecuted under the aforementioned R.I.C.O. Act, targeting the gang as a criminal conspiracy [24–28]. The investigation was significantly advanced after Shaun Michael Martinez, aged 35, pleaded guilty to the 2011 murder of fellow gang member Jereme Kraskey, which was intended to prevent the latter from cooperating with law enforcement. Assistant U.S. Attorneys Andrew R. Winter and Steven L. Schleicher led the case. There were a total of 25 convictions related to Native Mob activity. The key leaders sentenced were Wakinyon Wakan McArthur, 43; William Earl Morris, 35; and Anthony Francis Cree, 24 [27, 28]. A vast network of agencies cooperated, including the BIA, DEA, the FBI-funded Headwaters Safe Trails Task Force, and various tribal police departments (Mille Lacs, Leech Lake, Red Lake, Fond du Lac, and White Earth) [19, 26].

The Gang's activities created a cycle of addiction and fear that targeted vulnerable populations within the community. Its financial structure relied on the distribution of crack, ecstasy, heroin, and methamphetamine. In terms of recruitment tactics, offenders infiltrated communities by targeting juvenile reservation members, specifically those perceived to lack positive role models. The group generated an atmosphere of violence and intimidation – including internal murders and “emergency council meetings” – to maintain silence, creating a pervasive culture of terror [18, 24]. The long-term effects on this community included deep-seated trauma resulting from the premature loss of community members to both violence and addiction. Unfortunately, despite the arrest of key leadership and the 2014

convictions, reports suggest that the arrests did not lead to the total long-term dissolution of the gang, indicating a resilient, deeply embedded entity.

The Native Mob case we describe highlights how criminal syndicates capitalize on jurisdictional complexities between tribal and state lands to evade oversight and entrench their operations [1, 7]. The implications for change necessitate a paradigm shift from reactive sentencing toward proactive community stabilization by addressing the systemic recruitment of at-risk youth [34]. Ultimately, continued collaborative efforts are essential. Only by institutionalizing cross-jurisdictional cooperation, as seen in this R.I.C.O. investigation, can the legal system effectively dismantle sophisticated enterprises that threaten the sovereignty and safety of Indigenous communities [16, 19].

### **3. Implications**

Litigated cases arising from the criminal gang crisis we have presented herein demonstrate the positive impact of coordinated law enforcement efforts in disrupting organized crime and restoring public safety. Successful prosecutions were often the result of multi-agency collaboration, combining local, state, and federal resources to share intelligence, streamline investigations, and build stronger cases. Coordinated strategies enabled authorities to dismantle entire criminal networks rather than targeting isolated offenders, leading to higher conviction rates and more substantial sentences. These outcomes not only weakened gang structures and reduced violent activity but also reinforced public trust in the justice system by showing that unified, strategic enforcement can effectively manage and mitigate complex criminal threats. If one is serious about prevention, one must be serious about early identification, culturally responsive intervention, and sustained support for Indigenous women and girls across the whole of their lifespans.

Though this pervasive, systemic threat still looms large over the future of reservations, we posit that there are a number of promising policy and practice interventions that could be readily implemented to begin addressing this crisis. As with most public health concerns, adequate funding is essential if this issue is to be satisfactorily addressed. Despite maintaining jurisdiction over major crimes, federal law enforcement agencies are often not afforded enough resources to execute their stated intention of promoting justice on reservations [34]. As previously outlined, vast expanses of land are often covered by only a small handful of agents. Beyond funding additional law enforcement agents, the establishment of standardized interagency communication channels could greatly improve investigative efficacy [19]. Within the labyrinth of tribal, local, state, and federal jurisdictions, communication is highly fragmented, with vital investigative information often being received piecemeal. Cross-department data sharing is an issue that plagues many fields, but it is especially vital here, as failure to convey important updates can mean the difference between life and death for community members. Presently, due to different reporting and information-sharing practices across the tiers of law enforcement, investigations often occur in silos, significantly impeding the deliverance of justice. As we saw with the Safe Trails Task Force in the RSK case, the creation of well-funded, inter-jurisdictional task forces operating under a shared aim and vision can expedite investigations and ensure that law enforcement is operating at its highest potential. As we saw in the case of the Sinaloan Cowboys, the ability to do undercover work can be a determining

factor in successful gang investigations. This type of vital undercover work is simply not possible without heroic tribal members and the environmental knowledge that they bring to investigations. The challenge of creating strong, collaborative networks cannot be solved by funding alone, however. Effective inter-agency teams require a clear, shared aim, mutual humility, and a willingness to cooperate. Here, it is important to respect the autonomy and wisdom of tribal leaders and law enforcement, as historic traumas have set the conditions for mistrust of outsiders; cultural humility and the adoption of a supportive, rather than directive, role must be at the forefront of all future interventions.

Legislative reforms are an obvious, though more complex, point of intervention. Legal scholars of all backgrounds and persuasions have argued over whether tribal law enforcement agencies should be allowed to arrest, prosecute, and charge U.S. citizens; some state that such rights are an obvious extension of self-determination and sovereignty, whereas others retort that doing so would be a violation of due process if the accused cannot be guaranteed the same constitutional rights that the American justice system would offer [11, 16, 17]. Though we are unlikely to see a holistic policy reform in the next few years, we may look to recent decisions that have sought to close jurisdictional loopholes. Most notable among these is the Violence Against Women Act (VAWA), one of the first major efforts to expand tribal jurisdictional authority over non-indigenous perpetrators. Partly inspired by the aforementioned MMIW movement, the VAWA greatly expanded tribal jurisdiction by allowing them to prosecute non-indigenous offenders for special crimes such as assaulting a tribal officer, violence against children, obstruction of justice, and sex trafficking offenses. As the name suggests, this amendment was largely focused on mitigating violence against women and sex trafficking, which has been a rampant issue on and off reservations. Importantly, the VAWA also offered \$11 million in grant funding to tribal governments to expand law enforcement efforts against domestic violence on reservations [35]. This milestone was no doubt influenced by the decades of advocacy through the MMIW movement, which sought to bring light to the victimization of near-invisible indigenous women. Though the VAWA was clearly addressing the specific needs of indigenous women, it stands to reason that similar provisions may be made for expanding tribal jurisdiction over gang-related crimes. Enabling tribal officers to detain, arrest, and even prosecute non-indigenous gang offenders would do a tremendous amount to address this ongoing crisis and promote public safety.

#### **4. Conclusion**

We began this chapter by quoting the simple yet poignant phrase, “Of course we are crazy” [1], as we believe this phrase captures the historic treatment of Indigenous communities in the United States with devastating accuracy. We initiated our analysis with a biographical recounting of the lead authors’ entry point and previous work in the space of Indigenous justice, initially working with sexual assault survivors and later addressing systemic violence against Indigenous women [3, 4]. We then established the significance of structural “jurisdiction loopholes” that inhibit tribal law enforcement’s ability to protect its communities, rendering them vulnerable to violent crime [7, 11, 14, 15].

The unsolved case of Emily Pike illustrated the impact of these loopholes on human lives [8]. In Emily's case, a life already marked by instability and prior assaults ended in extreme violence, and the location of discovery heightened jurisdictional ambiguity. This case illustrates that jurisdictions are not mere legal technicalities but the forces that determine whether justice remains elusive or becomes possible [9, 10].

After highlighting the Emily Pike case, we widened our lens to begin the chapter's central contribution: themes drawn from litigated cases of gang and criminal enterprise activity on reservations. The first theme, kinship networks as a point of entry, showed how predatory outsiders and local enterprises leverage the tight relationships, intimacy, and family structure on reservations to embed themselves and gain control. Sagaste-Cruz demonstrated a calculated exploitation of addiction vulnerability, converting social suffering into a market through "free samples" [21, 23, 29]. R.S.K. showed an Indigenous-led enterprise that operated with terror, witness intimidation, and violence [7].

The second theme, delayed investigations triggered by spectacular violence, was exemplified by the Mescalero Apache meth ring: an extensive trafficking organization that garnered full attention only after the community's harm became impossible to ignore. The story was not simply about arrests; it was about what it costs a community to reach the threshold where systems finally respond.

The third theme, profound community harm, was demonstrated by the Native Mob and Sinaloa Cartel cases. These cases highlighted how addiction and intimidation become means of control, and how even successful prosecutions may not fully dissolve networks that have become entrenched in communities [18, 24–28, 32, 33].

Across these sections, one pattern held true: coordinated, inter-jurisdictional work produces outcomes. Task forces, cross-deputization, shared intelligence, undercover operations, and sustained community cooperation were essential mechanisms of success across these cases [19, 22]. In closing, we returned to prevention and repair as long-term strategies to address this structural vulnerability. Adequate funding, standardized data sharing, and institutionalized collaboration are essential for guaranteeing the safety that persons on reservations should be entitled to [19, 34]. Legislative reform remains complicated, but recent expansions of tribal jurisdiction, such as the 2022 reauthorization of VAWA, suggest that targeted changes can meaningfully reduce impunity and begin addressing critical gaps in tribal legal authority [16, 17, 35].

We trust that our collective findings underscore the extreme vulnerability of Indigenous females across developmental stages and the necessity for coordinated prevention, screening, and intervention across child welfare, healthcare, education, and justice systems [4-6]. Through this chapter, we hope to name an experience that reservation communities already know: structural vulnerabilities continue to consign many reservations to cycles of violence and tragedy. Our final position is a simple one: we want fewer missing persons, fewer murdered women and children, and fewer Indigenous communities held hostage by addiction and fear. To begin addressing the silent suffering still occurring within these communities, we need to continue raising awareness of the massive structural disadvantages that reservations have been subjected to and pursue meaningful reparations through concerted efforts to prioritize the safety of these communities.

## Acknowledgments

We extend our gratitude to Mak Mars for his prodigious efforts in creating the *Justice for Native Women* database and for his early guidance on issues impacting Native Americans. We thank Jeff Wood for lending his nearly two decades of experience as a federal agent and gang expert; his illuminating perspectives were invaluable. Lastly, we thank our forensics research team members: Gianna Pascale, Hathaway Scott, and Ping Redmond, who aided in case identification and in reviewing the literature.

## AI tools disclosure

The authors acknowledge the use of ChatGPT for language editing in the chapter.

## Conflict of Interest

The authors declare no conflict of interest.

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## Chapter 3

# Disruptive Histories: Interrogating Fiji's Flawed Historical Narratives for the Management of Chiefly Titles and Land Disputes

*Eta Varani-Norton*

### Abstract

Fiji's tribal leadership has been plagued with disputes over chiefly titles and land rights since the colonial creation of historical narratives called the *Tukutuku Raraba* (TR), which continue to be used in attempted official resolutions of these disputes. Disagreements about the veracity of the records have weakened community social cohesion. There is a need for the reconstruction of the histories using appropriate indigenous research methodology guided by an ethical framework. This requires the *vanua's* (the tribal community's) participation in research to ensure correct and reliable narratives and to ensure ethical standards are maintained. The chapter highlights the importance of this in critiquing a study concerning the rightful holder of a chiefly title recorded in a TR

**Keywords:** Fiji, chiefly titles, land rights, *TUKUTUKU RARABA*, tribal community

### 1. Introduction

The Republic of Fiji lies in the middle of the Western Pacific Ocean. Of its nearly 300 islands, a little over 100 are inhabited. Its population of almost 1 million comprises indigenous people (60%), Indo-Fijians (36%), and other ethnic groups such as Chinese, Part-Europeans, and other Pacific Islanders, who make up 4%. Fiji was first settled about 3,500 years ago. Long before contact with Europeans, the islands were visited by Samoans, Tongans, Rotumans, and Ellice and Futuna Islanders. Later, from the early 1800s, Europeans began to arrive, and eventually, their pressure for land became acute, sometimes ending in violent confrontations and wars [1, 2]. From 1874 to 1970, the Fiji Islands were under British colonial rule.

However, the colonial impact, especially during the early contact period, was relatively mild compared to the colonial experience of many other Indigenous people around the globe. There was, for example, no brutal land dispossession. An important issue the colonial government had to address was the land claims made by European settlers because many Indigenous Fijians, or *iTaukei*, felt aggrieved over the way lands were taken from them by deals between Europeans and chiefs. The colonial

administration conducted an inquiry into land sales to assess their fairness. The first governor, Sir Arthur Gordon, ensured that half of this land and most other land should remain with the iTaukei and that much of their culture be ‘protected’ from the vagaries of modernity and the exploitative influence of white settlers [3, 4]. There were, nonetheless, very significant colonial policy impacts on Indigenous life that Fiji still faces today. One of these was the establishment of rigid land boundaries between tribal landowners. A new commission of inquiry was instituted in 1911, led by G. V. Maxwell, to determine a satisfactory basis for iTaukei social structure and land tenure. To record land boundaries, it was essential that information collected during the inquiry include tribal histories, giving attention to social status and land division within and between tribal clans.

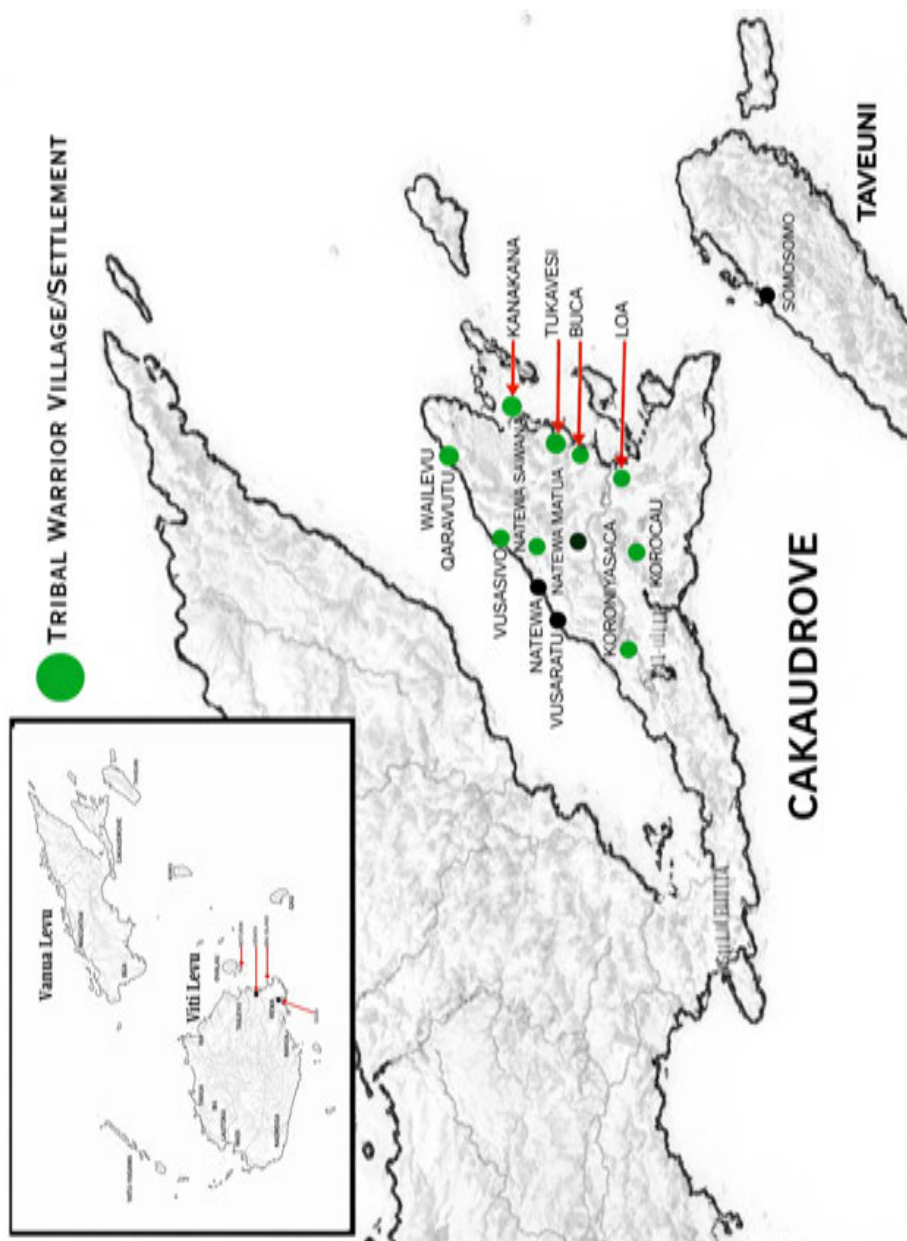
The first part of the present chapter focuses on the collection and recording of that information, the interference by local colonial officers to change the contents, the storage of the records, and the post-colonial bureaucratic attitude towards the repositories. The historical narrative called the *Tukutuku Raraba* (TR) is only part of the records. The TR is a narrative of a *vanua* (tribal community) that includes the original peopling of the land. It records people’s movement to their final destination, the classification of social units, and their ancestral god and genealogy. The description includes events such as tribal wars, tragic circumstances, and catalogues of heroic deeds. Most of the tales are, in essence, political. The selection and collation of information as content of the TR ensure certain truths are ignored, and some false information is presented. Some cases are highlighted as examples of erroneous records. There is an urgent need to decolonize and reconstruct the historical records of the iTaukei, including especially the TR, and re-examine landownership divisions and chiefly leadership.

As will be discussed later, Indigenous knowledge and issues must be analysed in their contexts to qualify and to corroborate or question any claims made. My discussion of the TR also includes factors outside the traditional structure that influenced the depopulation of the iTaukei soon after colonial rule began, the reforms introduced by the colonial administration, and interventions made by local official personnel – the Roko and Buli – who made decisions for the governance of iTaukei, which strongly shaped the outcomes of the historical narratives. These changes under colonial rule have continued to fragment the social fabric of many *vanua*.

The second part of the chapter is a critique of a case study of the *vanua o Natewa* on the island of Vanua Levu (see **Figure 1**) and the methodology and method it used to examine an aspect of the Natewa TR: the historical chiefly list of Vunivalu (root of war) and its authenticity. To establish the list of Vunivalu (the successors to this chiefly position), the current traditional leadership position of the *vanua*, the origin of the chiefly clan, their migratory movement, and final settlement are examined. The discussion will also include illustrations of disruptions of installation ceremonies, including chiefly installations in subject villages of Natewa. Additionally, the arrogation of a chiefly title and its transfer to another village in the neighboring *vanua* of Tunuloa is discussed.

## **2. Ethics in indigenous research**

Research methodologies and methods are central to knowledge production in universities. In conducting Indigenous research, it is critical that rigor in Indigenous



**Figure 1.**  
*Fiji Islands: Natewa vanua in Cakaudrove Province. Source: chatgpt.com/c/695.*

research is scrutinized when Indigenous ethics are applied and not Western ethics, especially in the framing of ethical practice with reference to the requirements of Research Ethics Committees and other research institutions [5]. Methods of research on Indigenous knowledge must be culturally competent, which means that methods and measurements are appropriately tailored to the culture being studied [6, p. 153]. A peoplehood approach is necessary [7]. Community participation in a research project must be mandatory from its inception to its end. Community representatives must be involved in decision-making, collecting and interpreting data, and collaborating in its final production and dissemination.

The concept of *vanua* has interrelated physical, social, and cultural dimensions [8, p. 6]. Harmony, solidarity, and prosperity are achieved in a *vanua* whose identity is secure, and where confidence in belonging is identified with and rooted in a particular terrain. Connection to the *vanua* ancestors, who once roamed the land and whose spirits continue to linger and watch over their descendants in their daily lives, reinforces an extension of the individual self and the group self. When these interconnected bonds break, the *vanua* splinters, there is a depletion of trust, and relationships become fragile or even break. With the current rising numbers of disputes over land and chiefly positions, many *vanua* today are afflicted with fracturing communal relations [9, p. 45], originating from tensions of tribal wars [10]. These conflicts often worsened as the people came into contact with white settlers who introduced guns. They remained unresolved and were ‘frozen’ as a text in the TR. The Natewa case study illustrates the change of leadership during the contact period, and the post-colonial official attitude has ‘frozen’ the leadership change despite the plea from *vanua* members to re-examine the narrative.

## **2.1 Indigenisation of research**

Chilisa [11, p. 94] outlines essential measures for the indigenization of research. The research undertaken must have a cultural reference, where constructs are measured by the customs, norms, and behaviours that represent the examined culture, not those of the West. The rationale and justification of the research should be culture-based to ensure the relevance of the study to the indigenous community and its needs. Moreover, the conceptual basis for research must be gauged by the extent to which it originates from cultural frameworks, not from frameworks that are universalistic or taken from Western academic literature. Indigenous concepts should be embedded in traditional religion, cultural traditions, norms, language, metaphors, and the knowledge systems of the culture where the research is conducted. Additionally, variables should reflect community stories, legends and folklore, social problems, rapid social change, or public policies. In short, an indigenous methodology refers to research methods tailored to the culture of the people being researched. This can be reflected in the language used in developing research instruments, such as interviews, and the use of methods, concepts, and variables that are derived from indigenous knowledge systems.

## **3. The TR: Its formulation, storage, and impact on the iTaukei**

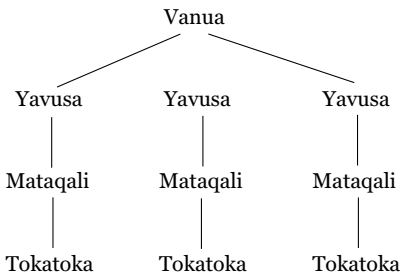
Discussion on these issues will include the content of the TR and the post-colonial attitudes towards the record. It will consider the impact of the narratives, the official

response to requests to correct erroneous content, and the storage of historical records. Early colonial governors, such as Gordon and Im Thurn, agreed on the need to have a land commission but differed on how land is owned traditionally and the nature and extent of these traditional rights [3]. While Gordon argued that land was owned by social units called *mataqali*, Im Thurn believed that land ownership was not clearly defined by the native people and that their rights to land differed throughout Fiji. Im Thurn's observation was based on unsuccessful Native Land Commissions conducted in 1892 and 1894. Both failed to identify a generally shared pattern of land ownership amongst the natives. In 1911, Maxwell [12] was appointed to head another land commission. By 1913, he had defined the Fijian social structure by allocating names to social units and describing their relationships to each other (Figure 2).

According to Maxwell, the *yavusa*, the largest unit in a *vanua* (territory), are direct agnatic descendants of a single *kalou vu* (ancestral god), whose sons became the founders of component *mataqali* (land-owning units). As the population increased, smaller descent units called *tokatoka* were formed from nuclear and immediate extended families. As I will discuss later, this 'procrustean' pyramidal structure of social units [3, p. 166] later became a vexatious issue to the indigenous community and the nation. The model was made the basis of a template for the TR, providing a selection of events as content for a historical narrative of a *vanua* and its nomenclature.

The TR tribal knowledge and its classificatory statements were collaboratively collected and compiled by tribal members, then presented to the commission of inquiry by a tribal representative. Members of the community were encouraged by the colonial administration to attend the inquiry to facilitate the airing of disagreements. The historical narrative represented the iTaukei philosophy, its spiritual essence, the beliefs and relationships among the tribal members, and their connections to the land. These classifications are referred to as signposts [13].

Of the eight elements of the nomenclature, six are defined below as traditional concepts useful for this discussion [14, p. 330]: 1. The *yasana* (province), *tikina* (division or district), and *koro* (village); 2. The name of the *yavusa*, its totems, and war cry. (a *yavusa* name represents two things: the new village foundation and the major social unit); 3. The *Kalou-vu* (spiritual god or origin spirit) and his *waqawaqa* (incarnation); 4. The name of the *vu* and his place of origin, and, if possible, also his wife's name; 5. The collective traditional title, which is normally the name of the



**Figure 2.**  
*Levels of social division in an iTaukei social structure.*

*yavutu* (the first village founded by the *vu*); 6. The children of the *vu* and their *wasewase* (divisions). This nomenclature provides the guidelines for all TR narratives. The discussion below, based on a study of the TR of Natewa, demonstrates how the signposts illustrate their connections – or lack thereof – and the application of traditional evidence to question or refute claims.

### **3.1 Other factors impinging on TR reforms**

In 1875, a measles epidemic reduced the Indigenous Fijian population by a quarter. Further decline continued, mainly due to another epidemic, and by 1921 the iTaukei population totalled 84,475 [4]. The colonial government introduced reforms in its effort to combat depopulation, blaming culture as the cause. The reforms included changes such as new social units, unification of different *vanua* into one district or province, landownership changes, introduction of village by-laws, amalgamation of settlements into a village, and rules for their daily routine [15], which caused much confusion. There were other Pacific Islanders living amongst local iTaukei communities, as well as iTaukei from other parts of Fiji [16], who later became landowners – a right that belonged only to the traditional clan chief. However, chiefs had the responsibility to look after the affairs of the *vulagi* (later settlers). For example, the traditional fishermen tribe did not usually own land, but their needs were met by the chief in exchange for their daily catch. The interplay of these roles maintained balanced reciprocal relations and social harmony, which were disrupted when, in 1905, the colonial government introduced a new law [17] on landownership.

The reforms created confusion that may have caused havoc to many, but not to local administrators – the Roko and Buli – who took advantage of the changes to benefit themselves, such as through chiefly titles, land, or both. Testimonies on *vanua* nomenclature, blood links, and the traditional roles each clan plays were sworn during the commission of inquiry.

The TR also included ‘genealogies’ to reflect Maxwell’s idea of direct agnate descendants of a single *kalou vu*, and the ‘rearrangement’ of the family tree by the architects ensured they would benefit from the change, placing their families in positions of seniority. In the iTaukei’s limited understanding of the Western legal system, the recording of the TR narrative as texts meant that the chances of reversing or reconciling the changes were minimal, let alone changing the record altogether. This popular belief may have also given strong motivation and confidence to the architects that the changes were permanent.

Successful manipulation of a narrative and its presentation as authentic history was enabled by three factors. One is the decimation of Indigenous Fijians during the measles and influenza epidemics. With many deaths and consequent reforms introduced by the colonial government, there was fission, fusion, and bifurcation of groups (Mataciwa’s thesis gives excellent illustrations [16]). This, together with the reforms, provided opportunities to cancel or create roles and relegate certain clans to lower roles to benefit the architects of the narrative. Another factor is the time lags between commissions of inquiries, which enabled interested parties to plan and consult clan members and other *vanua* to ‘tweak’ certain changes to the architects’ advantage. In the Natewa case study, 16 years before the 1928 commission of inquiry, certain clans were already divided into

sub-clans following Maxwell's model. Over the next 16 years, the architects of the TR regrouped and repositioned their clans to downgrade others. Most important was the power of the provincial and district officials, the Roko and Buli. They filtered information for the colonial administration, as well as controlled what trickled down to the grassroots, affecting the welfare of a clan and bringing benefits to themselves. The TR, as a text, in the views of the locals, was irrevocable. To illustrate this point, the *vanua* o Bau (see inset) is discussed below (see **Figure 1**).

#### 4. Bau island and Natewa *Vanua* chieftainships

The chiefly island of Bau illustrates how history was corrupted and chiefly status appropriated by the current clan-claimants, backed by the colonial office and later sanctioned by the post-colonial authorities. The current Vunivalu (root of war) title is now the chiefly seat of the island of Bau and its confederacy, instead of the Roko Tui Bau. According to Roth [18], a migratory group from north-eastern Viti Levu mainland, where the chiefly title Vunivalu is usually the head, sailed south down a river and settled in Kaba, opposite the island of Bau. A lapse of time helped the Vunivalu dynasty build up its power base. By the time white settlers arrived with guns that would help in tribal wars, the tribe was ready to move to Bau Island, already occupied by the Roko Tui Bau and his clan. Naulivou, the then Vunivalu, had settled in Bau by the mid-1700s, ambitious to expand his influence, which reached its zenith in the 1820s as the influence of the Roko Tui Bau, the sacred chief, declined. Routledge [19, p. 43] explains that Naulivou took on certain attributes of the sacred chief, from whom authority and the integrity of the social order had flowed, abandoning something of his character as 'root of war'. Naulivou consolidated his power and superiority, paving the way a decade later when Cakobau, a descendant, ascended to the chiefly status backed by the white community [Routledge, 1985]. The white community bestowed the title Tui Viti (King of Fiji), to which he was not entitled, nor was he backed by the *vanua*. Installation of the Vunivalu title by tradition only confirms the position as an executive. Hocart [20], who conducted interviews in 1912 on chiefly titles, asserted that the title Vunivalu is ranked second chief.

Another aspect of the TR template concerns land ownership, a proof of chiefly identity. Bau's proof of its jurisdiction required the acquisition of more land from subject villages on the mainland. They coerced the Nakelo people on the mainland to surrender their lands [21]. To validate their claim to land ownership, they would have also ensured that Nakelo's TR narrative was aligned with Bau's. In 2017, an informant, originally from Bau, claimed that a clan from Bau held clandestine meetings with mainland villages to ensure their TR narratives aligned with Bau's.

A Bauan historian reiterated that the Roko Tui Bau (meaning supreme) first settled as the senior and sacred chief, and that the Vunivalu, as the executive, came later [22]. Despite this assertion, the political and manipulated version appeared as 'authentic' in the TR. Bau's TR architects melded the genealogies to assert shared origins and descent lines, and aligned their subject *vanua* connection and their land boundaries to the benefits of the Vunivalu and his clan. The TR, with the backing of the colonial administration [15, 18, 21] but not the *vanua*, placed the Vunivalu at the leadership helm.

#### **4.1 Social cohesion**

When a signpost is moved or usurped by another clan, other ‘nodes’ will need changing to synchronise with the initial alteration. Changes alter role relationships, land ownership (in terms of quality and quantity), house foundations and locations, hierarchical accountability, procedural consultations, and reciprocal gift-giving. These changes have encouraged aspiring individuals or clans to make claims that are invalid or ambitious, or both. Changes to any of the signposts will upset people’s relationships and disrupt social cohesion. Such inconsistencies were detected in studies conducted by scholars such as Toren [23], Young [24], Humphrey [25], Parkes [26], and Tanner [27].

### **5. Past disruptions, simmering futures**

Five events described below exemplify what many *vanua* confront today. The first two illustrate the naming protocols and conventions that aid in revealing traditional identities, such as land ownership, but were replaced with incorrect records, shady deals between powerful institutions, and the subjugation of indigenous rights to land and their identity. The other examples cover either the appropriation of the chiefly title or the installations and their aftermaths for the *vanua* of Tunuloa and Natewa on the island of Vanua Levu (see map).

#### **5.1 Wainisavulevu clan**

The *Fiji Times* [28] newspaper reported that the true landowners of the Wainisavulevu (water-of-the-great-waterfall) land were not registered in the native land registry as the owners. The land has now been turned into a weir for the Energy Fiji Limited (EFL) hydro development. The claimants had approached the Ministry of iTaukei Land Registration Department in 2008 and 2015 with supporting letters from neighboring *vanua* chiefs to explain that they were wrongly recorded in the TR as members of a different tribe. They were told that only the name of the creek is on the map. Yet, information obtained by journalists from the locals pointed to the tribe’s *yavutu*, *yavu*, and connection to the land all being named as Wainisavulevu. This is also supported by a colonial officer’s report about the same tribe with the same *yavutu* name [29]. Yet, this evidence was rejected by the iTaukei Land and Fisheries Commission (TLFC). There was no consultation with the landowners, nor was any compensation paid, and the lost resources, such as native timber and ecological diversity, cannot be replaced.

#### **5.2 The Vunivalu of Rewa**

The second example, like the first, highlights the importance of recognising connections between language, power, and resistance occurring in specific historical and societal contexts [30, p. 61]. This event was described in an interview with a local resident who provided a historical account of the Vunivalu and the chiefly title of the Roko Tui Dreketi in the province of Rewa [31]. Tribal movements and wars between different *vanua* were described by the informant, including successive Vunivalu since their settlement in Rewa from the north east of Viti Levu

(see **Figure 1**). In the TR, however, the original Vunivalu lineage was recorded as 'extinct', so the title was transferred to another family whose ancestors were only part of the entourage that migrated from the north. The Buli (district official) had then appropriated the title of Vunivalu [32]. As evidence to confirm the inconsistencies between the 'new' claimant to the Vunivalu title and his *yavu*, the informant pointed out the locations of the *yavu* (house foundations) in relation to the village hierarchical setting, as well as the names which reflected their traditional positions and status. The TR does not reflect the reality on the ground. The descendants of the Buli continue to be installed and play the Vunivalu 'role' today.

### 5.3 Tui Tunuloa chiefly seat and title

Tunuloa *vanua* and its chiefly seat and title, Tui Tunuloa, originally belonged to the chiefly village of Wailevu (see **Figure 1**), several miles from the Koroivonu village, which now claims both the chiefly seat and title Tui Tunuloa [33, p.3, 456-62]. Traditionally, iTaukei nomenclature, including personal names, should remain with the owners, and its adoption by another clan or person should only be authorised by the owners, but not the title, which remains with the clan or *tokatoka*. In cases of status appropriation, a new title may have to be created by the usurper. During tribal wars before Christianity arrived, the old Tunuloa *vanua* usually allied with the old Cakaudrove *vanua* on the nearby island of Taveuni (**Figure 1**) to fight the latter's enemies. The recording of Tunuloa's TR in 1911 was an opportunity for the Roko of Cakaudrove, who was also a high chief of the Cakaudrove district, to manipulate the TR of Tunuloa *vanua*. He claimed the chiefly seat and the title Tui Tunuloa for the village of Koroivonu, where one of the Roko's ancestors had earlier settled. Hocart [32], who had visited Taveuni before Tunuloa, detected contradictions between the Lands Commission records he had seen earlier and information given by his informants in Wailevu. Not only did the Roko appropriate the title and the seat, he also shifted both the sacred institutions to the village of Koroivonu and bestowed them on a descendant of his ancestor. The last investiture of the Tui Tunuloa held at Koroivonu was in 2017 [34].

### 5.4 The aftermath of chiefly installations: Vusasivo and Natewa

The last two incidents involved two chiefly installations that ended in violent confrontations in Vusasivo, a subject village of Natewa, and in Natewa village itself [35]. In August 1969, the elders from the chiefly village of Natewa, who traditionally bestow the title of Tui Vusasivo to the correct candidate, were faced with a dilemma. Upon their arrival, the villagers of Vusasivo and its neighbour Nadavaci were at loggerheads about who should drink the second cup of *yaqona* (*Piper methysticum*) in the installation ritual. The Vusasivo people explained to the elders that, from memory, the cup is ritually taken by a representative of the Tuibala clan in Vusasivo, and not from Nadavaci as recorded in the TR. The elders advised them to consult with each other, and the installation was successfully held. But the day still ended in violence. A similar ritual held in Natewa in 1973 also ended in violent confrontation. Two rival clans, Valelevu and Valenisau, both claimants to the chiefly title, requested official intervention to pacify supporters. In contrast to the incidents described above is another of Natewa's subject villages, Vusaratu, which successfully installed its chief in 1969. Like the above villages,

there was an unethical transfer of the chiefly seat and title to a different clan, but they later returned both sacred identities to the correct family [36]. There is an urgent need to review the TR using indigenous methodology and methods to correct erroneous content and restore chiefly seats and titles to their original owners to ensure harmony and cohesion are maintained.

## **5.5 Post-colonial attitudes towards iTaukei knowledge**

Documents collected during Fiji's colonial days, including the TR, are stored in the 'strong room' of the TLFC but have remained inaccessible since colonial times. The Ministry of iTaukei Affairs has always insisted that the TR record is 'sacrosanct' and cannot be replaced, erased, or changed [37, p. 69]. This exacerbates the problem of disharmony and fragmentation. Unable to access very important historical data, Indigenous Fijians are deprived of their full identities. Self-knowledge development is stunted, and curiosity to create new knowledge is impeded. Such knowledge deprivation in the iTaukei community can result in claims to higher status, such as the *vunivalu* title by the Buli of Rewa.

iTaukei culture-based ranks and roles are ascribed. A clan can be given an additional role without a change of status. There is no status promotion or demotion. According to an informant who described traditional status to this writer: *e sega na toso cake se toso sobu*, there is no upward nor downward movement [38].

## **6. Knowledge building: Triangulation of naming, yavu, role, title, and connection to land**

### **6.1 Research on Natewa and the Vunivalu list: Context and meaning**

The second part of this chapter questions the methodology and method adopted by some local scholars to study the case of Natewa *vanua* (see **Figure 1**) and its Vunivalu list of pre-colonial and post-colonial periods [39]. The study is scrutinised closely with the TR text (where necessary) and the application of oral tradition and its method of evidence. The discussion will begin with two rival parties who are claimants to the Vunivalu title, their origins, and settlement in Natewa, which provide the contexts of their claims. Traditional evidence, or lack of it, is examined to back or refute claims to the title of Vunivalu and its authenticity.

The report of the study is available online, including, as an appendix, a critique by the present author. As members of the *vanua* o Natewa, another person and I were approached for separate interviews. We were not informed about the extent of our involvement but were later asked to critique the initial draft of the report. The research group also included two members from the *mataqali* Valelevu in Natewa. The study used a questionnaire (interview) instead of a *talanoa* method, which is a culturally accepted approach for social research. Bricolage methods [40] also aid in substantiating and corroborating claims [Kincheloe, 2001]. However, indigenous concepts, such as traditional signposts, must be assessed by indigenous method(s) to confirm or refute claims.

## 6.2 Methodology and method

### 6.2.1 Timeline

The report's Vunivalu timeline is problematic. The list was not examined; its validity was taken for granted. The report claimed that Saurara arrived in Natewa in the first few decades of the eighteenth century [39, p. 31], contrary to my research, which indicates that the Vunivalu title was created in 1847. Given that the list of Vunivalu was not questioned by the research group, the 11 names were stretched back to fit into the TR timeline. When this list of 11 chiefs is compared to the list of Tui Cakau of Cakaudrove and the list of Vunivalu of Bau, between 1840 to 1925, the margin of error is too wide. The Tui Cakau dynasty during these 85 years saw the title pass through seven successors, three of whom were murdered, which contributed to a longer list [41]. The Bau Vunivalu line had three. In the same period, Natewa had 11 Vunivalu. The three *vanua* should have some consistency, allowing a margin of error between them.

If the Vunivalu title already existed at the beginning of the eighteenth century, this conflicts with events that occurred after 1840. For example, Bonaveidogo was the Turaganivalu (chief-of-war) living in Natewa Sawana and recorded by Cannibal Jack, a gun-runner. This conflicts with Tokainamena's timeline in the report as a Vunivalu during that period (**Table 1**). If Tokainamena is Bonaveidogo's father-in-law, then it would be the same man Cannibal Jack referred to as 'king'. Bonaveidogo and his father-in-law play the same role as Vunivalu. There is a contradiction in both roles (Turaganivalu/Vunivalu) and title (Vunivalu/King). The research report team failed to see this conflict.

The study used the Western method of questionnaire. As Chilisa [11, p. 76] argues, the questionnaire method is a top-down approach to data collection that mirrors the worldview of the researcher and their understanding of the topic. Moreover, the study report contends that oral traditions, such as tales of origins, are

| Number | Tukutuku Raraba (Sovatabua) | Hocart's 1st list (p. 3,466) | Hocart's 2nd list (p. 3,470) |
|--------|-----------------------------|------------------------------|------------------------------|
| 1      | Dakuwaqa                    | Ndakuwayga (Dakuwaqa)        |                              |
| 2      | Veitoyaki                   | Mbaleicoyge (Baleicoqe)      |                              |
| 3      | Raliku                      | Totovaygala (Totovakaqala)   |                              |
| 4      | Gasagasa                    | Gasagasa                     |                              |
| 5      | Rakuita                     | Rakuita                      | Rakuita                      |
| 6      | Tokainamena                 | Tokainamena                  | Ratu Na 'ete                 |
| 7      | Rasiwa                      | Ratu Rasiwa                  | Rasiwa                       |
| 8      | Emosi Tila                  | Ratu Tila                    | Tila                         |
| 9      | Manoa Waibuta               | Ratu Waimbuta                | Waimbuta (Waibuta)           |
| 10     | Amenatave Rabelo            | Ratu Rayambelo               | Ratu Rayambelo               |
| 11     | Epeli Vakalalabure          |                              |                              |

Source: [39, p.68]

**Table 1.**  
The list of Vunivalu: from the *Tukutuku Raraba*.

mythical because they have been passed down and have no way of proving their validity unless established canons of research are applied [39, p. 174] to test their authenticity. There are established iTaukei methods of proving one's identity by studying traditional signposts, their connections to land, and their land of origin [13].

The discussion below examines the Vunivalu list, beginning with the origins of the two *mataqali* contesting this leadership title: Vatulawa/Valelevu and Valenisau. It covers their migratory movement, especially the lineage of Saurara, and considers whether the blood link between Saurara's descendants is genuine. To provide the context of the title and what may have transpired before the title Vunivalu was created in Natewa, the discussion recounts the history of Natewa from 1840 to 1925, when the last Vunivalu from the Valenisau *mataqali* was ordained. This is the period, particularly 1840 – 1870, when various events occurred, which have become the centre of contention between differing views about the Vunivalu dynasty.

The research team did not deconstruct the TR historical narrative to examine the reliability and validity of its content, nor did it consider interrogating the context prior to the creation of the Vunivalu position and title. Yet, it is critical that the historical events be explained because of their impacts on what unfolded later. Research cannot be effectively conducted in an ethical and cultural vacuum.

### 6.3 Origin of Saurara

In the report, the list of Vunivalu (**Table 1**) consists of Saurara's descendants, except for Epeli Vakalalabure from Valenisau. There are a few issues that need clarification before I discuss the Vunivalu genealogy. I begin with Saurara, an ancestor of the Sovatabua warrior clan who came from Ra (see **Figure 1** inset) under the leadership of Naboutuiloma [41, 42] to strengthen Verata's power base, a powerful kingdom, attend to disputes, and provide military aid. The Sovatabua group was left behind, maintained its name, and became the inside warriors of the indigenous clan of Natewa, who originally came from Verata. The traditional practice after a war was for the victor to leave behind a group of warriors to reinforce the victors' interests. The story of Naboutuiloma has been validated by Sayes as part of oral tradition in Ra. Saurara, a chiefly position in Ra, is a title that is idiosyncratic to that area [20, 43]. Connected to this history is the TR claim about the migratory group from Bau under Saurara. According to the TR, Saurara from Bau arrived in Natewa after the *vanua* was already occupied. The name Saurara has now been transferred by the architects of the TR to the migratory group from Bau. These two different histories of Saurara have been conflated and compressed into one epoch. However, the TR version was disputed by the research team, which argued that the TR was not clear whether Saurara came from Bau Island itself or from the *vanua* of Bau. Because the TR was not 'precise', the report then infers that Saurara's group came with the Roko Tui Bau's (the sacred chief) entourage from Ra. On their way, Saurara split off and went to Natewa.

There are three points that need rebutting. First, a *vanua* is ensconced within its chiefly system. They are inseparable, so whether the group is from the *vanua* or Bau Island, their indivisibility means that they cannot be treated in isolation. This argument is irrelevant because it does not represent the cultural milieu and collective consciousness of the iTaukei. Moreover, the tale of the Roko Tui Bau coming from Ra is incorrect (I elaborate more below). They come from Moturiki Island [1, p. 7], close

to Bau. The storyline of Saurara and the entourage of the Roko Tui Bau sharing the same origin is a new version created by the report. Here, the research team is attempting to meld three pieces of history: Saurara from Ra, the Roko Tui Bau entourage, and the combination of the two to create a new storyline.

Furthermore, they made no mention of an entourage coming with Saurara. All chiefly entourages that migrate to look for new land [44] travel as a community. According to Milner, an entourage consists of warriors, heralds, and hand-of-food bearers. Their presence should be evident on the ground where they settle, serving their chief or Saurara's descendants. There is no proof of their presence. In contrast, the indigenous group of Natewa has its *yavutu*, Natewa Matua, surrounded by their traditional warriors (see **Figure 1**), and the presence of their heralds and hand-of-food bearers living with them. In indigenous research, the presence of traditional roles and skills can be useful evidence to back up claims of chiefly settlement. Equally important is community participation to interrogate situations such as the above to avoid confirmation bias or untruths, which can compound fragmented relations.

### *6.3.1 Conflation of Roko Tui Bau, Kubuna, and Saurara*

The tale of Saurara's migration and its association with the Valelevu/Vatulawa clan does not exist in the oral tradition of Natewa, nor has the clan adopted names of signposts connected to Saurara as part of tradition. They named their *yavutu* Vatulawa after the sea they crossed, not by a signpost from where they originally came. Signposts are useful as evidence of their origin. Two further points in the report (page 56) must also be challenged. One is that the Roko Tui Bau and his entourage left Ra for Bau in the mid-eighteenth century. The report is conflating two migration groups: Roko Tui Bau's entourage and Kubuna. The Roko Tui Bau and his entourage came from Moturiki Island and occupied Bau for centuries, well before the Kubuna group arrived [45]. This timeline is often a subject of debate [46], but not their origins. In addition, migratory groups often settle at various places before their final abode. Both groups, Kubuna and the Roko Tui Bau, did not leave directly for Bau. The Kubuna group settled there when Fiji was already occupied by a small number of Europeans. Oral tradition maintains that the Roko Tui Bau group came from Verata, settled in Ovalau and Moturiki Islands at different periods, and finally in Bau [1, p. 7]. For Saurara, however, there is no stop-gap movement but a direct migration to Natewa. Nor is there oral tradition to explain why they left for Natewa and why Natewa in particular.

Another conflation in the researchers' report is the linking of Saurara, the Roko Tui Bau, and Vusaratu (in Natewa) as evidence. The Roko Tui Bau's clan is called (Ya) Vusaratu, who originated from Verata. The problem here is that the Vusaratu in Natewa has the same name, but the composition of the village consists of tribal warriors of Cakobau of Bau, who brought them in 1847 [1, 2, 41, 46, 47]. Cannibal Jack [46] described how he visited Vusaratu village and threatened to shoot and kill their eel god five years before Cakobau's warriors arrived. According to Derrick [1, p. 88], Cakobau's second visit to Natewa was political: to implant his candidate to be the Vunivalu and leave his warriors behind in Vusaratu. The report's merging of Vusaratu (Natewa) with the (Ya)Vusaratu of Bau to explain Saurara's connection to Bau is a misnomer. Another problem in this merging is a compression of time from the early migration and settlement before the 1700s to 1847, when Cakobau came to Natewa.

These contradictions and inconsistencies could be ironed out with the presence of community members.

#### **6.4 Cakobau's warriors**

The Tui Cakau declared war on Natewa in 1841 and requested military aid from Cakobau, the Vunivalu of Bau. It took five years before Cakobau joined forces with the Tui Cakau to attack Natewa [1, 2, 41, 46]. After the war, a group was left behind by Cakobau, who have now become the Valelevu/Vatulawa clan; they are traditional warriors of Cakobau, who came from various places in the *vanua* of Bau [47]. Cakobau had not only left his footprints in Natewa but in many other parts of Fiji, such as Macuata and central Viti Levu [1, 21, 27]. For the island of Gau, for example, Toren [23] gives an account of how the high chief of Sawaieke *vanua* admitted his connection to Bau after being challenged by a man from the rival chiefly lineage during the 1916 commission of inquiry. Toren's account of the exchange between rival chiefly families highlights their different origins, which belies the shared agnatic descendants of a single *kalou vu*.

##### *6.4.1 Lull before the storm*

An account of Natewa between 1841 and 1847 provides the context for what occurred in 1847 when the first 'Vunivalu' was created. This is the period that has been overlooked by the researchers' report. Cannibal Jack, a gun – runner, was living in Natewa Sawana (Natewa-on-the-coast) between 1841 and 1844, having been brought over from Somosomo by Bonaveidogo [45]. Bonaveidogo was the son of the high chief of Tui Macuata (see **Figure 1**, inset), who came with his wife to look after his father-in-law, who was about 60 years old. His father-in-law was the head of the traditional carpenter clan, *mataisau*. Bonaveidogo often made trips to Somosomo to represent the Tui Macuata and to seek military aid from the Tui Cakau. He self-appointed himself as Turaganivalu (chief-of-war) and propped up his father-in-law, Ratu Dabe, as 'high chief' so he could have more control over material wealth for prestation. This was the situation Cannibal Jack faced when he left in 1844. It was during this period, too, that Cakobau was preparing for the Natewa/Somosomo war, probably a factor in Bonaveidogo's disappearance from the scene by the time the war was declared in 1846. After the war, there was a lull before Ratu Dabe died in 1847. **Table 1** below lists Dakuwaqa as the first Vunivalu, both in the TR and Hocart's list. Ratu Dabe is probably a moniker for Dakuwaqa. Henceforth, this discussion is based on my analysis of the Vunivalu context since 1846.

## **7. The Vunivalu list**

### **7.1 Valenisau clan**

I now discuss the origin of the Valenisau *mataqali* because it is a rival party to the Vatulawa/Valelevu *mataqali*. This is relevant to the basis of my argument that everyone in the community is from different origins. The Valenisau clan consists of three main groups: the *mataisau* (traditional carpenter), the *gonedau* (fisherman), and the warriors of Tuikilakila (Tui Cakau's son), who were left behind in Loa in

1843 [2]. Part of the Loa group moved to Natewa during the colonial period, probably between 1870 and 1900. The *mataisau* clan came from Cikobia Island, and landscapes are named after them, such as Vesitatoga. *Vesi*, a native tree, *ta* means cut, and (T)oga refers to where they originally came from. They named their *yavu* Cikobia and changed it to Valenisau in 1973 after a dispute over the Vunivalu title. This clan is connected to Bonaveidogo and Dakuwaqa/Ratu Dabe, the first Vunivalu, according to the TR. The fisherman clan, according to oral tradition, came from Nagasauva, a village across the bay. Both clans named their *yavu* after their places of origin. The third group came from Nasarata in Somosomo, of Tongan origin. The population of Natewa village, therefore, does not share a common descent line, as Maxwell's model would have it. As well, there is no shared agnatic descent line between any of the clans, as the report claims.

## 7.2 Vatulawa/Valelevu clan

I have already discounted the new storyline created by the researchers' report on the origins of the Vatulawa/Valelevu clan coming from Ra. My study contends that the group came in 1846 as Cakobau's warriors. Settling at Natewa Sawana [2], they became aware of the vacuum left by Bonaveidogo and the conundrum faced by Dakuwaqa/Ratu Dabe. When Dakuwaqa died, the elders of Natewa, who were living in Natewa Matua (old) (see **Figure 2**), appointed Baleicoqe [33] as his replacement. This name was given to Hocart in 1912, despite its absence in the TR Vunivalu list. Dropping the name by the architect of the TR was for a good reason. The 'appointment' of Bonaveidogo as a Turaganivalu and propping Dakuwaqa up as a 'leader' was not vetted by the *vanua*, which must have incensed the indigenous people of Natewa Matua. The death of Dakuwaqa, however, was an opportunity to re-right the position and procedure by putting a man of their choice who would be loyal to them. Baleicoqe, I believe, was from the initial Sovatabua warrior clan from Ra.

However, before the elders could install him, Cakobau arrived to intervene [1, p. 88]. Note that this scenario is similar to the situation in Sawaieke at Gau Island, where Bau insisted on their candidate. This was when the title Vunivalu was introduced in Natewa. Derrick [1] surmised that Cakobau's second visit to Natewa in 1847 was political. Despite Cakobau's coercion to install his candidate, the Natewa elders installed Baleicoqe after Cakobau left. Veitoyaki, Cakobau's chosen candidate, must have been enraged by this change, probably belligerent enough to be given a name, Totovakaugala(la) [33, p. 3,469]. This period, 1840 to 1850, is important to the architects of the TR because they had to meld the leadership gap to smoothen the 'ruffle' created by the leadership friction.

The word 'toto' means annoyed, and 'vakaugala' means uncooperative. Names, especially moniker names, in Fijian tradition, must have meanings.

## 8. The Vunivalu descent line

Below, I examine the list of Vunivalu names in **Table 1** and highlight flaws that illustrate attempts by the researchers' report to defend and substantiate their claims of shared agnatic descent line. Three names in the list have been conflated: Dakuwaqa, Baleicoqe, and Veitoyaki, the first three leaders who come from different origins.

Note also the moniker name Totovakaugalala given to Veitoyaki because of his outrage has shifted to Raliku, who is a Vatulawa/Valelevu candidate. This shift to Raliku does not reflect the meaning of the name and why it was given. Note too that the spelling of the name has changed to Totovakauqala, perhaps to prevent connecting the name and context and render it meaningless.

Another moniker name is the seventh Vunivalu Rasiwa (abbreviation for Rasiwatibau). Rasiwatibau means *ra*, short for Ratu (an honorific title), *siwa* means bait, and 'Bau' or 'Cakobau'. For a different interpretation, see [39, p. 71]. The threats indicate that the selected candidate to be the Vunivalu was not from Cakobau's warrior clan, and so the rival candidate earned a moniker. In brief, the period between the early 1840s, when Dakuwaqa was the 'king' cum Vunivalu before Cakobau's intervention, brought friction which needed to be suppressed by conflating or dropping names, creating moniker names to give meanings and contexts, which were altered or delinked to reconnect with other names, rendering it meaningless.

### **8.1 Agnatic descent line: A colonial construct**

Tila(walu), the eighth Vunivalu in **Table 1**, reveals a very different scenario about the selection, criteria of selection, the installation ceremony, and its 'aura'. In the TR, Tila's entrance is recorded as coming to Natewa after the war in Taveuni between Tui Cakau and Wainiqolo, an aide of the Tongan noble, Ma'afu. Natewa's aid was requested. After the war, Tila came to Natewa and stayed. Where he came from is not explained, nor is the reason why. Tila later became the Vunivalu to replace Siwatibau. So, where did Tila come from? The answer could be explained by Draveisau's diary [48], which recorded that he came from Saqani, a *vanua* on the other side of the bay. A diary belonging to Draveisau (also a Hocart informant in 1912) asserted that when the sacred Vunivalu cup was offered, not one man was willing to accept it – *era sa dro ki tuba*, they all ran outside [48]. Only Ratu Suasua (an ancestor of Draveisau) clapped to accept the sacred cup but did not drink the *yagona*. Instead, he offered it to Tila. *Sa gunu ko Tilawalu, kai Saqani* – Tilawalu drank the cup, from Saqani, according to Draveisau. A Tevita Suasua played the role of the Sau under Siwatibau [39, p. 73], consistent with this information. Tila(walu), therefore, did not share agnatic descent with any Vunivalu in the list. Another Vunivalu who did not have blood relations with others is Manoa Waibuta, who came from Vusasivo, as the report noted [39, p. 356]. To summarise, the people of Natewa, since the early settlement of the *vanua*, all come from different origins. That includes the Vunivalu in the list. There is no shared agnatic descent line, as claimed by the researchers' report.

It is particularly important to note the context of how the installation transpired when Tilawalu accepted the sacred cup. There was no prior decision as to who would be installed, as is the expected procedure now. Instead, the men present were challenged to drink the sacred cup if the aspirant thought he had the ability and capacity to take up the challenge. One major reason why the cup was offered to Tila was because he shot Ramoda (a name also mentioned in the TR), *na qaga ni Muaiudu*, a hero of Muaiudu (a *vanua* on the other side of the bay). In a fluid society, the choice of a Vunivalu is based on pragmatism. Sayes concedes, referring to her study of the Tui Cakau dynasty in Somosomo, that there was no requirement that a title should be succeeded on a purely ascriptive basis. Succession rules are ambiguous, and this allowed the most politically competent turaga (man) to achieve the title [41, p. 132].

## 9. Conclusion

Social fragmentation of the iTaukei community has caused tensions, sometimes aggressive disagreements on chiefly titles and land disputes, mainly due to the erroneous record of historical narratives in the TR. The insistence by the TLFC that the record is irrevocable compounds the problem. There is a need to review the TR, correct the narrative, and take necessary actions to resolve the injustices caused by the erroneous record, which has created splintered relations and degraded the culture of the iTaukei people.

Research conducted on the iTaukei community to resolve disputes will not work unless the methodology and methods used are culturally competent and appropriately tailored to the culture. It is important to include local academics in research studies because they have the 'inside knowledge' that can be useful. However, community participation is very important as adjudicator or scrutineer to prevent confirmation bias, untruths, or manipulation.

Research studies using Indigenous methods must resolve the situation that the research study report could not achieve, especially regarding social coherence and the Vunivalu debacle, because the team used Western methods only. In addition, the researchers accepted both the TR and Vunivalu lists as 'truth' without examining them. The Vunivalu title in Natewa is not based on blood links, as the report claims, but was accorded to whichever candidate is challenged by the responsibility of the role, which can include outsiders. It is a flexible system that relies on a powerful and capable person who will take up the challenge to provide protection to the community. The insistence on agnatic descent was a colonial construct that only appeared after Vakalalabure, the eleventh Vunivalu. Since the title and position were not created or endorsed by the *vanua*, it was important that the position remain pragmatic to suit the needs of the community at that time.

The research team's failure to involve community representatives from the beginning to the end of the study undermined the principles of responsible and ethical practice for participation and decision-making in the study. Community involvement as contributors to the research is indicative of accountability and transparency to the community, other stakeholders, and the researchers themselves. It is a platform where differences in interpretations of data and the aligning of incorrect understandings or misunderstandings of certain practices, values, and protocols are held up to the light for scrutiny. It provides opportunities to reflect and reconcile with alternative version(s) or, if present, confirmation bias. The application of indigenous method(s) ensures the approach is holistic, which also addresses other issues related to the main problem.

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## Chapter 4

# Rehabilitation of the House of the Taruljayaz Family in Padain, an Indigenous Paiwan Settlement in Taiwan

*Huei-Min Lu*

### Abstract

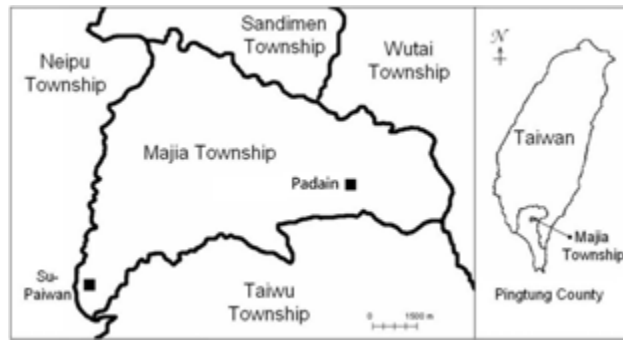
This chapter discusses an indigenous settlement in Taiwan, and the meanings of an ancestral house with the act of rehabilitating an indigenous settlement. This reconstruction act is not only to conserve endangered architectural construction methods but also to sustain traditional indigenous culture with community empowerment. Through interpretations of the idea of a settlement in society, and how people survive in the twenty-first century by returning to their original homeland to reconstruct a house, we can rethink our attitude toward nature to create a resilient environment in modern society. The purpose of this chapter is to articulate the rehabilitation of the headman house in Caljisi-Padain, an indigenous Paiwan settlement in southern Taiwan. The essay introduces the background of this reconstruction in Padain and its significance in the indigenous history. By integrating the approaches of anthropology, mythology, and human ecology, the essay articulates the relationship between humans and environment especially on three scales: the regional, the district, and the locational scale. The sustainable and resilient indigenous settlements remind contemporary practitioners, politicians, and educators to learn from the humble attitude of indigenous ancestors toward the environment.

**Keywords:** human settlement, resilience, sustainability, authenticity, human ecology, Kavulungan, reconstruction, myths and architecture

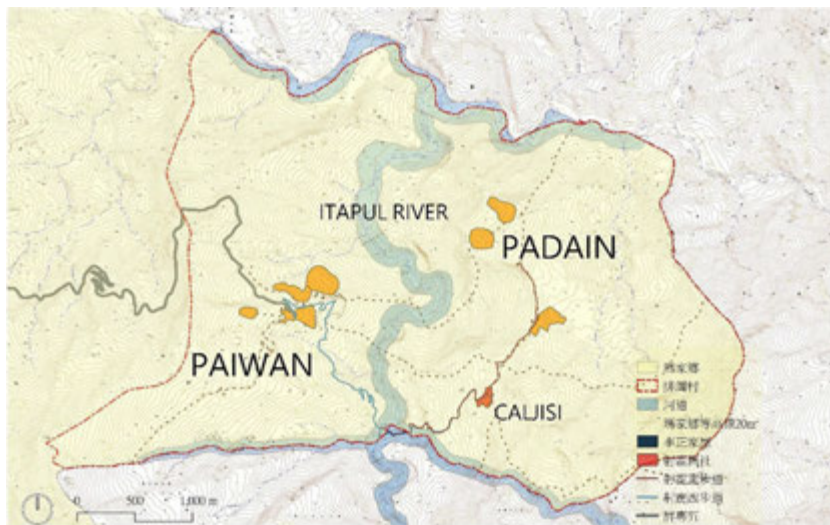
### 1. Introduction: Padain and its history

Padain, an indigenous civilization's originated domain, is located on the east part of the Itapul River, an upstream tributary of the Ailiao South River in Majia Township, Pingtung County, Taiwan (**Figures 1, 2**).

Padain primarily comprises the Caljisi, Tjulinaulj, Kalicekuan, and Kapadainan settlements, a civilization that developed at the foot of Cekecks Mountain in Kavulungan, which is thought to be the original domain (Vineqacan) of the



**Figure 1.**  
*The location of Padain, Taiwan.*



**Figure 2.**  
*Caljisi, Padin/Paiwan in the Itapul River Basin, drawn by Huei-Min Lu (GIS) [1].*

ancestors of several Indigenous ethnic groups, such as Paiwan, Rukai, and Puyuma, who later spread across a broad area of southern Taiwan and now number about 150,000 people, approximately one-quarter of the Indigenous population. Padain: “pa” means to make or to be, and “dain” means the embryo of a human; thus, Padain means the creation of human life. Kapadainan, formed by adding “ka” and “an,” means the original place, and therefore, Kapadainan is the original place of creating human life.

Padain, hence, is the common memory of ancestors of several indigenous ethnic groups. This domain is associated with creation myths, including the story of Reeves’s muntjac carrying fire from Padain during the Great Flood, probably 4,000 years ago, which indicates the original place of the Paiwan lineage. There is a legend of seven main gods, representing the seven ancestors: three men and four women. About 1,000 years ago, they migrated along four routes: the eldest

daughter (Muakai) moved toward the northwest as the ancestor of the Raval ethnic group; the second son (Sakinu) founded the Caljisi settlement; the third son (Pulalengan) crossed over Kavulungan Mountain and moved toward the east as the eastern Paiwan people; the fourth son (Puljaljuyan) moved to the west as the ancestor of Kalapo (Pinpu ethnic group); and the seventh daughter (Saljavan), along with some villagers, crossed the Itapul River and founded Supaiwan. According to archeological, anthropological, and kinship studies, Kapadainan (800–1721 AD) had over 200 households, which migrated to Kalicekuan (1721–1900 AD) and then to the east due to a landslide in 1721. They later moved to Tjulinaulj (20 households) and Caljisi (40 households) (1900–1974). It was abandoned due to the government migration policy in 1975; however, until 2004, before Taruljayaz's rebuilding, six intact houses remained (**Figure 3**) [1].

Among the 70 old indigenous settlements I surveyed between 2000 and 2003 [2, 3], Caljisi-Padain was the only “alive settlement” with people still residing there. Many old indigenous communities had long been abandoned in the mountains since the mid-eighteenth century. At that time, the elders cared deeply about cultural revitalization and inheritance. The survey was conducted in the seven townships of Pingtung County. Settlements with traditional architecture and landscapes that embody an authentic mountain lifestyle are the most important carriers of cultural transmission. I deeply felt that these settlements, with their stone slab houses, hold the same value as UNESCO World Heritage sites. This realization sparked great interest and laid the foundation for my research in architectural anthropology. I learned about the value and importance of old indigenous communities in architectural anthropology research – these disappearing settlements, their architecture, and indigenous culture,



**Figure 3.**  
The site plan of the settlement of Caljisi, drawn by Huei-Min Lu [1].

especially oral traditions, myths, and architecture – which need to be well preserved, transmitted across generations, and revived. During the survey work, I experienced countless instances of precious traditional wisdom from elderly indigenous people, empathized with their desire to rebuild their ancestral homes, and felt deeply concerned about the disappearance and decline of Paiwan culture and its inability to be passed on. I was profoundly moved by Paiwan Village's passionate commitment to reviving indigenous culture. Therefore, to fulfill the headman's dream of rebuilding his ancestral home and to document the techniques of the vanishing slate house construction methods for my own professional curiosity, I also hoped that through the act of reconstruction, these techniques could be passed on to younger generations, encouraging more people to return to their old village to recover their homes. I hope that this valuable Paiwan community can be preserved and revitalized. Consequently, I funded the reconstruction work and invited the elders to carry out the reconstruction.

The stone slab house of Taruljayaz was reconstructed in 2004–2005 at Caljisi-Padain. The reconstruction site was confirmed on September 23, 2004, and the house reconstruction project was led by Cegaw (1937–2009), the 14th-generation descendant of the Taruljayaz family, who oversaw the project's content and progress. Giljegiljav (1940–2021) and Auvin were the main elders assisting him. Members included Sauniyav, Kalecekas, Tjuku, Ucudjunu, Qalavas, Tinganguruc, Timtimal, Lanpav, Remaljiz, etc. It was primarily reconstructed by the families of Taruljayaz, Ruadjiyad, Galjang, and Pasasaw residing in Caljisi.

Traditionally, the construction of a house usually requires consulting the chieftain to obtain land. The construction process requires the joint efforts of all members of the clan, including the collection, sorting, and quarrying of stone, as well as the sourcing, felling, transportation, cutting, and staking of timber.

The construction process of the stone slab house includes site selection, material collection, transportation, commencement of construction, excavation, land preparation, sidewall stacking, pavilion construction, purlin placement, pillar erection, roof slab paving, front wall assembly, and floor paving [1].

Besides, during this period, from February 9th to 14th, 2005, the author followed in the footsteps of Chief Li Zheng (Cegaw) and Elder Song Yili (Giljegiljav), traversing the Kavulungan Mountain to the east to explore the kinship route of the North Paiwan to the East Paiwan.

## **2. Theoretical framework and literature review: Anthropology, phenomenology, human ecology, geomythology, landscape anthropology**

Anthropological research, from its enlightenment in the eighteenth century to its transformation in the early twentieth century, reached its peak in the 1960s. In architectural anthropology, works such as Joseph Rykwert's *The Idea of a Town* (1963) and *On Adam's House in Paradise* (1972) provided a crucial direction for the study of architecture and settlements at that time.

*“...I happened also to read Tristes Tropiques, Claude Levi-Strauss' account of his journeyings to and in the Amazon basin, and was struck by his description of the unity between village plan, kinship system and the world picture of Boror,*

*a people of the poorest material culture, and by the way each aspect of this picture mastered much of their thinking and action. . .”*

Levi-Strauss’s structural anthropology happened to be correlated with Rykwert’s *The Idea of a Town*, which explores the notional structure of the ancient town and how that structure might be transmitted and understood by its citizens. That is my inquiry and my intention too. Just as the Dutch *Forum* editor, Aldo Van Eyck, suggested in 1964, it would serve as a reminder to architects of something they seemed to have forgotten: the city was not just a rational solution to the problems of production, marketing, circulation, and hygiene, or an automatic response to the pressure of certain physical and market forces, but it also had to enshrine the hopes and fears of its citizens [4]. In *On Adam’s House in Paradise* [5], a voyage toward origins and inward to architectural thoughts of various great figures of architects and architectural historians – from Vitruvius to Le Corbusier – also urges me to search for the primordial idea of the primitive house. The spiritual dimension of dwelling or a house, to establish a meaningful connection with the environment, cannot be neglected. A person truly dwells only when they develop “orientation” and “identification” with their environment. Genius Loci refers to the “spirit” or intrinsic character of a place, which is a unique feeling composed of the tangible environment (architecture, nature) and intangible meaning (feelings, atmosphere) [6].

Mythology, geography, and ecology are deeply interconnected, as ancient myths often arose from, explained, and encoded environmental realities and natural phenomena. This intersection, known as geomythology, shows how local landscapes, weather, and geological events were interpreted through divine or supernatural narratives. These stories served as vital ancient ecological knowledge, fostering harmony between human communities and their environments.

Human ecology is an interdisciplinary field examining the complex, adaptive, and reciprocal relationships between humans, their social structures, and their built/natural environments. Originating in the 1920s with the Chicago School of Sociology, key theories include urban ecology, human ecosystems, and sustainability frameworks [7]. Landscape ecology falls under the category of human ecology, one of the Eastern Indigenous studies. A potent landscape is replete with personal and collective memories, but it is also a landscape formed by people, spirits, and goods [8].

Inspired by various disciplines mentioned above, I would like to concisely create a theoretical framework to discuss the issue in the specific indigenous settlement. The purpose of this essay is to articulate the rehabilitation of the headman’s house in Caljisi-Padain, an indigenous Paiwan settlement in southern Taiwan. It introduces the background of this reconstruction act and Padain, as well as its significance in indigenous history. Integrating the approaches of anthropology, mythology, and human ecology, the essay aims to articulate the relationship between humans and the environment in three scales – the regional scale of Kavulungan, the district scale of the Caljisi-Padain settlement, and the locational scale of the house. From an ecological perspective, these three scales, Kavulungan, Qinaljan, and Umaq, represent significant meanings for dwellings and human identities with spiritual dimensions: Kavulungan, a realm of coexistence between humans and gods; Qinaljan, a settlement with genius loci (nasi); and Umaq, a house with a sacred

shrine. Perhaps this discussion also serves to awaken us to realize the importance of urban and rural development with ecology reminding contemporary practitioners, politicians, and educators to learn from the humble attitude of their indigenous ancestors toward the environment.

### **3. Kavulungan – a mount realm of coexistence between humans and gods**

Indigenous settlements need to be understood in terms of an ecological perspective with different scales: from the regional scale of settlements in the domain of Kavulungan (10,000), to the district scale of the settlement (1,000), such as Caljisi, and to the location scale of the stone slab houses (100), such as Taruljayaz House in Caljisi.

#### **3.1 Kavulungan and myths**

Anthropological study of urban form was highlighted by Joseph Rykwert in 1964 in *The Idea of a Town*, which emphasizes that myths are essential for the formation of settlements and to the study of architecture in the ancient world [5]. “Kavulungan” (the sacred Mount Dawu of the Paiwan people) in the aboriginal language means the authentic, sublime, highest, ancient, and original mountain region where our ancestors lived. Kavulungan is a living space encompassing padain (Figure 4) settlements of the Vuculj Group, with Mount Dawu as its backdrop and surrounding mountains. Kavulungan has a rich legacy of creation myths and environmental memories passed down to this day.

The oral transmission can be divided into several important stages according to chronological order [9]:



**Figure 4.**  
*Padain settlements situated in Kavulungan, in the Eastern Bank of Itapul River Basin [1].*

1. The creation myth of Kavulungan
2. Milimilingan – the tale of the sacred ridgeline gods from Kapadainan to Tjagauas
3. Padain Sacrificial Sites
4. Migration records of the seven main gods (ancestors)
5. Story of Reeves's muntjac obtaining fire during the Great Flood
6. Story of offering pigs to retreat from floods and the origin of the Five-Year Sacrifice
7. Songs of the Five Head Families
8. Narration of the Half-Broken Beam Brothers
9. Records of the migration of families

The study of myths attempts to understand the Paiwan people's perception of the Mount Dawu area through oral transmission. From an anthropological perspective, understanding an ancient Taiwanese aboriginal domain, Kavulungan, can be summarized as a "realm where humans and gods coexist." Humans sanctified the mountains and rivers, and their ancestors were deified and placed in charge of nature, reinforcing the settlement's stability and legitimacy. At the same time, they anthropomorphized the mountains and rivers to understand the surrounding natural environment, imbuing the natural space they depended on with different levels of emotion. The mountains and rivers were guarded by gods who created and nurtured life. The surrounding mountain and river environment had names with characteristics that reflected ecology or human experience, where the gods also had their abodes. People either revered, feared, felt close to, or tabooed the mountain and river environment. In modern terms, this is a strategy of coexistence between humans and the natural environment that evolved from humans' long-term understanding of the ecology of the surrounding natural environment in the reality of survival within the natural environment. The Kavulungan concept of coexistence between humans and deities, and its spiritual dimension, is primarily understood, interpreted, and constructed through the oral transmission of the Padain tribe, including myths, environmental memories, and family migration histories.

### **3.2 Visual perception – point, line, and plane**

It can be understood from the concept of "point, line, and plane." We can interpret Kavulungan as encompassing three levels. The first level, starting from Kapadainan and covering the entire Dawu Mountains (3092 meters), is called Kavulungan, signifying the highest region, understood as a "surface." The second level, extending directly from Taiquras Mountain (1986 meters) up to Mount Dawu, is called Milimilingan, a sacred place with legends, representing a "line" or "sacred

ridgeline.” The third level, the summit of Mount Dawu, is called Tjagaraus, representing a highest “point” or “sublime peak.” Tjagaraus is also the common memory of the South-East Asia aboriginal people of Austronesian languages.

This is the most basic understanding of the complex mountain and forest space through a combination of visual landscape imagery and spiritual dimensions. It is evident that the farthest and highest visible mountain is Mount Dawu, hence the best “landmark” and the most influential settlement image for Paiwan people’s identities.

## **4. Padain settlements**

### **4.1 Human ecology (settlement site selections and layouts)**

Padain settlements, along with their surrounding areas encompassing dwellings, farming zones, forbidden zones, and hunting grounds – such as the old communities in the Itapul River Basin, including the mountain and water systems upon which they depended for survival – are investigated and analyzed on a scale of tens of thousands. Entering into a single settlement, focusing on the settlement itself and the water systems and farmland it sustains, is on a scale of thousands. The scale of a single settlement is on a scale of hundreds. At this scale, one can closely appreciate the spatial beauty of the settlement, whether enclosed or open by houses, and the esthetic beauty created by the building materials. Houses are primarily constructed of stacked stone slabs. The Paiwan settlements consist of houses, including the chief’s house, the shaman’s shrine, the noble’s house, commoners’ houses, youth centers, the five-year festival ground, outdoor granaries, taro drying houses, settlement boundaries, and settlement entrances. Traditional settlements are often surrounded by thorny bamboo, dense forests, or stacked stones forming outer walls. A gate is located at the entrance to the settlement. Traps are also placed around the settlement as defensive structures, and skull sheds are often located near the front and back entrances. Take Kalicekuan-Padain as an example. Its entrance is protected by a massive stone barrier and planted with slender bamboo, providing a sense of defensive seclusion for both the home and the settlement entrance. Sometimes, settlements are crossed by a stream with wild ginger flowers, such as the Amawan settlement. These settlements often have many areca palm trees, which are sometimes used to identify settlements in the mountains. The earlier settlement, Kalicekuan, laid out the Five-Year Ritual site at higher elevations, while later sites were often placed in front of the chief’s house. The chief’s house is usually located in a more central position within the settlement, neither at the highest nor the lowest point, while the youth center is often near the edge.

The cultural essence of these settlements reflects an adaptation to their surrounding environment, a harmonious relationship between people, the land, nature, and flora and fauna. Behind this efficient use lies a philosophy of environmental resilience. This resilient ecological approach to the land aligns with the resilient thinking of human settlements, low-carbon communities, and resilient architecture advocated by the modern UNESCO SDGs. The civilization of the Paiwan people is manifested in the integration of their religious activities with their life experiences in their traditional territories, reflecting an inner spiritual dimension that manifests in their outward reality. Their mountain wisdom, encompassing aspects such as topography, geology, hydrology, site selection and orientation for

architecture, site-specific construction methods, material usage, biological warnings and environmental safety, plant and animal conservation and recycling, and environmental education derived from taboo beliefs, is a rich treasure trove of achievements of high-altitude civilization. These can be gleaned from the exploration of ancient kinship trails, visits to old settlements, and the reconstruction of chieftain's houses, revealing the indigenous people's mountain wisdom, logic of natural resource management, and attitude toward ecological conservation.

Humans are indeed one of the greatest threats to biodiversity; the construction process of the old stone slab houses of the indigenous people is the author's local practice and an effort to initiate the preservation and regeneration of traditional indigenous settlement architecture. In 2009, facing Typhoon Morakot, the author, along with elder Giljegiljav and others, returned to old settlements for investigation, once again experiencing the tremendous changes in the mountains and forests and the ecological adaptation and resilience of the indigenous people after the disaster.

Indigenous people have lived in such harsh mountainous areas for thousands of years. With limited resources, they have maintained a certain balance between tribes. Between hostility and alliance, the migration of settlements has been driven. In response to each landslide or epidemic, migration has expanded again. We cannot help but admire the wisdom of the mountains and forests that they have accumulated from this, which fully understands and utilizes the relationship between nature and ethnic groups. This is the practice of indigenous bio-landscape and biodiversity. The traditional territories of the Paiwan people are spatial domains that integrate ecology, daily life, production, culture, recreation, and visual aspects. Their approach to land development is resilient, and their utilization of flora and fauna is both a necessity for survival and an expression of culture and art. The depth and breadth of their community life demonstrate that the Paiwan people are a highly civilized society.

#### **4.2 Cultural landscape: How human activities imprint on the land**

The traces of terraced development under the dense forest, revealed through aerial and ground-based three-dimensional lighting, allow for a more precise interpretation of the landscape changes in the indigenous settlements during the process of human development. This showcases the effective use of the natural environment and the ecological and cultural landscape of coexistence between humans and the environment. The ancient Qinaljan settlement is remarkably well-preserved, showcasing how humans have achieved extremely sustainable use of land and resources within limited and challenging mountainous terrain. It represents a profound and extensive regional cultural asset of indigenous peoples, possessing significant World Heritage value.

Any man-made construction is an intervention in the environment. Therefore, the construction of homes should involve minimal environmental intervention. The Paiwan old community is a stone slab house settlement built in a high-altitude forest area, with rectangular, semi-subterranean, low-lying buildings excavated to balance the slope. The home is the core of the indigenous settlement and the most important asset of the family, as well as a symbol of social class and status. Traditional houses consist of a main house and a front yard. In the Paiwan Old Village, during the indigenous era, these were single-room houses, serving multiple functions such as a stove and millet storage area, a bathroom/

toilet area, and a living/bedroom area. After the Japanese occupation, these were separated by walls, evolving into two-room or multiroom houses. The main house is separated from the secular area by an ancestral spirit pillar. The front side is the secular living space, while the rear side of the main house, against the wall, houses a shrine for sacred worship. An indoor burial pit is located beneath the floor of the front room. The main pillar is usually carved with ancestral images, highlighting the importance of ancestral worship in the overall house space system. The front yard is the main area for production and public communication and also serves as a continuous space connecting different houses. The low, gently sloping roof, in practical daily life, extends the front yard space, often used for storing utensils or drying crops. Construction materials, depending on the geological environment, are mainly stone slabs and wood. The chieftain's house was initially designed by drawing up a floor plan sketch. Using simple measuring tools, dimensions were measured on the site, and locally sourced shale was used to construct the walls, accommodating living, defense, ancestral worship, and religious rites.

The walls and side walls were constructed by horizontally stacking small shale blocks, while the front wall and roof were covered with large areas of river stone. The roof's timber truss structure, wooden roof panels, and stone slab roofing facilitated ventilation and smoke extraction for indoor fires. The outdoor paved stone plaza, stone-paved steps, and stone-paved retaining walls on the residential and farmland were designed to adapt to the terrain. Before construction began, communication and reporting to ancestral spirits were conducted. The chieftain and elders commenced construction with a solemn traditional ceremony, signifying their commitment to peaceful coexistence with the mountains and rivers, making good use of the land's resources, and praying for blessings while warding off evil. The Taruljayaz family house, built through the hard work and joyful labor of nine elders and many young and strong individuals, preserves the skill of slate slab construction. These artistically crafted stone walls, hand-stitched timber frames, and other artistic elements make the slate houses the most striking visual impression of the Paiwan settlement. They are in harmony with the local slate's well-jointed geology. After the chieftain's house was completed in 2005, the form, character, and atmosphere of the slate houses directly conveyed beauty and warmth. This group of traditional artists, with their profound humanistic concern, created these houses and settlements, which are a cultural treasure of the Paiwan people.

## **5. Spiritual dimension – Qinaljan and Umaq**

### **5.1 Qinaljan (settlement)/Nasi**

The local deities are omnipresent, especially the Cemas, the guardian spirits of the settlement. With Qinaljan Cemas, the settlement has life and vitality (in the indigenous language, Nasi), which is equivalent to the Western words *aura* (atmosphere) and *genius loci* (local spirit).

The term “Qinaljan,” meaning “village deity,” originally referred to the spatial concept of a settlement. However, a settlement is not merely a physical structure on land; it also includes the people who inhabit it and the deities who

protect it. The concept of a settlement being protected by deities is the most prominent and important aspect. Therefore, speaking of Qinaljan is equivalent to speaking of the deities protecting the settlement—the village deities. The usual residence of these deities is the village shrine. If the village shrine does not relocate, the residents of the settlement will not migrate. The village shrine later evolved into a sacrificial altar, becoming a place of worship for any rituals related to the settlement.

In the original Padain, ancestral houses or shrines were not particularly physically represented. This may be because they were the most primitive ancestral tribes, and the remains and spirits of their ancestors were kept in their houses. The gods protecting the settlements reside everywhere in the Dawu Mountain area, especially along the sacred ridgeline. The Saljavan God was believed to reside below the Kapadainan settlement, at the water source, at the spring on the mountain, which was also the place where the Saljavan God washed babies. Water and babies are the source of life, emphasizing the sacredness of the place where life was created. The shrine on the back wall of the house was believed to be a branch spirit of the chief of gods – the Saljavan Sun Mother Goddess, or perhaps a shrine god. The concept of ancestral houses only began to appear after migration to further south such as Makazayazaya, Tjalja'avus, and Lalekeleke. In early Paiwan settlements, the skull-shaped platforms at the front and back entrances were considered the dwelling places of the local deities. The spiritual spatial hierarchy of the old Paiwan community can be interpreted as follows: the skull-shaped platforms at the entrance of the Paiwan tribe's forerunner settlement, the Caljisi settlement, served as the place of Caka, the settlement warriors symbolic assembly location. The major Qinaljan is Kalicekuan-Padain, where the Five-Year Ritual platform still exists nowadays as the spiritual center of the settlement.

Genius loci are local guardian deities, often depicted in Western religious motifs as treasure bowls or snakes. Architectural theorist Christian Norberg-Schulz, in his book *Towards Architectural Phenomenology* [6], reveals the value of settlements through their atmosphere and the spirit of place (genius loci). In settlements of ethnic minorities in Yunnan, China, such as Nuohei Village, this spiritual dimension is prominent. For example, the dense forest in Nuohei Village is the sacred center of this traditional village. The people worship the three deities of the dense forest – the earth god, the forest god, and the ancestral god – and the rituals of the dense forest emphasize the protection of the forest, that is, the protection and veneration of the sacred forest and water source, thus becoming a place of worship for the settlement. Therefore, the preservation of settlements is not merely about restoring the original materials and construction methods of houses like the mushroom-shaped old houses in Azheke Village or the earthen houses in Chengzi Village. The preservation of settlements should also be like that of Puzhehei, simultaneously protecting the rural ecological landscape structure (lifestyle, production structure, and ecosystem) in a comprehensive ecological way. The preservation and regeneration of the indigenous settlements in the Dawu Mountain area, and the comprehensive protection of their ecological landscape structure, are of paramount importance. Furthermore, it is crucial to highlight the spiritual dimension of settlements like Nuohei Village.

The concept of indigenous settlements, much like Rykwert's interpretations, utilizes archeology and anthropology to describe the birth and formation of antiquity as a process based on intuition, ritual, and spirit, in an era where modern Western rationalism primarily leans toward faster transportation and social

segregation. It “reminds architects that the city is not merely a rational solution to production, market, circulation, and sanitation problems, or an automatic response to the pressures of tangible, market-driven forces, but must also carry the hopes and fears of its inhabitants” [4]. “Qinaljan,” besides referring to a settlement, also embodies the concept of settlement spirit. Furthermore, several settlements forming a tribe constitute a large community with self-identity, as the territory of Padain. Qinaljan, signifies a settlement space with a spiritual dimension. The Paiwan people’s important Five-Year Ritual, Maljeveq, emphasizes the preservation of ancestral identity and culture, but perhaps it should place greater emphasis on the spiritual dimension behind the Ritual. The spirit behind the five-year festival should not be simplified to chieftain culture; the labor behind the rituals carries a deeper meaning. Preparing the sacrificial poles requires felling trees in the mountains, a collective labor effort of the entire tribe. Culture initially signified a purely material process, later becoming a metaphor for the spiritual. The concept of culture combines the lower and higher structures, the joy of cultivation and education, and the tribal memories of floods, earthquakes, and famines. It is important to emphasize that culture is built through continuous interaction with nature, that is, labor [10].

The concept of culture is derived from nature. One of the original meanings of culture is agriculture, or the care of natural growth; the *coulter* and culture share a common origin. From labor and agriculture, harvesting and cultivating, we have derived the most refined vocabulary of human activity. Looking at the roots of rural labor, culture initially referred to something akin to refinement and later became somewhat synonymous with civilization, signifying the overall process of intellectual, spiritual, and material progress. Take the pottery culture as an example: the sacred pottery tightly bound and solidified indigenous families together. This mindset evolved from survival in the harsh mountains, becoming the civilization of the Paiwan people. When objects enhanced their original functions, combining technology, culture, religion, and art, what we call material civilization was formed. These pottery vessels, which once carried the rise and fall and glory of families, are important symbols of tribal self-identity. They also embody the technology and esthetics of traditional indigenous craftsmanship, transcending mere objects into timeless works of art rich in meaning, witnessing the cultural heritage of indigenous peoples over thousands of years. From the Qinaljan settlement culture to the slate house construction culture to the material culture of objects, we see a natural environment where lower-level labor evolved into a metaphysical intellectual and spiritual dimension.

## 5.2 Umaq and Kaumaqan

The term “Umaq” (“house”) refers to the entire building structure, while “Kaumaqan” carries a deeper spiritual connotation, referring to the main space of the house. The House of Taruljayaz is a typical and traditional Paiwan indigenous house, not only demonstrating its ecological value but also its spiritual dimension (Figures 5, 6). Kaumaqan is divided into two spatial forms: the sacred space of “Tjaqumqqan” near the back wall, where the spirit of the local deity is enshrined, and the secular space of “Kasintan” in front. Originally, Kaumaqan was the altar where the spirit of the local deity “Qinaljan” was enshrined, the most powerful place in the house, the location of the deity’s spirit. It has evolved into the main space of the



**Figure 5.**  
*Taruljayaz House, Caljisi – Padain, Itapul River Basin, Taiwan [1].*



**Figure 6.**  
*The author and the headman, Cegaw, and his wife in front of the House of Taruljayaz, constructed in 2005 [1].*

house, including the current living room and bedrooms. Kaumaqan also signifies the founding house or the most energetic and powerful place in the settlement. For example, in Kuljaljau settlement, the location called Kaumaqan was where the largest and most numerous skulls were displayed. It also implies the earliest ancient settlement, hence the old tribal term “kaumaqan.” The indigenous people’s thinking extends from the spiritual realm of various nature gods in the visually accessible mountain and forest space to the settlement’s local deity, and finally to the household gods and ancestral gods of the house. The spatial significance of ancestral deities and main pillars has been discussed previously. The humanistic meaning and

architectural order embodied in the main pillars are universal in both ancient and Western civilizations and cannot be ignored. Further research on pillars and architectural order can be found in *The Dancing Column*,<sup>9</sup> a book by Joseph Rykwert, which echoes the spatial significance of the main pillars in indigenous slate houses [11]. The spiritual dimension of a settlement can be described as both an infinite expansion across different scales and a continuous spatial focus.

## 6. Ecological practice

The traditional Padain sphere includes Kapadainan, Kalicekuan, Tjulinaulj, Caljisi, Masilid, Makazayazaya, Supaiwan, and Pyuma. This understanding stems from an ecological perspective, which is considered superior to political alliances. Sometimes, within the same ecological sphere, direct confrontation and resource competition can lead to hostile relationships. Regardless, understanding this from a watershed ecological perspective can also explain political alliances or adversarial relationships, as well as the reasons for intergroup conflicts and the displacement of settlements. In other words, the original indigenous communities are thought of as ecological spheres where humans and gods coexist. Ecology must be understood at different scales: the regional scale of the Dawu Mountain ecological sphere (10,000), the regional scale of settlements (1,000), and the locational scale of stone slab houses (100). The Padain sheepskin map reveals the regional scale of the Dawu Mountain ecological sphere, encompassing several settlements, as mentioned earlier. The ecological domain of a settlement includes the settlement itself, cultivated land, gathering areas, forbidden areas, hunting grounds, and sacred areas, which are distributed in patches around the settlement. The stream below is the Itapul River, is where the habitants to fish, bathe, and fetch water. The slate and shale near the stream are important building materials. Sometimes, the large stream below the dwelling serves as an important defensive barrier between settlements, while the small streams on the side are the source of water for daily life or the place to quarry stone. The small streams are usually easily eroded landslide areas, providing quarries for building slate houses. The outer perimeter of the settlement consisted of farmland cleared by slash-and-burn agriculture. The land was chosen to be sunny, flat, and relatively fertile, arranged in terraces. Work huts or verandas were built within these fields for resting or storing farm tools. Further out, a one- to two-day walk away, lay hunting grounds.

Today, environmental sustainability and biodiversity research and application are global concerns. Reflecting on the issue of human coexistence with the environment is a crucial lesson that contemporary architects and landscape professionals engaged in social development must confront. This paper offers my humble perspective, exploring the future of human architecture and environmental ecology through thousands of years of forest experience of the Paiwan indigenous people, and sharing the wisdom of their ancient communities. Perhaps this helps us understand the attitudes humanity needs to adopt toward the environment in order to sustain life, particularly through resilient settlement and architectural practices supported by village participation (Figure 7). It also awakens us to the upward spiral of future urban and rural development and environmental ecology, and I hope that contemporary practitioners, politicians, and educators can learn from the humble attitude of their indigenous ancestors toward the environment.



**Figure 7.**  
*Young people participated in the reconstruction of Taruljayaz House, 2005 [1].*

## Acknowledgments

Parts of this chapter were previously published in the book: Lu, Huei-Min, 2024, *Old Indigenous Settlements in the Itapul River Basin*, Architecture Press.

For further information, readers are encouraged to consult the following videos:

- 台灣大武山顛 Padain 原民舊社 Taruljayaz 石板家屋重建  
Rehabilitation of a Stone Slab House of Taruljayaz in Padain, an indigenous settlement in Kavulungan, Taiwan. [https://www.youtube.com/watch?v=xRCvb\\_8JNxs](https://www.youtube.com/watch?v=xRCvb_8JNxs)
- Revealing the Past with Humanities and Digital Technologies. Kapayuwanan, Indigenous Settlements (TW), <https://www.youtube.com/watch?v=jPmsemEsnpQ>

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## Chapter 5

# San Master Trackers: Deploying Ancient Skills to Enhance Palaeo-Ichnological Interpretation on South Africa's Cape South Coast

*Charles W. Helm, Hayley Cawthra, Jan C. de Vynck and Clive R. Thompson*

### Abstract

Since 2023, Ju/'hoansi Master Trackers from the Nyae Nyae Conservancy in northeastern Namibia have assisted the Western-trained palaeo-ichnology team (based out of Nelson Mandela University) in the analysis and interpretation of Pleistocene vertebrate tracks. The resulting insights, gleaned from a fusion of two scientific perspectives, through which traditional scientific knowledge and modern scientific approaches are blended, have been profound and compelling. These include novel interpretations for nine vertebrate trackmaker groups, resulting in the publication of several peer-reviewed scientific papers, with more to follow. The results have helped to create an extra dimension to the discipline of palaeo-ichnology, while the partnership that has been forged is mutually beneficial.

**Keywords:** Ju/'Hoansi, San, Indigenous Master Trackers, palaeo-ichnology, Pleistocene, aeolianite

### 1. Introduction

The San ('Bushmen') of modern southern Africa possess one of the oldest distinct lineages of *Homo sapiens*, with genome sequencing signalling a history of more than 200,000 years [1–3]. They were hunter-gatherers then; pockets within their remaining clans are hunter-gatherers now. A range of physiological, cognitive, and cultural attributes would have contributed to their survival and adaptability over many millennia. We focus here on one of these attributes: their tracking ability, now gainfully repurposed to enhance the discipline of palaeo-ichnology. An ancient science has brought new resources to a modern one.

The skills of San trackers have developed a legendary mystique. Palaeo-ichnologist Martin Lockley noted that:

*‘... the Bushmen were masters at observing the subtle differences that distinguish (the) species of antelope, whose tracks would all seem the same or very similar to the footprint-illiterate western eye. ... the skeptical office-bound researcher may want measurements and statistical proofs that two or more tracks are different before accepting that they are distinct or applying scientific names to them. Such an approach would seem incomprehensible to the Bushman, whose ability to differentiate tracks, know the trackmaker with certainty and discern the subtlest nuances of behaviour they betray was second nature, and moreover proven by empirical experience: i.e., the species recognized from the track was always found at the end of the trail’, [4], p. 14 and referred to ‘[the] Bushmen, who somehow possessed a form of holistic consciousness that allowed them to correlate tracks with animals with such consistency that observers claim they were never wrong’.*

Van der Post [5] and Thomas [6] provided similar commentary, alluding to the remarkable tracking skills that astonished and bewildered early Western observers. Suzman [7] (p. 163) expanded on this skill:

*‘To be a good tracker requires engaging in a constant physical dialogue with the environment and ultimately an ability to project oneself into the animals that left the tracks. Like poetry, tracks have a grammar, a meter, and a vocabulary. But also like poetry, interpreting them is far more complex than simply reading sequences of letters and following them where they go’.*

Liebenberg [[8] – p. 17] approached this from a scientific perspective:

*‘The apparent paradox [of how the human brain seems to have possessed capacities far in excess of their early evolutionary function] may be resolved if it is assumed that at least some of the first fully modern hunter-gatherers were capable of scientific reasoning, and that the intellectual requirements of modern science were, at least among the most intelligent members of hunter-gatherer bands, a necessity for the survival of modern hunter-gatherer societies’.*

Since the inception of the Cape South Coast Ichnology Project in 2008, almost 400 Pleistocene vertebrate tracksites have been identified along a 350-km stretch of coastline on South Africa’s Cape coast [9], and more than 50 peer-reviewed scientific articles have resulted to date. The project has been based out of the African Centre for Coastal Palaeoscience at Nelson Mandela University. Consequently, the global understanding of Quaternary ichnology (the study of tracks and traces) has been enhanced [10, 11].

The work of identifying these tracksites involves methodically walking the coastline, usually around spring low tide, searching for evidence left by Pleistocene trackmakers in unconsolidated dune and beach sand, now cemented into rock (aeolianites and cemented foreshore deposits). These outcrops occur in clusters, and their level of lithification and depositional style impacts whether tracks and traces are well-preserved or not. Re-examination of previously well-explored track-bearing areas is required after storm surges and particularly high tides, as coastal erosion is ongoing. These rocks are liable to be eroded by wave action, and many tracksites are ephemeral. An indent or protrusion may qualify as a track candidate, but the ‘Holy Grail’ is a sequence of tracks – a trackway, a repeating pattern that dispels all doubts about a biological provenance [12].

Noticing the traces is the initial step; reliably interpreting them and identifying the trackmaker are usually more challenging. Sometimes, subtle

details may go unnoticed, while other observed phenomena remain perplexingly enigmatic.

This provides the context for the involvement of Ju/'hoansi Indigenous Master Trackers in our palaeo-ichnology work on the Cape south coast. We knew that discontinuous pockets of traditional hunter-gatherers and trackers remain globally, despite the fact that much of the knowledge that Indigenous peoples possessed has been lost over only a few millennia [13]. In southern Africa, there is growing concern about a vanishing body of wisdom [14]. The Cape South Coast Ichnology Project recognised an opportunity to collaborate with San trackers in order to apply aspects of their knowledge in a scientific space and to interpret ichnological features from a broader perspective.

The background to this collaboration arose from partnering with the trackers in more established terrain. One of us (CT) is involved in running wilderness trails in remote areas of the Greater Kruger National Park. Being a trail guide necessarily involves being able to interpret not just tracks but also all the surrounding signs. However, in contrast to those whose exposure begins at the toddler stage, late learners struggle to interpret these traces with proficiency.

The San once populated all of southern Africa, including what is now the Kruger National Park. Their artwork adorns rock surfaces throughout the subcontinent. However, their presence as a distinct people was often erased with the arrival of others in recent centuries – through eviction, assimilation, and outright extermination.

Amongst the last of the San still exercising their hunter-gatherer skills are the Ju/'hoansi of the Nyae Nyae Conservancy in north-eastern Namibia. The most accomplished among them have been recognised as 'Indigenous Master Trackers' through an accreditation program developed by CyberTracker (<https://cybertracker.org/track/master-trackers/>).

Leading trackers were enthusiastic about the prospect of demonstrating their tracking and interpretation skills on Kruger National Park walking trails, and in 2017, the first such initiatives began. Their impressive contributions to the trail experience led to lateral speculation: could their skills be re-deployed and applied to the field of palaeo-ichnology? The result was a connection between our Cape South Coast scientific team and Indigenous trackers from the distant Kalahari.

Our interest in this field coincided with an increasing global awareness of ancient Indigenous knowledge of palaeontology [15, 16]. We knew that our initiative followed other similar projects. For example, the 'Tracking in Caves' project involved Indigenous Master Trackers from Nyae Nyae collaborating with Western-trained scientists in western Europe in interpreting hominin tracksites [17–19]. Furthermore, those same trackers provided highly instructive assistance in the interpretation of prehistoric track depictions in Namibia's rich archive of rock art [20]. In both cases, the illuminating outcomes of these initiatives augured well for collaboration on Cape south coast Pleistocene ichnology.

Beginning in 2023, the expertise of trackers from the Nyae Nyae Conservancy in northeastern Namibia was sought in trackway interpretation. In 2023, #Oma Daqm and /Uce N'amce, Indigenous Master Trackers from the Conservancy, explored the coast with Western-trained scientists and provided their input. In 2024 and 2025, they were joined by Steve Kunta, also from Nyae Nyae, and further discoveries, trackway interpretations, and identifications ensued (**Figure 1**). The



**Figure 1.**

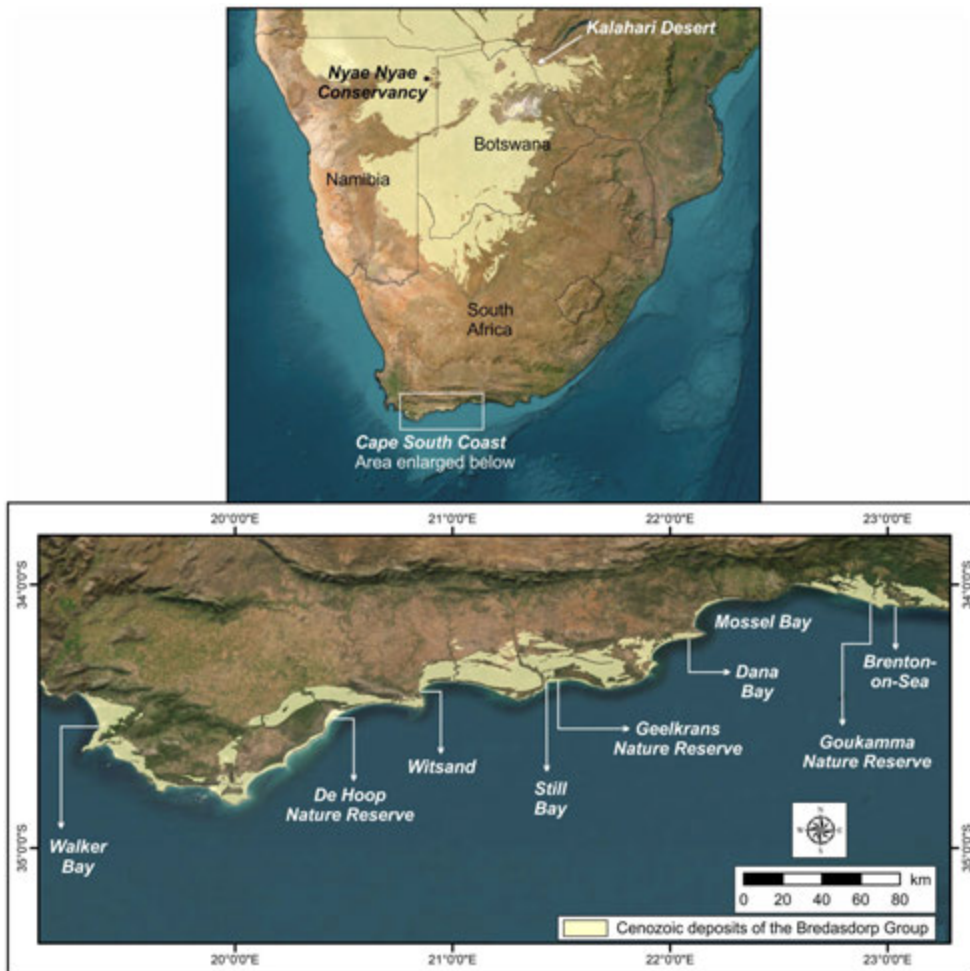
*The three team members from the Nyae Nyae Conservancy in northeastern Namibia take a break to examine the Indian Ocean.*

resulting Western/Indigenous collaboration has led to several publications, with further publications currently in press or in preparation. An article on the mutual benefits of the newly-developed relationship was published in Namibia [21].

The Pleistocene vertebrate tracksites are located within two formations of the Cenozoic Bredasdorp Group (**Figure 2**) [22]. The majority occur in aeolianites (cemented dunes) of the Waenhuiskrans Formation [23]. A minority occur in cemented foreshore deposits of the Klein Brak Formation [24]. The tracks were registered on these dune and beach surfaces, respectively, when they were composed of unconsolidated sand, which has now been consolidated into rock. While the relatively coarse grain size largely precludes the preservation of fine detail and exceptional anatomical fidelity, identification of the trackmaker group or species is frequently feasible [10]. The majority of tracksites are dated through optically stimulated luminescence (OSL) to marine isotope stage (MIS) 5, often around the time of the MIS 5e sea-level high-stand (~125 ka) [25–29]. The oldest Pleistocene tracksites are dated through OSL to MIS 11 (~400 ka) [25], and the youngest are dated through OSL to MIS 3 (~50 ka) [30].

The purpose of this chapter is

- To illustrate examples of the type of collaboration that have developed,
- To demonstrate the value of Indigenous expertise to palaeo-ichnology, and
- To consider the potential benefits of this collaboration to the Indigenous population of the Nyae Nyae Conservancy.



**Figure 2.**  
 Map of Southern Africa and the Cape South Coast, showing the extent of Kalahari sand, the extent of Cenozoic coastal deposits, and sites mentioned in the text. Data sources include the University of Koeln Digital Atlas of Namibia ([https://www.uni-koeln.de/sfb389/e/e1/download/atlas\\_namibia/e1\\_download\\_physical\\_geography\\_e.htm](https://www.uni-koeln.de/sfb389/e/e1/download/atlas_namibia/e1_download_physical_geography_e.htm)), the Council for Geoscience 1:250,000 geological map series, and Esri, Maxar, Earthstar geographics and the GIS user community.

## 2. Methods

For the Ju/'hoansi members of our team, what we imagined would be a steep learning curve lay ahead for them as they were given a 'crash-course' in the principles of palaeo-ichnology, focusing in particular on the differences between tracking on Cape South Coast rock surfaces and tracking in the Kalahari sand and bush.

Specifically, the activity of pursuing game in real time offers more clues and involves more senses than the more static exercise of fossil track and trackway identification. When tracking live game, trackers rely not only on their sense of vision but also on their senses of hearing, smell, and touch. An extended set of tracks



**Figure 3.**

(a) Tracks may occur on the undersides of ceilings, requiring detailed examination in cramped surroundings. Photo cropped and reproduced with permission of Josef de Beer. (b) Author Charles Helm, #Oma Daqm, and /Uce Ntamce examine hominin tracks preserved in hyporelief on the ceiling of a tight coastal cave. Reproduced with permission from #Oma Daqm and /Uce Ntamce.

with varying features along its dynamic pathway – gait length, depth, associated droppings, feeding signs, grass displacement, direction, and more – offers multiple signals to help the hunter build the prey model and ultimately locate the prey. Tracks preserved in aeolianites and cemented foreshore deposits, in contrast, typically provide fragmentary clues that rely mostly on the sense of vision.

Furthermore, the Cape South Coast fossil tracks occur on relatively coarse-grained surfaces, where high-resolution anatomical fidelity usually does not occur. Moreover, the fossil tracks with the highest quality are often formed by the infill layer (i.e., they are preserved in hyporelief), rather than on the original epirelief surface, which has frequently been eroded away. The finest tracks are thus often found projecting down from the ceilings of caves and overhangs, and they often occur in cramped surroundings (Figure 3).

Despite these challenges, the temporal proximity of the Pleistocene to the present implies that most track morphologies that might be encountered would be familiar. The tracks of extinct species, such as the long-horned buffalo (*Syncerus antiquus*),

giant Cape zebra (*Equus capensis*), blue antelope (*Hippotragus leucophaeus*), and giant warthog (*Metridiochoerus*), were explained through reference to the tracks of extant species [31, 32].

Once the instruction phase in palaeo-ichnological principles was complete, and modern analogues on Cape beaches had been examined for context, practical training followed in an area that harboured numerous known tracksites, preserved in epirelief, hyporelief, and profile. With proficiency achieved, the Ju/'hoansi trackers readily exceeded our expectations. They were soon walking the beaches independently, searching out candidate tracks and trackways, and offering identifications and explanations. Their accounts, along with those of the Western-trained team members, were then compared.

For sites that could not be visited, photographs and 3D photogrammetry models were reviewed together and discussed. The 3D photogrammetry models were generated with Agisoft MetaShape Professional (v. 1.0.4) using an Olympus TG-5 camera (focal length 4.5 mm; resolution 4,000 x 3,000; pixel size 1.56 x 1.56 µm). The final images were rendered using CloudCompare (v. 2.10-beta) [33, 34]. Photographs and photogrammetry models were reviewed together and discussed. For the Western-trained team members, five southern African tracking manuals provided reference information [35–39].

Artiodactyl tracks (especially those of bovids and suids) present a special challenge, as numerous southern African species leave tracks that are morphologically quite similar. In addition to reviewing examples in the field, an inventory of photographs and photogrammetry models of artiodactyl tracks was examined via Zoom. Consensus was reached on trackmaker identity where possible, although in some cases, definitive conclusions remained elusive.

To minimise bias, the *modus operandi* was for interpretations and opinions not to be initially shared when a site was visited together for the first time. The Master Trackers were able to review the site with no preconceived notions as to the trackmaker's identity and would examine the site and confer at length with each other. They would then present their interpretation to the Western-trained team members. Discussion would ensue, almost always leading to a conclusion by consensus.

### 3. Results

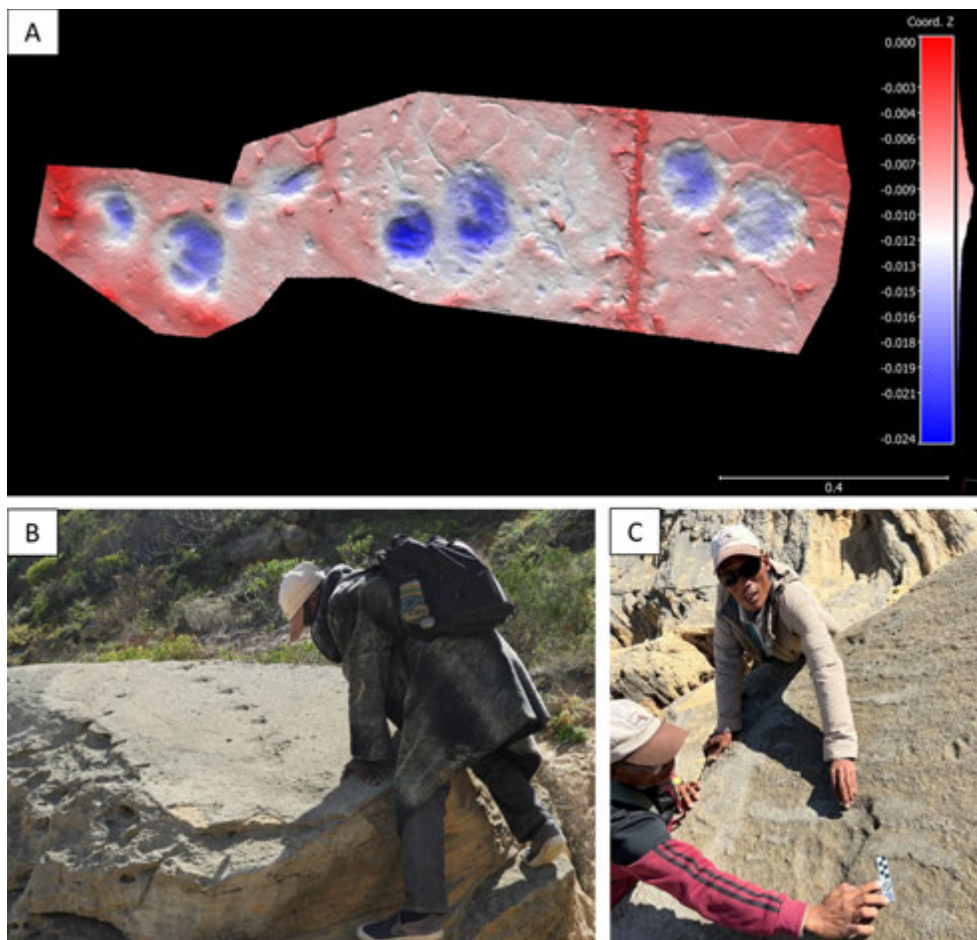
Nine trackmaker groups are discussed here. Together, they illustrate the type of collaboration that has occurred and the insights that the Ju/'hoansi team members have contributed.

#### 3.1 Hyena trackway

At Dana Bay, west of Mossel Bay, citizen scientists Aleck and Ilona Birch had, for years, observed how sand coverage on the beach below their home would vary, often substantially. Then, for a few days, a new rock surface composed of MIS 11 aeolianites was exposed before the sand returned. On that surface was an intriguing trackway [40]. They were instructed (all the way from Canada) on how to take photographs for photogrammetry. Once the images were processed and the 3D model was available, it became apparent that this may have been the first hyena

trackway ever to be documented. The brown hyena (*Hyaena brunnea*) has an unusual trackway pattern, which includes a forefoot track that is significantly larger than that of the hindfoot [39].

The site was visited together, and Aleck and Ilona Birch indicated where they hoped the rock surface lay buried. An excavation of beach sand then occurred. Fortunately, the track-bearing surface was reached about a metre below the beach surface, and the trackway was exposed and briefly examined before the incoming tide put an end to such activity. Later, the photogrammetry model (**Figure 4a**) was reviewed together. Without any priming, the conclusion of the Master Trackers was clear: these were hyena tracks. The resulting published scientific paper was the first that we jointly authored [40].



**Figure 4.**

(a) This 3D photogrammetry model was examined together after the tracksite had been re-exposed. A hyena trackmaker was confirmed – note how much larger the forefoot impressions are than the hindfoot impressions in a repeating pattern. Horizontal and vertical scales are in metres. (b) A master tracker closely examines a trackway on a loose fallen block, prior to the identification of the trackmaker as a pangolin. (c) #Oma Daqm points to lion tracks, watched by /Uce N#amce. Reproduced with permission from #Oma Daqm and /Uce N#amce.

### 3.2 Pangolin trackway

In terms of public perception and the profound nature of the identification, the next published paper had the most impact, eclipsing even our report of hyena tracks. Renée Rust and her family had reported an intriguing trackway to us on a large fallen aeolianite block that had become dislodged from overlying cliffs and come to rest at the upper end of a beach below her home, east of Still Bay near Geelkrans (**Figure 4b**). The subtle findings had eluded us, and we stuck with the term ‘enigmatic’ [41].

We showed it to our Master Tracker colleagues, not expecting them to provide a definitive opinion. However, we were wrong. They confidently announced that it had been made by a pangolin. This would be the first fossilised pangolin trackway ever reported anywhere in the world, so we were aware of the importance of the moment. They carefully explained their rationale, pointing out the salient features one by one. We later showed images of the tracks and trackway to top experts in the southern African tracking community, who concurred.

In the resulting joint scientific paper, published in the *South African Journal of Science*, we celebrated the fusion of two scientific approaches into something that was greater for its diversity, and we drew attention to the global plight of pangolins [41]. A subsequent feature in *The Conversation Africa* garnered more than 25,000 reads across the world.

### 3.3 Rhinoceros tracks

A recently published paper summarised the evidence from seven potential rhinoceros tracksites along the Cape coast [42]. The main contribution of the Master Trackers lay in assessing sites in the Walker Bay Nature Reserve, where they helped uncover a previously hidden trackway registered either by a rhinoceros or a hippopotamus. Distinguishing between these two large trackmakers is not always straightforward. An important discussion then ensued on assigning the tracks to a trackmaker, which led to a nuanced description in the scientific paper.

### 3.4 Lion tracks

One paper documenting a lion tracksite on the Cape South Coast in the Goukamma Nature Reserve had previously been published [43]. The tracks, preserved in concave epirelief on a loose aeolianite block, were of ‘textbook quality’ and left no doubt as to the trackmaker's identity. We reviewed the site together, and the Master Trackers provided further interpretation, noting the passage of both a male and a female lion (**Figure 4c**).

At a site in De Hoop Nature Reserve, a tentative identification of lion tracks on an in situ aeolianite surface had been made by the Western-trained team members. The Master Trackers confirmed the identification and provided further interpretation.

At a third site, east of Witsand, the Master Trackers made an independent identification of lion tracks, now preserved in concave epirelief, progressing along a steep slope. Fossilised lion tracks are globally rare [10, 43]. The three South African sites thus contribute substantially to the global record. A scientific paper documenting the findings is currently under review.

### 3.5 Tortoise tracks

An unexpected finding in Cape South Coast aeolianites was the presence of tracks of very large tortoises, given the absence of such evidence in the regional body fossil record; either an extinct giant tortoise or a large Pleistocene ‘chrono-subspecies’ of the leopard tortoise (*Stigmochelys pardalis*) was postulated [44]. Also unusual was the fact that the global palaeo-ichnology record does not include evidence of the distinctive tortoise tramway pattern [44].

The recent identification of this pattern at aeolianite sites in Walker Bay Nature Reserve and De Hoop Nature Reserve was thus of considerable importance. In addition, one of the loose track-bearing slabs in the Walker Bay Nature Reserve appeared to feature the digit impressions of a very large tortoise. The Indigenous Master Tracker team members were independently able to reach an identical conclusion to that of the Western-trained team members and add substantially to the interpretation of a complex tracksite (**Figure 5a**). The revision of the scientific paper that has been developed is currently under review.

### 3.6 Artiodactyl tracks

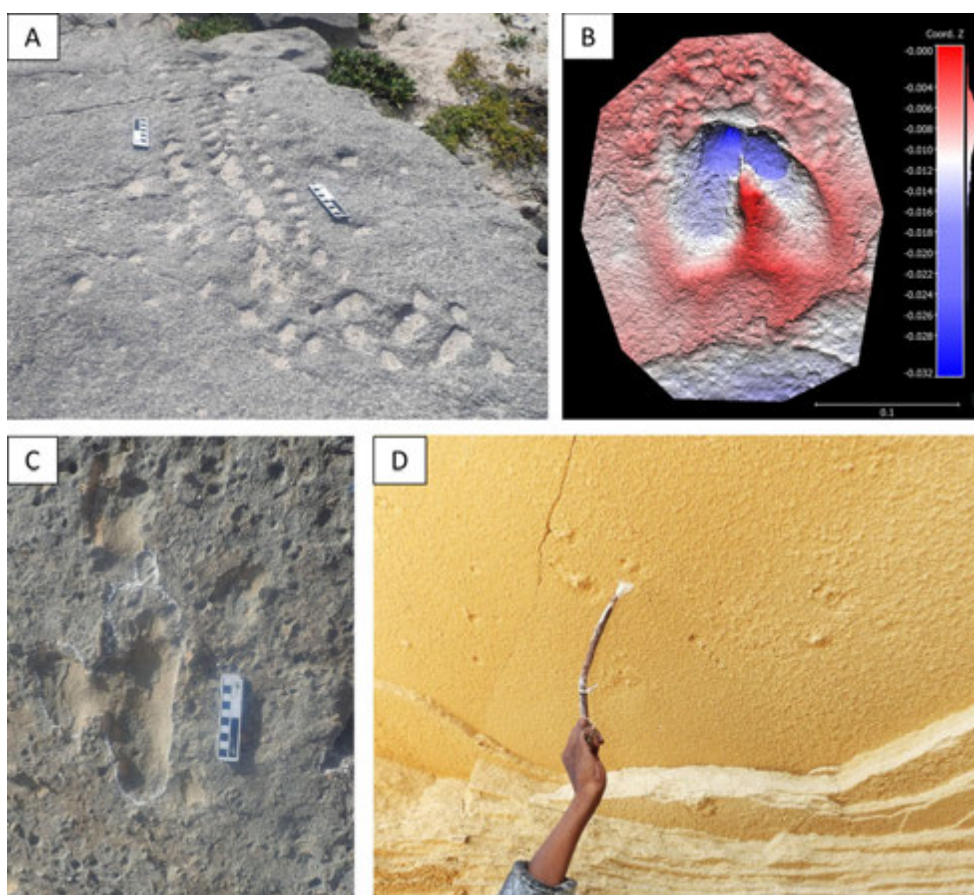
During time spent together ‘in the field’, artiodactyl tracks were reviewed together. One example was the confident identification of an eland (*Tragelaphus oryx*) track by the Master Trackers (**Figure 5b**). The challenge lay in distinguishing tracks of species which superficially appeared very similar [28–32], as well as the large number of candidate bovid species (at least 23) known from the body fossil record to have inhabited the region during the Pleistocene [31]. In addition, substrate conditions have the capacity to affect track morphology and preservation quality [9].

Our interest in this topic stemmed from the potential of identifying tracks of two extinct artiodactyl species, the bloubok (also known as the blue antelope – *Hippotragus leucophaeus*) and the giant warthog (*Metridiochoerus*) [31]. We therefore reviewed an inventory of artiodactyl track photographs and 3D photogrammetry models from 50 Pleistocene tracksites together. If tracks could not be identified to the level of artiodactyl or perissodactyl (e.g., equid), they were excluded from the inventory. Once the artiodactyl inventory was examined, tracks of bovids that were too large or too small to be bloubok candidates were readily excluded. A scientific paper on possible bloubok tracks is currently under preparation.

A welcome development from reviewing this inventory together was the observation of several examples of fossil suid tracks within the inventory. Some of these were consistent in size with tracks of the extant warthog (*Phacochoerus africanus*). Others, somewhat larger, were more consistent with tracks of the extant bushpig (*Potamochoerus larvatus*). Others still, substantially larger, appeared to have been registered by *Metridiochoerus*. A joint scientific paper on suid tracks is currently in progress.

### 3.7 Ostrich tracks

A puzzling aspect of our ichnological discoveries on the Cape south coast was the relative absence of ostrich (*Struthio camelus*) tracks. We had expected them to be a common phenomenon. The only convincing ichnological evidence that we had found was a possible trackway on a loose aeolianite slab in the Robberg Nature



**Figure 5.**  
 (a) At this complex site, the Master Trackers provided interpretation of the enigmatic features, contributing to an enhanced understanding of the trackway pattern registered by a tortoise; scale bars = 10 cm. (b) 3D model of an artiodactyl track, immediately identified by the Master Trackers as that of an eland; horizontal and vertical scales are in metres. (c) An ostrich track has been outlined in chalk by the Master Trackers, scale bar = 10 cm. (d) One of the Master Trackers points out the salient features of a hare trackway on the underside of a ceiling. Photo cropped and reproduced with permission of Kimball Pitcher.

Reserve [45] – Site 9 and ostrich eggshell fragments embedded in aeolianites east of Still Bay in the Geelkrans Nature Reserve [45] – Site 2. When we visited the latter site with our Master Tracker team colleagues, they noted the eggshell fragments and proceeded to outline in chalk several adult and juvenile ostrich tracks (**Figure 5c**). They declared that we might be looking at the vestiges of an ancient ostrich nesting hollow. The presence of tracks and eggshell fragments in close proximity to each other allowed us, for the first time, to reach a confident interpretation of the site.

### 3.8 Lagomorph tracks

Hares have a distinctive bounding gait, whereby the front feet are sequentially planted first (one ahead of the other), and the larger rear feet come around and over, and are then planted ahead of the front foot tracks, beside each other and a few centimetres apart. This creates a distinctive trackway pattern [39]. Our Master

Tracker colleagues immediately recognized and commented on this pattern at a tracksite preserved in convex hyporelief on an overhanging aeolianite surface east of Still Bay in the Geelkrans Nature Reserve (**Figure 5d**). Either the Cape hare (*Lepus capensis*) or scrub hare (*Lepus saxatilis*) is the likely trackmaker.

### **3.9 Hominin tracks**

The great majority of hominin tracksites in the world, greater than 40 ka, have now been identified on the Cape coast of South Africa. The first findings were published in 2018, followed by the identification of more sites in 2020. Subsequent publications have involved the oldest known possible shod-hominin tracks, evidence of ancestral hominins having used sticks, and a globally unique cluster of hominin tracksites [27, 46–50].

The joint visit to the first identified site, at Brenton-on-Sea, was particularly poignant. #Oma Daqm and /Uce N#amce were visibly moved by the experience, relating it to the oral history of their ancestors long ago inhabiting lands near the sea. They emerged from the cave that houses the tracks and demonstrated how hard their hearts had been beating (**Figure 6**). For all of us, it was a memorable moment.

Subsequent joint exploration has yielded a similar site east of Witsand, also with tracks preserved on a cave ceiling in hyporelief, showing evidence of a hominin running fast. The Master Tracker team members provided a concise comment: ‘Dis ‘n mens!’ (Afrikaans for ‘It’s a human!’). Once dating results are available, a scientific paper on this site will be submitted for publication. Of note is that a large rockfall subsequently occurred, precluding further access to the site. This underlines the importance of the initial detailed documentation.

## **4. Discussion**

In summary, the collaboration between Western-trained scientists and Ju/’hoansi Master Trackers has yielded numerous benefits. The latter were able to add nuanced interpretations of sites where trackmakers had already been identified with confidence and reported. At other sites, they were able to confirm tentative identifications that had been made, leading to an increased level of confidence in reporting and publishing on these tracks and trackways. Arguably more important still has been their ability to provide novel trackmaker identifications (e.g., the pangolin trackway and one of the lion tracksites). The identification of the tracks of extinct species is of particular importance.

The plethora of Pleistocene hominin tracksites on this coastline presents further opportunities for collaboration, cementing the bond that has formed within our research team. This bond is rooted in the shared appreciation that the trackmakers were almost certainly common ancestors to us all.

### **4.1 Co-authorship**

The art of tracking has memorably been called ‘the origin of science’ [51]. We respect our Master Tracker colleagues not just as experts in their field but as fellow scientists. Our skill sets are derived differently but converge in their application. The Master Trackers’ track-reading prowess is clearly superior to ours, having been



**Figure 6.**  
*#Oma Daqm and /Uce N#amce after emerging from a cave containing hominin tracks; in the foreground are their own footprints in the sand. Reproduced with permission from #Oma Daqm and /Uce N#amce.*

honed from an early age and developed continuously since then as a life-long learning experience. Our quest to ‘track’ is driven by intellectual and academic curiosity; theirs by something far more visceral – the survival imperative. That distinction provides another trenchant explanation for their edge.

As fellow scientists, we have naturally been co-authors on our published papers thus far and are continuing this practice in those papers that are in preparation. This has sometimes perplexed journal editors, who traditionally insist on an institutional affiliation. Thus far, when we have constructively discussed this issue with editors, they have been appreciative of our perspective and have recognized ‘Nyae Nyae Conservancy’ as an affiliation.

Another hurdle relates to click consonants. The Ju/’hoan language has four basic click types, used to generate well over 50 click consonants. This phonemic richness, compared to other languages dispersed around the world, has been put forward to bolster the genetic, palaeontological and archaeological evidence for the ‘Out-of-Africa’ human origin thesis [52]. Our challenge with these language features has been more prosaic: having to explain to copy-editors that the symbols ‘#,’ ‘/,’ and ‘‡’ in our author lists are not clumsy typographical errors but an accurate representation of our colleagues’ initials and names.

## 4.2 Working with the Master Trackers

Our interactions with the Master Trackers come with challenges. As is so often the case, we of European extraction do not speak their language, but we rely on them to communicate with us in ours. We strongly suspect that much gets missed in translation. Theirs is an expressive language – for instance, what we know rather plainly as the African hawk eagle (*Aquila spilogaster*) is, for them, the action-oriented àri-nṣàmṣà'm – the 'guineafowl-catcher' ('ari' is a guineafowl in Ju/'hoan).

Upon first inspection of a site of interest, the Master Trackers typically discuss matters at length in their rich vernacular. They then convey what is clearly their nuanced Ju/'hoan account to us in abbreviated Afrikaans sentences, leaving us to interrogate the message further in halting exchanges as we try to capture more faithfully the full texture.

For example, when #Oma Daqm and /Uce Nṣamce were trying to explain – in the face of our quizzical scepticism – why the trackway depicted in **Figure 4a** had almost certainly been registered by a pangolin, they drove home their case by patiently explaining in Afrikaans that an old pangolin track is 'like a round stick that has been poked in the ground' ('soos 'n ronde stok wat in die grond ingedruk is').

On another occasion, when we pointed out to them a well-known set of hominin tracks on an overhead rock face, with the extra advice that we could see there may have been half a dozen track-makers, their deliberate but swift response was that a band of at least 20 people must have passed that way. They referred to what they had previously shown us about counting footprints when coming across a similar set of present-day tracks on a walking trail in the Kruger National Park.

When language fails, enactment helps. The gait of a bounding kudu was played out to us in animated visual terms. The pinched claws of a crouching lion were demonstrated by way of a clenched fist to explain some of the lion tracks mentioned earlier.

## 4.3 Science or magic?

The prowess of San trackers has, at times, been associated with supernatural factors [4, 5]. Others essentially see logic and the scientific method at work, however culturally clad. Roger Chennells, who has worked closely with Indigenous communities in the Kalahari, covers both bases in an instructive vignette:

*'Vet Piet, a renowned San tracker . . . shared his tracking gift with many admiring tourists, yet he was still unable to explain how the tracking ability worked. At about midday on a normal Kgalagadi day, dry and 38 degrees in the shade, while driving my Land Rover with Vet Piet and friends, we came across a large herd of eland, charging in the same direction about fifty metres to the right of our dirt track. . . . Someone pleaded that I turn the vehicle sharp right and head towards the moving herd so that he could get a few close-up photos. I looked at Vet Piet who shook his head. Instead, Vet Piet indicated, we should rather drive straight towards a tree about three hundred metres ahead, and wait there: There the eland will stop running, they will turn to the left, and will walk right past us'.*

*I knew to not ask questions, so drove towards the small tree as instructed. Intuitively it seemed the wrong thing to do. Surely the eland would carry on running away from us? As if being guided by some magic control panel, the galloping herd slowed to canter, then into a trot and finally to a brisk walk. Next the leaders swung to the left and within minutes close to three hundred eland walked past our vehicle, no more than thirty metres away, precisely as Vet Piet had predicted.*

*... I needed to understand what we had witnessed. [Later] I strolled to where the stocky Bushman sat under a camel thorn tree puffing on a Lexington. 'Vet Piet. How on earth were you able to predict the behaviour of those eland?' Amused by my question his response was... 'I simply knew'. I was not satisfied... I asked him to please go and think carefully about what knowledge he had utilised...*

*He agreed good-naturedly and sat pondering my request. After while he returned to where I was sitting, smiling shyly as if having discovered something surprising...*

*He went on to say that he had now worked out every step in the process. It was all about observation, he explained, followed by deduction. His observations were firstly that the herd of eland, heaviest of all African antelope, were running for fun that day, and not out of fear, for example, from lions. Secondly, they've been running at full speed for about seven hundred metres, which one could deduce from the height and the length of the plume of dust behind them. Thirdly, the wind was blowing from their right to their left, in other words across them, which one could also tell from the plume. Finally, it was a particularly hot day.*

*Then his deductions: One, an eland's body gets hot quickly, when running so hard. They soon overheat, and in about 300 m time (approximately near that single tree) they would need to cool down urgently; two, eland cool down through their nostrils, so they would need to turn into the wind blowing from left to right; and three, the herd would thus need to walk from that way, towards that tree. And so the huge herd walked slowly in front of our vehicle, as predicted'.*

*'Good explanation, Vet Piet' I said.*

*But something important was missing. He had explained the basics of the recipe. A vital ingredient, that intuitive, almost a magical knowledge that comes from aeons of observation, was missing. !Ngate Xgamxebe [another tracker] said that 'tracking is like dancing, because your body is happy... You feel it in the dance. It tells you when you love tracking and dancing, you're talking with God'. Vet Piet would have chuckled and shaken his head...*

*'Sorry [Roger]. That thing I can't explain'. [[56], pp. 191–193; extract reproduced with the author's permission]*

#### **4.4 Reciprocal benefits**

Our perspective, shared by our Master Tracker colleagues, is that the wisdom inherent in traditional, experiential scientific tracking methods – absorbed from early childhood (usually with the goal of supporting one's family through hunting and gathering) – blends well with an academic, institution-based approach. The benefits to Western science are readily apparent: the enhanced ability to identify and interpret fossilised Pleistocene tracksites leads to superior published papers and redounds to the credit of academic institutions such as Nelson Mandela University, the African Centre for Coastal Palaeoscience, and the Council for Geoscience. Perhaps less obvious are the potential benefits to the Master Trackers and the people of Nyae Nyae.

Awareness of the Ju/'hoansi of Nyae Nyae in the global arena was initiated by a book by Lorna Marshall, based on extensive studies from the 1950s of her work with the people she termed !Kung [53]. Her children, John Marshall and Elizabeth Marshall Thomas, continued her work, and the latter provided a 1989 update on the 'progress' that had occurred in Nyae Nyae, including the creation of the community of Tsumkwe [6]. Further updates [54, 55] have coincided with increased global attention, including the formation of the Kalahari Peoples Fund, an advocacy organisation based in the USA. More recent involvement of the Ju/'hoansi in international tracking projects and the awarding of the Indigenous Master Tracker designation through an accreditation program by CyberTracker (<https://cybertracker.org/track/master-trackers/>) have been alluded to above.

The remaining San communities in the countries that make up the Kalahari Basin of central southern Africa – Botswana, Namibia, Angola, Zimbabwe, and South Africa – are, for the most part, politically marginalised, geographically displaced, and impoverished. With few exceptions, such as in the case of the Nyae Nyae Conservancy, prohibitions on hunting have severed them from their natural environment and history. Work opportunities are scarce, and health outcomes are poor. Another exemplar of the world's rich Indigenous cultures is imperilled.

Recognition and empowerment are keys to a turn-around in fortunes. There are many initiatives through which San communities, often in conjunction with governments and NGOs, are looking to carve out a better future. The Master Trackers' engagement with the discipline of palaeo-ichnology, while modest in scale, has particularly gratifying features.

The benefits are manifestly reciprocal: the Trackers have advanced the discipline of palaeo-ichnology, as evidenced by published papers; this transfer from the realm of Indigenous knowledge to an area of contemporary scientific endeavour has happened in a clearly non-patronising way, and a new dimension has been introduced to the field. At the same time, deservedly-earned income has flowed to needy communities, and the initiative can serve as a prototype for others to follow, based on a more general appreciation of the extraordinary ichnological prowess of Indigenous Master Trackers. Furthermore, the initiative has contributed to the development of a new field for citizen scientists and eco-tourism (see <https://www.dailymaverick.co.za/article/2024-11-13-citizen-scientists-and-san-trackers-on-the-trail-of-our-human-origins-along-southern-cape-coast/>). Our hope is also that, through this initiative, the skills and wisdom of traditional ichnological knowledge will be preserved even as it is modernised.

## **5. Conclusions**

Through this initiative, combining ancient traditional scientific knowledge and modern scientific approaches, novel insights and interpretations have resulted. As a result, the discipline of palaeo-ichnology has benefited. The peer-reviewed papers that have already been published, with the promise of more to follow, provide testimony of a partnership that is rich in its diversity, constructively blending two scientific approaches. Importantly, the advantages of a mutually beneficial partnership are evident. In a world in which traditional knowledge and wisdom are steadily being eroded, the collaboration of Indigenous Master Trackers and Western-trained scientists offers hope for the celebration and preservation of traditional skills and traditional scientific acumen.

## **Acknowledgements**

We thank the Discovery Wilderness Trust for funding three Indigenous Master Trackers' trips from northeastern Namibia to the Cape South Coast. We appreciate the ongoing encouragement of Robert Hitchcock and the Kalahari Peoples Fund. Steve Kunta, one of the three Indigenous trackers who collaborated with us, passed away in 2025. We miss him dearly. We value the friendship that has developed with all three of our colleagues from Nyae Nyae, along with the numerous insights that have been shared with us. We appreciate the anonymous peer reviewer's insights and comments that have resulted in an enhanced manuscript.

## **Conflict of Interest**

The authors declare no conflict of interest, while noting that Clive Thompson is a trustee of the Discovery Wilderness Fund.

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## Chapter 6

# The Warlpiri: A Twenty-First-Century Hunter-Gatherer People

*Jack David Eller*

### Abstract

Only 80 years ago, the Warlpiri were substantially settled into a few remote townships, effectively ending their classic hunter-gatherer way of life. They were largely expected to linger on the fringes of Australian society and probably to die out. Instead of going extinct or stubbornly resisting modern culture, they, like most, if not all, indigenous people but more suddenly than most, have survived to master many aspects of modernity, using those aspects to preserve and strengthen their identity and knowledge. This chapter examines four main areas of dramatic modern achievement among the Warlpiri – art, language and literacy, music, and communication technology and media – to document those achievements but also to consider the inadequacy of persistent dichotomies such as traditional/modern or local/translocal. The Warlpiri emerge as a dynamic, creative people, not at all the stereotype of a backward “primitive” culture but a modern indigenous people who, in cooperation with outside actors and institutions, seize contemporary opportunities and employ them in culturally distinct and culturally positive ways.

**Keywords:** Australian Aboriginals, indigenous people, Lajamanu, media, Warlpiri, Yuendumu

### 1. Introduction

Australian Aboriginals are often seen as the quintessential indigenous people, untouched by the outside world until the invasion by English settlers starting in 1788. Unfortunately, with this status comes the dubious distinction of classification among the world’s most “primitive” people, consigned to Lewis Henry Morgan’s lowest living stage of cultural evolution: “middle savagery,” or hunter-gatherers who never invented the bow and arrow (no examples of putative “lower savagery” without even the knowledge of fire survived to Morgan’s day). Aboriginals were repeatedly referenced in early comparative sociology and anthropology as exemplars of the simplest form of culture, as in Durkheim’s epochal study of the elementary forms of religion. Many famous scholars, including Bronislaw Malinowski and A. R. Radcliffe-Brown, mined indigenous Australian cultures for insights into primitive social organization, kinship, and language.

As nomadic, naked, illiterate, foraging societies, it was also generally accepted that Australian Aboriginals were culturally and psychologically conservative, if not

static, and incapable of adapting to the modern world. Stanley Porteus, in his 1931 *The Psychology of a Primitive People* and a 1933 paper, "Mentality of Australian Aboriginals," declared them mentally slow, if not feeble-minded, suffering from "indolence, shiftlessness, and lack of foresight," and predicted that they would not advance to the level of civilized (that is, European) humanity [1]. Others judged them unable to think in abstract terms or as being trapped in an irrational, mystical mindset. As recently as the 1980s, when I conducted fieldwork in Australia, white Australians continued to disparage them, like one fellow who told me that Aboriginals "don't have culture and never did."

Of all the remaining Aboriginal peoples, none is better known and more thoroughly studied than the Warlpiri, whose homeland lies in the Central Desert northwest of Alice Springs. Within a few years of being settled into townships (see below), Meggitt [2] was onsite doing ethnographic work, followed shortly by Munn [3] and a steady stream of anthropologists, linguists, and other researchers since. Around the same time (mid-twentieth century), it was generally assumed (if not sought) that they, like other Aboriginal peoples, would soon decline and disappear (spawning a policy known as "smoothing the dying pillow"), even as their children were removed from their families, becoming known as the Stolen Generations (see, for instance, <https://aiatsis.gov.au/explore/stolen-generations>). Unexpectedly, in the 1970s, two developments augured a reversal of their purportedly imminent demise: first, a bilingual education policy enacted in 1972 that gave hope to the continuation of their languages and cultures, and second, the Aboriginal Land Rights (Northern Territory) Act 1976, which allowed Aboriginal peoples to claim ownership of their ancestral areas.

In the 50 years that have passed since those crucial steps, the Warlpiri have defied all expectations: rather than lying down to die or stagnating in their remote strongholds, they have energetically and, surprisingly successfully, grasped the modern world and adapted it to themselves. Therefore, this chapter will investigate several of the genres in which Warlpiri members have emerged as twenty-first-century indigenous people, including art, language and literacy, music, and communication technology and media. This is far from an exhaustive list of their domains of contemporary activity, nor are these domains completely discrete: media in particular (television, radio, print, and digital media) run through all of them, for instance. Nor is the claim here that the Warlpiri are utterly unique and unprecedented in their activities and accomplishments. For at least two decades, the Runa of Ecuador have christened themselves a *pueblo milenario* or millennial people, posting images and texts online and hosting an annual sports and cultural event called Pawkar Raymi [4]; the Kayapó of Amazonia acquired a movie camera and an airplane to protest dam construction in the 1980s, and indigenous people around the world have been absorbing and deploying foreign technologies and concepts as long as they have had contact with Western explorers and settlers. The accommodation of modern ideas and practices by and to Warlpiri culture has been remarkable, though, for its speed and its vivid contradiction of stereotypes of hunter-gatherer inertia. As we will argue in the conclusion below, it also undermines any simple binary of traditional/modern, local/global, and authentic/inauthentic – as the experiences of indigenous peoples today commonly do. Indeed, as we will see, many Warlpiri people explicitly see themselves as living "two-ways," both modern and traditional, indigenous and translocal, which is not always comfortable but is always creative.

Methodologically, the present chapter is a synthesis of fieldwork and both qualitative and quantitative secondary sources covering a select but representative set of cultural activities. While, of course, Warlpiri people are involved in other activities, individually and collectively, and none are involved in all of the areas discussed here (and, granted, some are involved in none of them), the chapter features the most prominent and accomplished of these undertakings. The chapter will also note the leading role of women in many of these initiatives, in direct contrast to the stereotype of the subordinate indigenous woman, which is more a reflection of modern Western gender assumptions and biases than the realities of indigenous and non-Western societies.

## **2. The Warlpiri: From foraging to settlement**

Sustained contact between the Warlpiri, who occupied a large region of northwest Central Australia, and white colonists began only around a century ago, when gold prospectors penetrated the Tanami Desert in the early 1900s. When I lived among them in the 1980s, some elders could remember meeting their first Anglo-Australians as youths. Before contact, the Warlpiri were paradigmatic hunter-gatherers, traveling and camping in small family bands, hunting kangaroos and other game with spears and boomerangs, and practicing a religion based on the famous notion of the Dreaming or Dreamtime (*jukerrupa* in Warlpiri, with cognates in most or all Aboriginal religions and languages) that intimately tied them to the land and the ancestors. White invasion inevitably led to conflict, as with the Coniston massacre in 1928, and even before that time, drought had driven some bands out of the desert and onto the fringes of white cattle stations. A ration depot was established at Rock Hill Bore, followed by the founding of the settlement of Yuendumu in 1946 under the policy of “protection” of native peoples in rural communities supposedly far from modern influences. Yuendumu received one of the first four government Aboriginal schools in the Northern Territory in 1950, but intratribal feuds – since the Warlpiri had never been concentrated and sedentary before – led to the opening of another settlement to the north, at Hooker Creek (Lajamanu today) in 1951.

At present, the Warlpiri comprise approximately 3,000 members, distributed across four main communities, the two largest being Yuendumu and Lajamanu (each with 600–800 residents) and the two smaller ones including Willowra and Nyirrpi (some 200–300); Alekarenge is sometimes also mentioned as a Warlpiri site. Other Warlpiri live in Aboriginal settlements around the Northern Territory, in Alice Springs, or in major cities such as, Adelaide and Darwin. Of course, a number (150 more or less in the case of Yuendumu) of non-*yapa* (*yapa* is the Warlpiri word for Aboriginal people, as opposed to *kardiya* or non-Aboriginals) also inhabit the settlements as administrators, clerks, teachers, nurses, and advisors (not to mention a parade of anthropologists and other researchers). (For a brief video introduction, see <https://www.youtube.com/watch?v=jWFZxkOD5gQ>.) In Browne’s words:

*As the heart of contemporary Warlpiri life, Yuendumu has been described as a bustling desert settlement hosting three community stores, a clinic, an air strip, a post office, a Centrelink office (the Federal government social security service) and the Central Desert Regional Council hub, an Old People’s Program, and*

*a Women's Centre and safe house. Facilities for young people include a swimming pool, several playgrounds and a peace park, a learning center, a youth recreational center, and basketball courts and a football oval. A number of local organizations have been founded there including the highly acclaimed Warlukurlangu Art Centre, Pintupi, Anmatjere, Warlpiri (PAW) Media and Communications organization, the Warlpiri Youth Development Corporation (WYDAC) and the Mampu Maninja-kurlangu Jarlu Patu-ku aged care provider. Several churches exist alongside the established Baptist mission. The Granites Affected Areas Aboriginal Mining Corporation was set up in 1991 to fund and manage community development projects by affected areas funds from the Newmont Mining gold mine, situated in the Tanami Desert, 540 kilometers northwest of Alice Springs [5] p. 52).*

We will return to several of these organizations and programs below.

Finally, while we may say that they have been sedentarized, like other Aboriginal groups, the Warlpiri maintain something of their mobile ways. Instead of sitting idly in the townships, they travel as much as possible into the bush for hunting and camping trips, to other communities for visits and “sorry business” (traditional funeral rituals) and other ceremonies, and to white-majority towns and cities for various kinds of business. Furthermore, employment opportunities in Warlpiri settlements are extremely limited, and few individuals have been integrated into the mainstream Australian economy. Indeed, their ongoing mobility makes full-time jobs or school attendance difficult – a constant complaint of white bosses and teachers. Although houses have been provided for much of the population, people continue to spend a lot of time outdoors, cooking and sleeping in the open.

### **3. Domains of Warlpiri modernity**

The previous description does not sound like a recipe for active engagement with the modern world. It might seem, for instance, that too little time has passed for major cultural changes to occur: literally, the first generation of children born in the settlements could be elders today. It might also seem that “tradition” is too strong and modernity too recent for the latter to have gotten much of a hold on them: television only arrived in the 1980s, cellphones and computers in the 1990s, and most people maintain firm ties to their kin and to their *ngurra* (ancestral country). Yet, as the subsections of this section demonstrate, appearances can be deceiving, and it is worth remembering that many of the same technologies are no older in Western countries.

#### **3.1 Art**

If there is one thing for which Australian Aboriginals, like the Warlpiri, are known outside their territories and the country of Australia, it is their art, especially the highly recognizable style of “dot painting” (see **Figure 1**). Prior to contact, Warlpiri dot painting was generally applied to stone or wooden objects and to the human body for ceremonial purposes, using a palette of four colors (black, white, red, and yellow) made from ocher, charcoal, and occasionally blood. Images tended to depict sites in Warlpiri country and/or scenes from Dreaming mythical



**Figure 1.**  
*A coolamon or parraja (bark carrying dish) decorated with dot painting. Source: schomynv, public domain.*

narratives. As such, the most sacred or powerful designs were secret, reserved for fully initiated men, although public versions of some designs were also available. Since designs often portrayed important places in Warlpiri *ngurra*, “ownership” and rights to paint and interpret them were ascribed to particular individuals affiliated with and ritually knowledgeable about those places.

As part of his pioneering fieldwork at Hooker Creek/Lajamanu in 1953, Meggitt introduced elders to crayons for allegedly the first time, curious to learn what they would draw and to discover how they saw the world (although Hinkson asserts that the Warlpiri had been exposed to crayons and paper 20 years earlier [6] (p. 306). The result was 169 crayon drawings made by 21 men and three women, which were stored at the Australian Institute of Aboriginal and Torres Strait Islander Studies.

By the 1930s, a Western Arrernte man from Hermannsburg Mission (Ntaria today), south of Warlpiri country, named Albert Namatjira became a celebrated Aboriginal painter in a modern style (see <https://nga.gov.au/stories-ideas/albert-namatjira>). It was in the early 1970s that men at Papunya, an Aboriginal settlement between Yuendumu and Ntaria to which some Warlpiri have attachment, fashioned dot paintings in acrylic on boards and school doors (see <https://araluenartscentre.nt.gov.au/art-collections/papunya-school-collection>), and Warlpiri artists soon followed suit. In 1982, elders painted traditional designs on the doors of the Yuendumu school (<https://decolonizingthemuseum.blogspot.com/2022/04/yuendumu-doors-1982-paddy-jupurrurla.html>), photographs of which were collected into a book. Françoise Dussart, who not only studied but also helped coordinate Warlpiri art, reports that painting with acrylic on canvas began at Yuendumu in 1983 and that within five years, “Central Desert Aboriginal acrylic art – ‘dot painting’ as it came to be known – captured the attention of critics, collectors, and scholars worldwide” [7] (p. 156). The first innovators were women, a pattern that we will see repeatedly as we proceed; it was not long before men joined the movement, recognizing the income potential of making and selling their art.

Acrylic paint, canvas, and the spectrum of colors suddenly available were all nontraditional, but Dussart notes that the subjects of these works tended to be what mattered the most, namely Dreaming places and stories. Furthermore, this decidedly modern activity was conducted in a decidedly traditional manner, for instance, observing norms of knowledge ownership practiced by *kirda* (owners) and *kurdungurlu* (managers), who customarily cooperated in ritual preparations and performances, and respecting the secret-sacred content of many of these images and related narratives. In a word, “the process of producing those early acrylics

mirrored the ceremonial surveillance associated with ritual life” [7] (p. 158). It goes without saying, then, that while an individual’s name might be signed on the final product, the creation process was actually intensely collaborative and social, “predicated on the ritual rights and obligations of the painters and their close or classificatory kin associated with the Dreaming stories and countries represented” [p. 158]. This entailed prepainting discussions and negotiations about what could be represented and how, with constant oversight during the painting session.

As we would predict, there were also motivations beyond economic ones for this eager painting activity. The most obvious was the desire to create, and the pleasure derived from creating, Dreaming designs in a new medium. Another understandable motivation was the hope that young people would take an interest in traditional knowledge, ritual, and country, although this did not always happen. Even when it failed, however, one consequence was “a revived legitimacy of both male and female seniority in matters of ritual and meta-ritual activity” [p. 160]. Additionally, we cannot overlook the strategic and political dimension of such work. Creating images, telling stories, and performing rituals have always been a means of demonstrating rights to territory and its attendant knowledge. Making art is making a claim – not only (but still importantly) transmitting key indigenous knowledge but also maintaining and asserting identity and aiming “to prove and demonstrate their sovereignty over the land” in a new artistic medium [8] (p. 245).

These attitudes and goals are illustrated in another essay by Dussart, in which she focuses on a single painting titled *Karrku*. This project, which involved the intersection of five different Dreaming tracks, required the input of multiple networks of kin. More importantly, the artists chose the site called Pikilyi near Nyirpi as their prime subject at the critical moment of “their attempt to purchase the property of Mount Doreen – the very parcel of land that the canvas was to celebrate” [9] (p. 215). Reasonably, when the purchase became impossible and they were actually prohibited from the site by the *kardiya* owner, they were no longer interested in Pikilyi as the subject of the painting. Obviously and unfortunately, such assertions of sovereignty do not always prevail.

Another valuable point is that producing and selling acrylic paintings has not been a totally spontaneous and individual enterprise. Bosch explains that “art centers are the core structures of that cultural industry” [8] (p. 246), often orchestrated and overseen by *kardiya* researchers and art dealers and funded by outside sources. At Yuendumu, the vital institution is Warlukurlangu Artists of Yuendumu (<https://warlu.com>; see also <https://www.facebook.com/warluart>). Set up in 1985, its website describes it as “one of the oldest and most successful Aboriginal-owned art centers in Central Australia.” It adds that the revenue from art sales benefits other projects in the community, such as the Yuendumu Men’s Museum (see <https://www.aboriginalartonline.com/regions/yuendumu-museum>) which was inaugurated in 1971 to hold religious objects and is itself adorned with painted murals, the Dog Program to promote the wellness of the community’s dogs, and various human medical programs such as ear and eye health and dialysis. A similar institution exists at Lajamanu, called Warnayaka Art (<https://warnayaka.com>), which offers a venue for “Warlpiri artists to share their stories through painting, artefacts, and evolving contemporary practices.” The center’s website declares that its ultimate purpose is “to preserve and pass on cultural knowledge between generations” and that, “While materials may evolve, the purpose remains the same – to learn, maintain, and share culture.”

According to Biddle, another principal actor in the Warlpiri art scene, there are at least 40 Aboriginal art centers in the Central and Western Deserts and no fewer than 100 around the country [10]. Warlpiri and other Aboriginal artists also show and sell their works at galleries and museums in major Australian cities and internationally. In 1987, they united in the Association of Northern, Central, and Arnhem Aboriginal Artists, which was succeeded in 1992 by Desert (<https://desart.com.au>), bringing together Warlukurlangu, Warnayaka, and almost 30 other local Aboriginal art centers. Biddle devotes an entire chapter to Warnayaka Art in her book on Aboriginal “avant-garde” art and culture (which transcends acrylic painting and extends into other visual and digital arts, examined below) and recounts how several senior Lajamanu women attended a two-week workshop in Sydney in 2007 “to explore directly the possibilities of *yawulyu* (women’s ceremonial body designs, songs, dance) as the basis of an experimental aesthetic” [10] (pp. 140–141).

To be sure, not all Warlpiri or other *yapa* are painters, and indeed most participants in the initial acrylic movement have subsequently left it, frustrated by government policies and diminishing financial returns. While some remain dedicated to the task and pursue it in the former collaborative and ritually appropriate way, however,

*In the last decade most Warlpiri painters have taken a more pragmatic (or at least less spiritual) view of the enterprise – abandoning both the collaborative kin-based oversight that characterized the early years of production, as well as the rhetorical discourse that invoked the promise of intercultural appreciation. More and more of the painters are producing works divorced from the social networks that had once sanctioned the designs. There are a far greater number of individual painters at work – an independence entirely divorced from the structure of collaboration that informed the earlier years of practice [7] (p. 165).*

Meanwhile, the crayon drawings collected by Meggitt were recently repatriated to the descendants of those 1950s artists. Hinkson was instrumental in this undertaking, beginning in 2011, which returned copies (not the originals) of the drawings. She recounts how some Warlpiri elders dismissed the pictures as “only for making white people happy,” not truly authentic *yapa* art, while others (and indeed some of those detractors after further reflection) acknowledged them as real depictions of serious “ritual themes” and “significant works of cultural creativity” [6] (p. 308). One contemporary viewer even speculated on what the prior artists had in mind, drawing images at Hooker Creek/Lajamanu but really thinking about their own *ngurra* at Yarrpirilangu. Truly, the meanings of modern art forms, like traditional ones, are multiple and contested.

### 3.2 Language and literacy

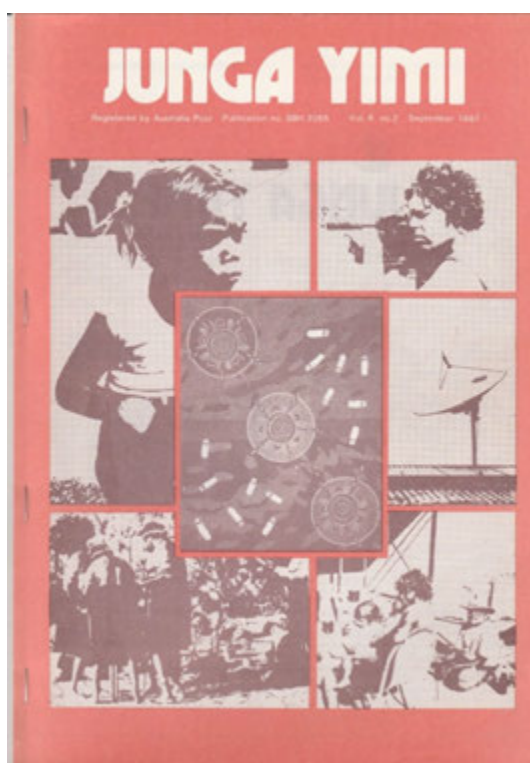
For all indigenous peoples, and for many modern state-level nations, language survival and revival are fundamental issues. Loss of language is often perceived as – and often is – loss of identity; conversely, the endurance of language, through the group’s own efforts and/or through supportive policies and practices of authorities and institutions like schools, is frequently a focus of pride and respect.

It is well known that many indigenous languages have long since disappeared, and others are terminally endangered. The Warlpiri tongue, happily, is one of a dozen or fewer Aboriginal languages still spoken not only by elders but also by all generations, even if English is also heavily present in their communities, and many younger people especially speak a hybrid Warlpiri–English dialect. The perpetuation of Warlpiri is no accident: as mentioned above, bilingual education was promoted not long after the settlement period began, and Warlpiri members and their *kardiya* supporters have been extremely active in documenting and institutionalizing the language. Indeed, Warlpiri is probably the most researched and written-about Aboriginal language (and one of the most researched and written-about indigenous languages) thanks to seminal figures such as Kenneth Hale, Mary Laughren, and David Nash. The Massachusetts Institute of Technology has housed a Warlpiri language lab for decades, which I used myself in the 1980s while at Boston University preparing for fieldwork. (For a stunningly extensive archive of resources on the Warlpiri language, see <http://www.language-archives.org/language/wbp>.)

When Yuendumu was first established in 1946 (as a ration station and Baptist mission), there was really no regard for Warlpiri-language education. As mentioned above, the Liberal National Government endorsed bilingual education for Aboriginal students in 1972, and Yuendumu was an early adopter of the approach in 1974 (one year after Hermannsburg/Ntaria), with Willowra and Lajamanu joining in 1976 or 1977 and 1982, respectively. Two challenges facing the objective were, of course, the lack of any written materials in Warlpiri and the complete absence of any written tradition or script in Warlpiri. The school at Yuendumu became the home of the Literacy Center, later renamed the Bilingual Resource Development Unit (BRDU) (<https://brdu.com.au>). As its present website informs, the function of the BRDU is “to assist with the production of Warlpiri teaching materials, like Warlpiri story books, readers, phonic charts, song books, and so forth.” The production of such materials progressed speedily: within six years, workers generated more than 100 publications (primarily short picture books), rising to more than 600 within another decade and over 700 at the time of Disbray and Martin’s 2018 study [11]. (See **Figure 2**. For a collection of Warlpiri language books, see <https://territorystories.nt.gov.au/?date=31%2F12%2F1549-31%2F12%2F2025&language=warlpiri&query=warlpiri>).

A third challenge confronting bilingual education was a shortage of Warlpiri teachers. Most of the teachers at Yuendumu and other Warlpiri and Aboriginal schools are young *kardiyas* on short assignments, few, if any, fluent in the local tongue. The philosophy of local bilingual education was to have an Anglophone and a Warlpiri-*phone* in each classroom, dividing time between them, which Browne calls the “diglossic compartmentalization of Standard Australian English and Warlpiri according to timetable” [5] (p. 68). Training Warlpiri teachers or teacher’s assistants (few have the same professional credentials as their *kardiya* counterparts) involved, and continues to involve, a busy schedule of meetings, workshops, and training sessions.

Beyond simply creating reading materials, English-speaking and Warlpiri-speaking teachers had to design a curriculum for elementary and secondary students that incorporated not only indigenous language but also indigenous knowledge. Disbray and Martin recall that a series of workshops were held at Lajamanu in 1984 and 1985, inviting educators from all four Warlpiri



**Figure 2.**  
 A 1987 issue of *junga yimi* (*true story*), a bilingual newsletter from Yuendumu. Courtesy of the author.

settlements, along with elders and community members, to craft this long-term educational plan in multiple subject-areas such as math, social sciences, and (surprisingly) song writing, drafting a *Pipa Nyampuju Nampapinkikirli manu Nyajangukurlu* or “Bilingual Warlpiri-English Mathematics Book” [5] (p. 69). Meetings in 1988–1989 concentrated on high school-level language and curriculum, and these efforts culminated in the 1998 founding of the *Warlpiri-patu-kurlangu Jaru* [roughly Language/Story/News about the Warlpiri], an entity that was formally presented to the Australian government in 2011. In the interim, commencing in 2006, semiannual *Jinta-Jarrimi* (Becoming One) workshops have been convened to train *yapa* teachers and to continue the development of curriculum.

What emerged early on in the discussions was an educational vision termed the Warlpiri Theme Cycle (<https://brdu.com.au/warlpiri-theme-cycle>), characterized by Browne and Gibson Napaljarri as “a curriculum guide encompassing Warlpiri knowledges and pedagogy across 12 thematic units” [12] (p. 6). Since 1999, according to Disbray and Martin, the Warlpiri Theme Cycle, conspicuously constructed with the input of elders, consists of a three-year teaching plan on the 12 topics of water, trees and plants, possessions and artifacts, men’s and women’s ceremonies and “monsters,” the body, family and kin, (meat) animals, language and hand signs, stories and designs, history, country and home, and (plant) food [11]. A teacher from Lajamanu recounted how, “Old people told us what to put in the

Warlpiri. We worked everytime [sic] with elders about what we should teach the kids, in different parts of the school. Jukurrpa [traditional law], jurnarrpa [introduced items], what food, everything, also literacy and Warlpiri maths” [11] (p. 31). Another teaching resource, not locally invented but employed in the local Walking Talking Texts program, is the Goanna Planner, which offers a learning model, worksheets, and other activities (see <https://lpc.elcho.org/lpc-library> and [https://lpc.elcho.org/wp-content/uploads/2019/03/Goanna-Planner-Worksheets\\_%E1%B9%88amurrananingalanawuy-Dhawu.pdf](https://lpc.elcho.org/wp-content/uploads/2019/03/Goanna-Planner-Worksheets_%E1%B9%88amurrananingalanawuy-Dhawu.pdf) for Goanna Planner materials).

Clearly, one of the intentions of Warlpiri educators and advocates is the preservation of what they call *Warlpiri pirrjirdi*, or “strong Warlpiri language,” as opposed to weak or hybridized speech. The other, consistent with indigenous initiatives around the world, is the maintenance and transmission of indigenous knowledge and worldview, which can best, if not only, be accomplished in the indigenous vernacular. As not only observers like Browne but also Warlpiri people themselves appreciate, language is not just a means of *being* (that is, of identity-formation and perpetuation) but also of individual and collective *wellbeing* and collective *self-determination* [5] (p. 119).

Finally, one of the crowning achievements of Warlpiri language study and promotion is the *Warlpiri Encyclopaedic Dictionary*, well represented by its indigenous name *Warlpiri yimi-kirli manu jaru-kurlu* (Strong Warlpiri Words; see <https://www.indigenous.gov.au/stories/warlpiri-encyclopaedic-dictionary-developed-generations-generations-to-come>). Assembled by leading scholars of the Warlpiri language (Laughren, Hale, Nash, Jane Simpson, and Robert Hoogenraad) with abundant input from native Warlpiri speakers including Jeannie Egan Nungarrayi and Marlurrku Paddy Patrick Jangala, the treatise is lauded by reviewer Curran as not simply a list of words and definitions but an invaluable record “of traditional knowledge of the environment and cultural contexts in which Warlpiri people live. The dictionary entries contain example sentences provided by Warlpiri people that have been recorded by linguists, wildlife experts, teachers, anthropologists, and many others since the 1950s” [13] (p. 171).

Last but not least, Warlpiri people are rather keen on other populations learning their language too. For this purpose, they and their *kardiya* partners have put together an array of language-teaching tools, such as the lessons and lesson books on the BRDU website (<https://brdu.com.au/learning-warlpiri>), an audio-tape Learner’s Guide to Warlpiri (<https://vdoc.pub/documents/a-learners-guide-to-warlpiri-tape-course-for-beginners-31q32gev3obo>), which I used myself in acquiring Warlpiri basics, and various dictionaries, courses, videos (see, e.g., <https://www.youtube.com/watch?v=moGiNsIEGMO&t=241s>), and websites at both the popular and scholarly levels.

### 3.3 Music

Lesser known or enjoyed outside of Aboriginal country than their art is indigenous Australian music, which tends not to appeal to Western tastes. Warlpiri music, in particular, consists entirely of singing and rhythmic clapping (usually with clap sticks or boomerangs); no other musical instruments are native to the society, not even the didgeridoo, which is actually a northern instrument.

Nevertheless, music is intensely important to the Warlpiri and other Aboriginal peoples, as well as a great source of pleasure. Warlpiri and other Aboriginal music today, in addition to its traditional or precontact styles, takes two modern forms: recordings of traditional performances for public consumption and, of course, popular music genres such as rock, reggae, country, and rap.

Aboriginal people have been recording their singing in modern formats such as vinyl, cassette, and CD for decades, as in the five-LP set “Songs of from the Northern Territory” collected by Moyle in 1962-1963 and released in 1970 (see **Figure 3**). They have done this to preserve their cultural treasures and share them with the world. Still, in the foreword to Curran’s recent book on Warlpiri songs, elder Otto Jungarrayi Sims laments that, “Our stories and our songs haven’t been written down, they haven’t been documented”; he also reiterates, as with painting and print, that his people “can only share the outer layers, the top layers of meaning” because the deeper layers are secret-sacred [14] (p. x). Within these restrictions, Warlpiri and neighboring groups are fairly enthusiastic about capturing their traditional music for posterity. In fact, the society embarked on a “Vitality and Change in Warlpiri Songs” project from 2016 to 2021, resulting in a collaborative and substantially bilingual book which stresses that even the elders “are developing an insatiable hunger for access to archival documentation to trigger their memories and reactivate the knowledge required to maintain songs”; the text quotes Harry Jakamarra Nelson who says:



**Figure 3.**  
*The 5-LP set “songs from the northern territory.” Courtesy of the author.*

*I am telling the young people to sometimes go to watch the old videos and listen to the old recordings from the early days. . . . You young Warlpiri people, I'm telling you now, so you can go and listen to your grandfathers and your uncles singing. Women can listen to their aunties' (father's sisters) and their grandmothers' (father's mothers) songs. This is our Warlpiri law. There is so much recorded from long ago, on both women's and men's sides [15] (p. 31–32).*

Parallel to this music documentation and preservation mission (and one reason why youths are admonished to attend to traditional performance and knowledge) is the explosive growth of modern popular music, mostly among younger folks. When I was in Yuendumu in the 1980s, some young men were already remarkably talented on guitar and other modern instruments, and several had formed bands. This desire to write and perform in modern styles – sung in a mixture of English and Warlpiri – has only increased over time, aided by organized programs like the hip-hop workshops chronicled by Dowsett: a three-week event dubbed Desert Rap was organized in Alice Springs in 1999, featuring *yapa* and non-*yapa* mentors, and Dowsett posits that since the early 2000s, “Indigenous hip-hop artists, many of whom co-facilitated the first hip-hop workshops, demonstrated an understanding of hip-hop as a new form of ceremony” [16] (p. 184).

Whether or not all contemporary Warlpiri musicians construe their activities as ceremony, there is no doubt that they use modern genres in distinctly Warlpiri ways to express their pride in being Warlpiri while addressing pressing social issues. Back in the 1980s, one of my *yapa* friends was composing a simple country-style song exhorting his peers to refrain from heavy drinking (the song was titled *Pama Yampi* or “Leave the Alcohol Alone,” *pama* literally meaning “sweet” and a common term for alcohol). One of the most famous of these acts is the Lajamanu Teenage Band, formed in 1993 and releasing a series of reggae/ska-influenced albums in 1995 (*Echo Voices*), 1997 (*Vision*), 2004 (*Dreamtime Hero*), and 2006 (*Prisoner*), by which time they were no longer teenagers. (To hear the tracks from *Prisoner*, including “Jamirdi/My Grandfather,” “Lajamanu,” “My Home Lajamanu,” and “Yarrungkanyi/Homelands,” see [https://www.youtube.com/watch?v=ha2VTxm9N4c&list=OLAK5uy\\_lxKw9uOFORsPoUbT8IUjQt\\_i\\_z8braXScY](https://www.youtube.com/watch?v=ha2VTxm9N4c&list=OLAK5uy_lxKw9uOFORsPoUbT8IUjQt_i_z8braXScY)). Other bands are equally or more passionate about their identity, culture, and country, such as:

- Rising Wind Band (formed in 1989) and their song “*Ngurra Warlaja*” (*ngurra*, as we know, means “country,” and *warlaja* or *warlalja* denotes belongings, kin, family). To hear the tracks from their album *Clear My Mind*, see <https://www.youtube.com/watch?v=ef7OffYArb4&list=PLWeUYhuNh82DLcHafCpy6oYNiWQt8LZw1>). Rising Wind Band also contributed some songs to the compilation *Strong Culture* (see [https://www.youtube.com/watch?v=Vhq7Jlrpf6o&list=OLAK5uy\\_ksnTxnu9W7Jzv7nEIEUTVSW7MSnhjVKkc&index=2](https://www.youtube.com/watch?v=Vhq7Jlrpf6o&list=OLAK5uy_ksnTxnu9W7Jzv7nEIEUTVSW7MSnhjVKkc&index=2)).
- Desert Wind Band, with their songs “Warlpiri Desert Dancer” (see [https://www.youtube.com/watch?v=2w\\_4Dh8aAmE](https://www.youtube.com/watch?v=2w_4Dh8aAmE)) and “Wati Warlpiri” (*Wati* means “man”; see <https://www.youtube.com/watch?v=5jpdsxXeer4>)
- North Tanami Band, for instance “Proud to be Warlpiri” see <https://www.youtube.com/watch?v=SMiGfHQvWIY>)

- Blackstorm, for instance “Warlpiri Warriors” see <https://www.youtube.com/watch?v=kKHCziSbCck>)
- Yatulu Yatulu, which Central Australian Aboriginal Media Association (CAAMA) Music describes as “the hottest new band from that fertile ground of desert music – Lajamanu,” features such songs as “*Tjukurrpa Tjukurrpa*” (an alternate spelling of *jukurrpa* or Dreaming), which is “about a young man asking his elders to give him back his lost ‘*tjukurrpa*’, or Dreaming,” and “Mt Coniston Massacre,” a “ballad remembering one of the most recent massacres of Aboriginal people that happened in 1928 on Warlpiri country” (see <https://www.caamamusic.com.au/artist/yatulu-yatulu>).

Obviously and understandably, some of this music is angry, and not all of it is performed by youngsters, like some of the songs gathered on the cassette *Rebel Voices from Black Australia* (see **Figure 4**), including a plaintive version of “No More Boomerang” with the memorable line, “No more boomerang, no more spear/Now we all civilized, color bar and beer.”

Neither all Warlpiri popular music is political nor all of it is made by men. Warlpiri (and other Aboriginal) people, especially women, enjoy singing in choirs and, increasingly, on Christian themes in gospel style. Global Recordings Network hosts an assortment of music files on its website, including performances by the Yuendumu Church Choir and the Lajamanu Choir, as well as a “Singalong for Wapirra” (“father,” the common Warlpiri word for God) (see [https://www.youtube.com/playlist?list=PLURSoBcThm8yW6V\\_dcXLurO8T6UfrZdwg](https://www.youtube.com/playlist?list=PLURSoBcThm8yW6V_dcXLurO8T6UfrZdwg)).

Even so, Ottosson grants that contemporary Warlpiri music is an almost exclusively male domain that also takes these men into unprecedented physical and social spaces that are “inherently ambivalent and multilayered” [17] (p. xiii). Therefore, she follows them to such disparate sites as the recording studio of CAAMA, the bars and clubs of Alice Springs (where they brag about being “too rough” and “too much” for white crowds), a concert tour in Darwin, and a battle of the bands in their homeland during the Yuendumu Sports Weekend (see below). She concludes that these “‘mongrel’ forms of identifying . . . challenge privileged notions of worthy, ‘real,’ and ‘authentic’ Aboriginality” [p. 178].



**Figure 4.**  
 The audio cassette rebel voices from black Australia. Courtesy of the author.

### **3.4 Communication technology and media**

All of the subjects dealt with so far – acrylic painting and crayon drawing, print literacy, and recorded music – are media in the strict sense. However, when we think of media today, we tend to mean legacy and cutting-edge communication technologies such as radio, television, video, and digital/online devices, platforms, and apps. One might expect that these ultramodern media would be the least accessible to recently-settled foraging peoples such as the Warlpiri. One would be wrong: of all contemporary nonindigenous resources, the most dynamic activities of the Warlpiri today, and for some decades, have transpired in this realm.

Prior to the 1980s, the Warlpiri were accustomed to televisual technologies such as film and videocassettes; movie nights (especially featuring martial arts films) were regularly held at Yuendumu and elsewhere. Broadcast television was not yet available in their remote country, nor was widespread telephone service. All of this began to change in the mid-1980s, when AUSSAT first beamed television and radio to the Central Desert. In 1987 (just as I was arriving for my second stay in the town), the Australian Broadcasting Corporation (ABC) and Imparja TV reached Yuendumu. Imparja TV (from the Arrernte word for tracks or footprints; see <https://www.imparja.com>) was created that year, based in Alice Springs, as a TV and radio network for the Outback; despite its name and Aboriginal-inspired logo, its programming was and is predominantly white Australian and even American.

Warlpiri people were only briefly, if ever, passive recipients of *kardiya* content. The key figure in early Warlpiri content creation was Eric Michaels, whose 1986 work *The Aboriginal Invention of Television* documents the rise of Warlpiri-made television and video [18]. Working closely with a young indigenous man, Francis Jupurrula Kelly, he was instrumental in the establishment of the Warlpiri Media Association (WMA) in 1983 (for a short video on this history, see <https://satellite dreaming.com/sources/the-aboriginal-invention-of-television-in-central-australia-1982-1986>). In other words, residents of Yuendumu were making their own video content even before outside programming arrived in 1987. As Hinkson summarizes, most of these early video projects focused on

*events taking place in the course of daily life in the township, and irrespective of the video camera's presence: local sporting events, activities associated with the school and adult education, community meetings, "public" ceremonies. In time, video production provided motivation and rationale for trips "out bush," and a series of country visits, hunting expeditions and oral histories were recorded [19] (p. 203).*

Soon, Warlpiri videographers started recording artists at work, filming video messages for neighboring Aboriginal communities, and producing promotional material for WMA.

Warlpiri media production received additional support from the Broadcasting for Aboriginal Communities Scheme (BRACS), which transferred video and radio equipment to remote settlements after 1988—equipment that could, among other things, interrupt mainstream broadcasts and insert other, local programming. The next key step was the introduction of the Tanami Network in 1991, a collaboration between Yuendumu, Lajamanu, Willowra, and Walungurru that facilitated video conferencing. Hinkson continues:

*At the time Aboriginal representatives of the four townships voted in favor of launching their own video conferencing network, they also identified a number of programs they were keen for the facility to provide. Paramount among these were a secondary education program, which for the first time would allow children of the member communities to participate in secondary classes without leaving home; a prison links program linking the member communities with the Alice Springs and Darwin prisons; and links between the four member communities, who share close familial and ritual ties [19] (p. 209).*

A survey of Tanami network usage in its initial years shows that secondary education and family/community meetings were among its early primary functions, which soon subsided in favor of legal hearings, commercial use, and telemedicine. Eventually, WMA allied with two other indigenous peoples to become Pintupi, Anmatjere, Warlpiri (PAW) Media and Communications (PAW Media; see <https://pawmedia.com.au/home-feed>).

Hinkson notes, with some disappointment, that Michaels and many others, including Warlpiri leaders, at first considered modern media to be a mortal threat to indigenous culture and identity. Undoubtedly, it did and does alter sociality and self-perception, with more time spent, for instance, sitting and watching TV and videos. Yet, complicating the boundary between traditional and modern, Warlpiri then and today exploit modern media for their own purposes and adapt it to their own cultural norms, as they do with painting and literacy. Buchtmann cites a litany of reasons why Warlpiri have largely accepted new media enthusiastically – not least because the hardware and money were available, but also because it allowed the continuation or restoration of traditional communication, could be assimilated “into existing cultural systems,” could be controlled and shut off if desirable, and offered employment opportunities. She adds, “Older people have adopted the use of new technology as it preserves culture by telling traditional stories and using language. . . . Elders in other remote communities, which have not previously used BRACS video, are now actively asking for cultural material to be recorded” [20] (pp. 68–69).

The variety and creativity of Warlpiri-produced media content are truly impressive. From merely documenting community activities (a noble enough goal), Warlpiri video makers have gone on to produce meaningful short films such as “*Munga Wardingki Patu* – Night Patrol” (about how women work to keep the peace and protect children), “*Marluku Wirlinyu* – the Kangaroo Hunters” (in which, according to IMDb, “A group of old Warlpiri men transport us back to a time of rarely heard history, and we follow their journey into the present”), and the humorous and sometimes self-deprecating “Bush Mechanics” series (see <https://www.youtube.com/watch?v=X8WfjkgqK9A&t=1s>), in one episode of which a mock-primitive Warlpiri man, played by Jupurrula Kelly, turns a dog into a car battery for a stranded *kardiya* motorist. They have also made “Sesame Street”-type learning videos for children (see <https://www.youtube.com/watch?v=vWA9tPNjadw>), a ten-part language series that incorporates various media formats from ordinary video to puppetry and also gives audiences a nice view of Warlpiri people, country, and lifeways (see [https://www.youtube.com/watch?v=D\\_D3V4EKZSg&t=404s](https://www.youtube.com/watch?v=D_D3V4EKZSg&t=404s) for the first episode), and entertaining shorts like “We are Warlpiri” in which Willowra children dance and sing, “We are Warlpiri, we are proud” (see <https://www.youtube.com/watch?v=vWA9tPNjadw>).

Expanding on these last points, Kral and Schwab discuss how various contemporary media are utilized to encourage youth literacy beyond the school setting [21]. Executing a project called Lifespan Learning and Literacy for Young Adults in Remote Indigenous Communities and spanning all of Warlpiri country, they discover that libraries, youth programs, internet cafés, arts centers, and video studios serve as “learning spaces.” They also mention the *Nganju Our Story* archival database at Lajamanu and the Mt. Theo program *Jaru Pirrjirdi* (Strong Voices) Project, among others.

In the excitement about advanced digital technology, old-fashioned radio is often overlooked, but radio has played and continues to play a vital role in Warlpiri country. In fact, in an odd inversion of Western media history, radio actually came after video at Yuendumu due to “dwindling resources and support” for the latter [22] (p. 145). The comparative appeal for ordinary community members is easy to appreciate: radio requires less equipment and less advanced and complicated technology, hence less skill, money, and *kardiya* assistance to operate [23]. Radio staff could merely “walk into the studio, flick a switch to override the incoming signal, and start broadcasting material of their own selection, which will be immediately heard by people listening” [22] (p. 145). Interestingly, through the 1990s, community radio at Yuendumu was driven by a coterie of related women, led by Valerie Napaljarri Martin. In 2001, Warlpiri radio joined with their two neighbors to launch PAW Radio Network. Within a few years, the original team of women had moved on, leaving men essentially in charge, and in 2009, a project was initiated to construct a new, separate women’s studio.

Much of the airtime on PAW Radio Network is filled with music, including, and especially, Aboriginal-made music, and the station routinely takes call-in requests. Here too, as in other facets of Warlpiri modernity, radio is a collaborative, kin-based affair: up to half of the requests for specific songs come from the “family” of the DJs, who often dedicate their selections to other kin or friends, or DJs may themselves similarly dedicate a song, sometimes to a long list of relatives. This practice sheds further light on Warlpiri social organization, as these dedication lists identify not only, or usually, blood kin but volatile “residential groups whose constitution changes frequently” [22] (p. 150). Male DJs also comport themselves differently than females: women seldom talk on air and present a shy and modest persona, but men project and even invent much more individualistic personalities, including creating radio names and identities for themselves and adopting “a mainstream Western DJ style” [23] (p. 156).

No discussion of communication media would be complete without some mention of cellphones and their apps. After noting that buried broadband cables make sense to Warlpiri people in terms of the Dreaming tracks and songlines that have connected them for millennia, Vaarzon-Morel states that many younger residents of Willowra own cellphones, although there is no mobile service at that location. As with painting or radio, phone use is also social and collaborative: “relatives huddle in groups, sharing phones and exchanging photographs, music, games and messages, whilst going about their daily lives, playing cards, watching sport, and other activities” [24] (p. 248). Unfortunately, the devices enhance not only traditional pro-social behavior but also anti-social conduct. For instance, during a period of tension and conflict between 2004 and 2007, mobile phones escalated trouble. Young Warlpiri sometimes used an app called Divas Chat to bully and attack each other: in those troubled years, “some young Warlpiri created fake identities on

Divas Chat to post slanderous messages and spread rumors, denigrating individuals of the opposite faction,” while others exploited a function called “Funny Face,” which allows text to be written over images, to post “photographs of deceased relatives [a cultural affront in its own right] of members of the opposite faction and defaced them with vitriolic comments” [p. 251–252].

### **3.5 Other intersections of Warlpiri indigeneity and modernity**

The four domains discussed above are the most prominent and often conspicuously overlapping areas of Warlpiri encounter with and embrace of new cultural forms and practices. They are very far from being the only areas. In this final section, we briefly survey a number of other important and fascinating contemporary activities, which often embed and support the ones described already.

#### *3.5.1 Community development*

For decades, a certain amount of responsibility for running their own communities has been devolved onto Aboriginal peoples. Warlpiri individuals, for instance, are involved in town government (with the help of a *kariyda* town manager and other officials) and on boards of regional land councils. Some also work in various capacities in their communities. The Australian government’s Community Development Employment Program (CDEP) was introduced to Yuendumu in 1997, basically offering job opportunities in exchange for welfare payments (what some pejoratively dub “work for dole”). For a couple of years, 140 Yuendumu residents performed tasks in 20 different institutions or projects around the settlement, including the school, the media center, old-age care, child care, the store and mining store, the art center, revegetation, waste management, building, the women’s center and night patrol, and several others [25]. The CDEP model was terminated by the federal government in 2015.

More domestic is the Warlpiri Education and Training Trust (WETT; <https://www.clc.org.au/wett>). In 2005, community members and traditional owners of the Newmont Tanami gold mine (in the Kurra Aboriginal Corporation) agreed to commit mining royalties to programs benefiting families and youths in all four Warlpiri settlements, such as early childhood services, language and culture learning in schools, out-of-school literacy activities, out-of-state excursions and off-settlement boarding schools, and community learning centers. The original impetus once more came primarily from women, especially teachers. Stanley concludes that “Warlpiri people had achieved a high level of control and ownership of WETT” and that its efforts have generally been deemed successful, thanks to competent *yapa* leadership, trust between these local leaders and outsiders, good relations between stakeholders, what she calls “fit-for-purpose governance processes,” including indigenous language and organizational forms, and reflection and adaptation through biannual meetings, independent monitoring, and promotion via “community meetings, posters, DVDs, T-shirts, newsletters, and a painting depicting WETT’s history” [26] (p. 331).

A few other initiatives worthy of mention include the Warlpiri Aboriginal Charitable Trust (<https://ngodetails.com/australia/northern-territory/warlpiri-aboriginal-charitable-trust>) and the Warlpiri Youth Development Aboriginal

Corporation (Mt Theo) (<https://yuendumuorgs.wordpress.com/2010/12/05/warlp-iri-youth-development-aboriginal-corporation-mt-theo>), which itself features multiple outreaches such as youth diversionary services, at-risk/substance abuse programs, the Warra Warra Kanyi Counseling Service, and the Mt Theo Cultural Respite and Rehabilitation Outstation. Speaking of serving youth, a mixed *yapa/kardiya* team in 2017 began developing an app called Kurdiji (meaning “shield” or “protection”) to prevent youth suicide; the project’s website indicates that the app was finished in 2019, although I do not find it currently available (<https://kurdijiapp.wordpress.com>).

### *3.5.2 Cultural reclamation and recovery*

In a very real way, virtually all of the diverse projects and media covered above – including print, music, and video/radio – have been in the cause of preserving and perpetuating Warlpiri culture and identity. Much other work has had that goal specifically in mind, such as collecting and publishing biographies, memories, and stories of Warlpiri individuals; some examples are Rockman Napaljarri and Cataldi’s *Warlpiri Dreamings and Histories* [27] and Vaarzon-Morel’s *Warlpiri Women’s Voices: Our Lives Our History* [28]. An oral history program called *Yapa patu wangkami* (“people are talking”) intends to archive information on pre-settlement history and culture, early settlement life, and present-day circumstances (see also <https://ngurra.org/#/sc/1>).

However, more recent ventures have explicitly sought to reclaim culture, often in explicitly material form. The simply-named Warlpiri Project (<https://www.samuseum.sa.gov.au/warlp-iri-project>; see also <https://www.facebook.com/people/The-Warlp-iri-Project/100095099776384>) is a collaboration with the South Australian Museum (SAM) and several other institutions, starting in 2019, to “repatriate cultural heritage”; among its achievements are the return of sacred objects from the Kluge-Ruhe Aboriginal Collection and other SAM holdings; the recovery of objects, drawings, photographs, and journals from Munn’s 1950s fieldwork; and the reburial of an elder near Pikilyi who died in the 1960s and whose remains had been delivered to the University of Adelaide.

To reconnect with their *ngurra*, an “outstation” movement emerged in the 1980s, during which groups migrated out of Yuendumu and set up camps on their ancestral land. Few, if any, of these outstations survived very long for want of material support, but the desire to remain close to traditional country endures. Another kind of project is cultural mapping, like the workshops conducted at Willowra to document places and the indigenous knowledge associated with them (see <https://www.winyama.com.au/news-room/participants-to-presenters-willowra-community-hosts-mapping-workshops>).

### *3.5.3 Yuendumu sports weekend*

Yuendumu has hosted an annual sporting event during the first week of August since 1959, featuring a few traditional skills like spear-throwing and fire-making but mostly modern games, including softball, basketball, Australian rules football, racing, and tug-of-war. Some Warlpiri gave the event the cheeky name of “Bush Olympics,” complete with winners’ podiums and medals (see <https://www.youtube.com/watch?v=tLZqJQn4WCE> for a short video on the 60th annual carnival

in 2019). During that time, Yuendumu also formed its own successful football team, the Magpies (see <https://aboriginalartandculture.wordpress.com/2008/01/13/aboriginal-rules-yuendumu-magpies>).

#### 3.5.4 Christianity

With missionaries present in Warlpiri country since the inception of settlements, if not before, many Warlpiri today identify as Christians, with a more or less complete and accurate understanding of the faith. At Yuendumu, Baptist is the main denomination, but at least since the 1980s, Pentecostal and evangelical sects have also risen and fallen in the area. Many residents, especially women, particularly value Christianity for the singing, but folks also attend local and regional Christian gatherings and conferences.

In fact, the Aboriginal engagement with Western religion reveals much about the mechanism by which they relate to all cultural innovations and introductions. Far from being a closed and inert cultural and religious worldview, Warlpiri and Aboriginal peoples have always been open to new knowledge and revelation. Traditionally, the Dreaming may have been eternal and complete, but no one claimed to possess all of its secrets. Knowledge (songs, designs, stories, or entire ritual cycles) could be revealed to individuals in dreams and become part of the “traditional” religion. Furthermore, the Warlpiri and their neighbors regularly exchanged religious knowledge, formally transferring ownership or control of rituals between societies. When the Warlpiri encountered Christianity, they treated it as yet another source of knowledge, integrating it into their repertoire rather than replacing their pre-contact beliefs and knowledge.

One particularly interesting outcome of this convergence of knowledge is the invention of *purlapas* (public, non-secret-sacred ceremonies) with Christian themes. Locals initiated an Easter *purlapa* by the 1970s, dancing and singing Christian stories in a blend of traditional and Christian symbolism (see **Figure 5**). Most contemporary Warlpiri, thus, do not see any contradiction between their Christianity and their traditional Dreaming religious knowledge and activity.

#### 3.5.5 Milpirri

One of the most exciting multimedia events in contemporary Warlpiri society is Milpirri, an “experimental Warlpiri ceremony” that “combines vernacular hip-hop, rap, and break dancing with *Jardi warnpa* [a traditional Dreaming ritual], *Yawulyu* [women’s ritual], and other public versions of traditional ceremony” [29] (pp. 27–28). Held every other year since 2005 at Lajamanu and devised in conjunction with Tracks Dance Company, Milpirri (Warlpiri for “rain cloud”) in ancient times was a Dreaming ritual of “dances, songlines, paintings, body paintings, and performances” that conveyed mythical narratives and values [30] (p. 53).

Like Warlpiri pre-contact religion, briefly characterized above, and Warlpiri culture in general, Milpirri is not a static and rote occasion. Rather, as Biddle describes it, it is different every time: “new traditions, new revelations, emerge in country, in place, in intercultural collaboration. . . . It relies on experimental participatory experience and encounter to reveal Warlpiri heritage for the future” [10] (p. 5). This is why Biddle selects it to epitomize Warlpiri “avant-garde.” Yet, in Jampijinpa Patrick’s words, it is “a bridge that connects the ancient Warlpiri



**Figure 5.**

*A scene from the Warlpiri Easter Purlapa, 1978. Courtesy of Ludo Kuipers, [www.ozoutback.com.au](http://www.ozoutback.com.au)*

values and heritage with the modern world” [30] (p. 59). Alongside Biddle, he concludes that Milpirri – and by extension, each formation of Warlpiri modernity – “uniquely ‘equips’ Warlpiri . . . for the demands of today” by breathing new life into venerable traditions [29] (p. 28). (For a 75-minute video of Milpirri 2018, see <https://vimeo.com/305387298> .)

#### **4. Conclusion: Living and learning two-ways**

Warlpiri people have mastered many other facets of modern culture: they drive cars, repair cars, hunt with rifles, and participate in numerous mundane modern practices. Nor are the Warlpiri today exceptional in the annals of indigenous peoples; every indigenous group somewhere engages in some version of each of the projects and programs examined in this chapter, some decades or centuries earlier. A few have accomplished things that the Warlpiri have not, like the Cherokee invention of their own writing system or the transformation of the Bafokeng kingdom in Africa into a corporation. What is extraordinary about the Warlpiri is how many such activities and enterprises are accomplished by such a small group of people (again, a mere 3,000) and how soon after their first major confrontation with outside modernity; someone who was a child at the time of resettlement at Yuendumu could be alive and in their 80s today.

Many observers would be stunned that a traditional hunter-gatherer society could so quickly and creatively engage with modernity. We should not exaggerate this encounter as a panacea: Warlpiri society has many problems today, not least its economic and political dependence on the *kardiya* federal government, along with local challenges of unemployment, juvenile delinquency, substance abuse, crime, and interpersonal violence. Certainly, many, if not most, Australian Aboriginal peoples have succumbed to the negative forces of modernity, with many destroyed and extinct.

The Warlpiri, for various reasons, have survived and, to an extent, thrived. They also, perhaps better than us moderns ourselves, understand what this survival depends on and looks like. They refer to it as “doing things two ways,” which means, in the words of Lajamanu media worker Maxwell Tasman:

*You can learn both ways, you can learn kardiya [sic] way, learn technologies, computer all that stuff with media, reading all the numbers, lights, reading books . . . And learning yapa side, even the birds, and plants, yeah even the season, looking at both ways.*

*It brings two ways together [21] (p. 35).*

In other words, Tasman and many, if not all, Warlpiri – and presumably other Aboriginal and indigenous people – understand that “traditional” and “modern,” “local” and “translocal,” “indigenous” and “non-indigenous,” or “authentic” and “inauthentic” are not incommensurable opposites but are intertwined processes, the latter of each pair potentially serving and advancing the former, even as the former is refracted by the latter. Today, the Warlpiri are not traditional or modern but both; they are a prime illustration of the idea of *multiple modernities* [31]. And today – *and in the past, for as long as it has existed* – Warlpiri culture and identity is not static and inflexible. It is, and has always been, as the best possible word for it, *alive*, which implies always metabolizing new influences and resources, albeit faster and more diversely now than before. But Tasman realizes, and *kardiya* scholars would do well to realize, that modern, nontraditional, and translocal can be as beneficial as detrimental to traditional, local, and indigenous: in the end, Tasman grants, “From knowing this media I’m starting to know these old people and knowing what they got . . . and knowing all that stuff what you learn from both ways.”

## Acknowledgments

The author acknowledges Woxsen University for facilitating this research

## Conflict of Interest

The author declares no conflict of interest.

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# Rising up in the 21st Century: The Integration of Contemporary Technology for the Transmission and Preservation of Indigenous Knowledge, Identity and Decolonization in Turtle Island (Canada)

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## Abstract

While the effects of settler colonialism continue to be experienced within Indigenous communities all over Canada, this chapter focuses on the ways in which our Indigenous-centered research in the Blue Sky Research Lab (BSRL) at the University of Alberta integrates a range of contemporary technological tools to transmit and preserve the knowledge of the Nêhiyawak (Plains Cree Nation) and contribute to decolonial work within the Canadian context. We discuss the process of how the BSRL utilizes digital and social media and our Spotify podcast *The Auntie Is In* to share traditional knowledge (Indigenous Science), spread truths, lived experiences, and a range of perspectives from Indigenous Elders, community members, youth, as well as university scholars, students, and non-Indigenous members of the Canadian public. The main aspects highlighted in this chapter include authenticity, warmth, and sharing joy; knowledge accessibility and translation; building human connections and a sense of community; using technology to enhance community relations and give back to Indigenous communities; and deconstructing stereotypes and misconceptions about Indigenous Peoples. Moreover, we share our reflections on the use of such technologies to advance anti-coloniality, preserve Indigenous identity and Ways of Knowing, and to share Traditional Knowledge with present and future generations of Indigenous and non-Indigenous Peoples across Turtle Island (and beyond).

**Keywords:** traditional culture, indigenous knowledge, Nêhiyawak, anti-colonial, identity, Indigenous Peoples, podcast, social media

## 1. Introduction

The representations of Indigenous Peoples in history, media, and public perception are, without a doubt, tarnished with misrepresentations, stereotypes, and assumptions of images that have never actually existed. Public knowledge is topical at best. The Canadian government and education system have actively concealed the truths about the treatment of Indigenous Peoples, refusing to acknowledge the ongoing colonialism purposefully embedded within Canadian institutions. Joyce Green [1, p. 85-86] emphasizes that the relationships between Indigenous Peoples and Settler Canadians “are perpetuated by a mythologized history and by judicial and political institutions that proclaim and defend this mythology-cloaked, un-hyphenated colonialism.” The “history” espoused about Indigenous Peoples is lacking at best and, at worst, serves to exploit, displace, and dehumanize. Settler colonialism has always worked to inaccurately portray the people that stand in the way of so-called “modernization” or “civilization,” refusing Indigenous Peoples the ability to rewrite the flawed historicities of the past and present. So, what happens when Indigenous Peoples get the chance to become the authorities and teachers of their own histories?

As Dr. Paulina Johnson marked nearly one hundred first-year term papers as an assistant professor, it became clear that many students, rather than exploring the library or online databases, turned to the most easily accessible resource they know – *Google*. Of course, *Google* can be helpful sometimes, though not in understanding the plights of Indigenous Peoples nor their histories. Additionally, AI-generated summaries cannot adequately evoke the emotion, spirituality, or intricacies imbued in the overarching colonial project [2]. Based on the references cited throughout those term papers, it became clear that the digital landscape of Indigenous Knowledges and representation continued to be outdated, as well as plagued with the misconceptions that many Indigenous scholars have continually addressed [3, 4]. This begs the question: In an increasingly online world, how do we represent the *truth* behind these misconceptions of Indigenous Peoples?

From an Indigenous worldview, there are many methods and ways of sharing that allow emotions to transcend and experiences to be embodied. For Indigenous cultures and cultures around the world, however, the power of spoken word is transformatory as it connects to individuals themselves but also as a whole. Within Indigenous storytelling, the experiences shared not only allow one to connect to themselves but also to the ancestors that once were, and those unseen who guided and shaped the world around them. For Indigenous Peoples, the power of “voice” is a way of not just connecting these truths but also sharing them beyond the confines of the settler colonial outlook. Holding *voice* as a crucial means of (re)writing the narratives of Indigenous Peoples, a podcast was created to give voice to the truths of Indigenous Peoples and to challenge the “perceived reality” of popular culture and Canadian media (and elsewhere). This voice, the voice of Dr. Johnson, is a powerful one. Her goal is:

To make this world anti-colonial and to fulfill the most important teaching of my people: to give back. Reciprocity is the driving force of relationality, and this means that I am bound to my people and community first, and an academic second.

Therefore, I leave these dialogs both in an oral presentation and in a written document, bringing my Indigenous upbringing together with the Western preference for text. [5, p. 5]

Layering the voice of an Indigenous scholar with the cultural and ancestral knowledge of community with the scholarly experience of academia, allows for new conceptions of Indigenous Peoples to be forged. Therefore, *The Auntie Is In* podcast was created not only to speak back but to *rehumanize* the way in which power and control have previously distorted Indigenous voices.

While many still believe that Indigenous Peoples are against “technology,” “modernity,” or “advancement,” the reality is that Indigenous Peoples are the most adaptable people in the world – they are simply still connected to the land and the ways of their ancestors. Therefore, to challenge the misconceptions and hidden realities of Indigenous Peoples, the podcast sought out ways to tell new truths and share Indigenous humanity through a new platform and landscape – a digital landscape.

As such, to change the digital landscape, we examine the history of technology and ways to utilize Indigenous voices in new media, rooted in their ancestral connections to time and place. The connection to community was prevalent from the conception of our podcast to ensure that the voices that had been left to the periphery could be centered. *The Auntie Is In* podcast was developed and grounded in Nêhiyawak (Four-Spirit or Plains Cree) intellectual traditions and produced by the Blue Sky Research Lab (BSRL) at the University of Alberta (U of A).

A core mission of *The Auntie Is In* podcast is to intentionally disrupt pervasive stereotypes and harmful misconceptions about Indigenous Peoples across Turtle Island. As Francis argues, colonial representations of “The Indian” are constructed in such a way that keep Indigenous Peoples as relics of the past, ignoring our continuity, contemporality, and survival [4, p. 59]. These colonial and simplistic narratives continue to circulate within mainstream media, institutions, and the court of public opinion/bias, shaping how Indigenous Peoples are viewed and how Indigenous Knowledge is (de)valued within a Westernized worldview. Such pervasive but damaging narratives misrepresent Indigenous Peoples and actively erase the diversity, dynamism, and modernity of Indigenous Peoples and their ways of life. Ultimately, this never-ending cycle erroneously reinforces the false assumption that “Indigenous Knowledge is incompatible with modern academic, professional, and technological spaces.”

This chapter tells the story of coming together to utilize contemporary technology to transmit and preserve an understanding of Indigenous Peoples within Turtle Island (Canada). Although done within a Nêhiyawak context, this model serves to disrupt the realities of settler colonialism for the liberation of Indigenous Peoples and Knowledges. However, to tell this story, we must first address the roots of settler colonialism that have framed how we understand technology.

## 2. The coloniality of technology

Technology is inextricably linked to the histories of European civilization and the continuation of settler colonialism [2, 5, 6]. Although technology is a universally recognized concept, a narrow definition has centered itself within Western academic and non-academic discourses [7, 8]. This restrictive framing tells the story of

technology as a Western invention, touting industrial machinery and digital advancement as the overarching examples of progress. Although colonial powers have played a role in technological advancement, the erroneous notion that this narrative of technology is the only story to tell is a product of settler colonialism.

Settler colonialism operates with the logic of elimination and replacement. It frames the bodies, ideas, and practices of the settler as superior to the colonized, therefore challenging the right of the colonized to exist [2, 9]. In addition to suppressing Indigenous Peoples, bodies, and practices, settler colonialism has suppressed Indigenous Ways of Knowing and Indigenous technological practices that would, thereby, challenge the Eurocentric settler colonial narrative of technology. Indigenous technological understandings and practices have been reduced to archaeological excerpts of arrowheads, oral narratives recorded and mis-transcribed by settlers, and thus turned into folk knowledge [6, 10–12].

The truth is that Indigenous Peoples are thriving, and countless Indigenous resurgence and decolonial measures are being taken both within academia and beyond. However, there remains a power imbalance that prohibits access to the narrative of self-determination [6, 11–14]. Indigenous Knowledges and technologies are purposefully diminished within academia, as the academic institution itself is a construct of the settler-colonial project.

Indigenous Peoples across the globe have been skilled users of technology far before its contemporary industrial and digital origins in Europe [11]. Technology has only been framed as European due to the settler colonial project's refusal to relinquish the power of access to the means of knowledge production. By expanding the narrative of technology and decentering the Western assertion that has diminished Indigenous voices, the complete scope of technology can be employed to problem-solve rather than eliminate.

## **2.1 Technology as a tool in social justice movements and Indigenous knowledge sharing**

Technology has always been a part of history. The Internet is one of the most life-changing technological advancements in recent history. The Internet not only provides people with space to interact with each other and with technology itself [15], but it is also characterized by specific features, such as the permanence of information and the speed at which it is disseminated. It is essential to note that the internet itself is neutral; how it is used is not. In the Blue Sky Research Lab, we have decided to use the internet via podcasts, documentary series, and animated content as tools to uplift the Indigenous Knowledges and Ways of Knowing that inform our work, while creating a space to promote community and build a meaningful legacy for the seven generations that follow us.

In a sense, we have appropriated Western technological practices for the greater good, focusing on the societal impacts of technoscience research and development, and reuniting the public with the knowledge they have not yet had the chance to learn [16]. Although the appropriation of knowledge and technology can go both ways (e.g., ethnobotany and Indigenous knowledge being co-opted by the pharmaceutical industry), we are interested in reimaging the use of technology to benefit the redistribution of social power. In our case, the Blue Sky Research Lab has appropriated the podcast, a settler phenomenon, which first gained popularity as downloadable “internet talk shows” in the early 2000s [17], transforming this

technologically assisted means of knowledge dissemination into a joyful facilitation of Indigenous Ways of Knowing.

Taking ownership of the digital space allows us to showcase the heterogeneity of Indigenous identities and the diversity of the team working on the decolonization projects led by Indigenous Peoples. We are constructing a digital space to “strengthen and solidify a collective political unity that resists settler attempts at erasure” [18, p. 33]. Showing our identities with pride is a direct challenge to the ongoing settler colonial project, which utilizes shame, harm, ignorance, and forgetfulness to mask itself.

The Internet is constantly evolving, which is why the way we interact with its tools has an impact on the digital environment and on our daily lives, especially when connecting with historically marginalized populations. Dinero explains that few people are aware of Indigenous People’s concerns and desires because of settler colonial efforts to categorize them as “savage,” “exotic,” or “distant” [19]. As such, the Internet offers a canvas for social justice advocates to play, create, and explore, based on our right to exist and experience life with joy, rather than only focusing on the harm done to our communities. In other words, taking up space in the digital ecosystem and using its tools on our own terms addresses the need for truthful public discourse on Indigenous sovereignty and self-determination.

Carlson and Frazer state that “Indigenous people are routinely defined by that which they supposedly lack, and research overwhelmingly emphasizes the ‘deficits’, ‘gaps’, and traumas that apparently define Indigenous people” [18, p. 121]. This sentiment is readily found on social media; however, social media is also a platform for creativity, joy, and community building expressed through jokes, memes, and humorous critique of the colonial project. Information, relationships, and emotions extend beyond the online environment and have a lasting impact offline. It is “a subjective and intimately embodied experience. It is a playful, productive, and affective force – bringing people together, breaking down boundaries, reifying others, and circulating pleasurable feelings across and between bodies” [18, p. 122].

Co-creating a digital space that uplifts Indigenous identities is a way to contribute to the anti-colonial project, enabling us to experience new realities and forge connections around the world, while challenging the idea that Indigenous wisdom belongs only in the past. At the same time, our social movements and the use of new technologies to speak our truths are concrete ways of answering our ancestors’ dreams of a better future for today’s generation [20]. We also uplift anti-coloniality over decoloniality in our work, since we cannot build a better future on the foundations that have brought Canadian society to this point. Therefore, we must be anti-colonial in our actions as we oppose control over Indigenous narratives and voices, while decoloniality examines the logics of domination still rooted in colonial power.

### **3. The Blue Sky Research Lab’s research: Approach and methodologies**

Within the Blue Sky Research Lab (BSRL) (**Figure 1**), our team believes that people always come before our findings. The work and research we conduct is not *about* Indigenous Peoples and their communities, but *with* them. Therefore, our approach focuses on the community through respect, showing care, and building trust with Elders and Knowledge Holders. Respect comes through acknowledging the



**Figure 1.**

*The Blue Sky Research Lab (BSRL) team at the University of Alberta, Edmonton, Canada.*

history of research as a form of knowledge extraction focused on information about Indigenous Peoples rather than the people themselves [21]. We avoid perpetuating these improper practices by ensuring our work follows appropriate cultural processes according to the traditions of the Indigenous communities we work alongside. Generally, this includes, but is not limited to, adhering to cultural protocols as well as providing honoraria (gifts and/or monetary contributions for the knowledge and time shared). Additionally, we ensure our participants are well-informed of our research projects and what they entail, as well as what our final output will look like. We explain to them how we protect the data, what our interviews are for, and give our word that the knowledge will be returned to its respective community. We show care by paying attention to the needs, desires, and hopes of the Indigenous Peoples that we work *with* and *for*. When conducting research, such as qualitative interviews, we ensure that our interviewees are comfortable – physically, mentally, and spiritually – and encourage interviewees to take breaks at any time. To further counter the extractivist history of academic research, the BSRL maintains its relationship-building with communities before, during, and after the research project has ceased. We recognize that the work we do would not be possible without the Indigenous communities we work with.

## **4. The role of The Auntie**

### **4.1 Authenticity, warmth, and sharing joy**

Dr. Paulina Johnson is *The Auntie* (Figure 2), the host and creator of *The Auntie Is In*, an open-access podcast about topics and realities close to her heart as a Nêhiyaw (Plains Cree) woman living in settler colonial Canada. Dr. Johnson is an Assistant



**Figure 2.**  
*Dr. Paulina Johnson, the host of The Auntie Is In podcast at the University of Alberta, Edmonton, Canada.*

Professor of Sociology at the University of Alberta in Edmonton, Alberta, Canada. While she occupies the role of professor within the academic institution, she is an auntie everywhere she goes. As an Indigenous woman in academia, Dr. Johnson is very familiar with how settler society discourages and belittles Indigenous Peoples within Canada and within research. As mentioned, both the general narratives of Indigenous Peoples and the research narratives within academia *on* Indigenous Peoples are damage-centered. Although these research approaches often attempt to draw attention to systemic injustices, they reinforce the narrative that the Indigenous experience is one of deficit [22]. Dr. Johnson and the Blue Sky Research Lab aim to combat this notion.

*The Auntie Is In* is, at its core, a **celebration of Indigeneity**. This celebration emerges through Dr. Johnson's banter with guests, her bodacious laugh, or the tender moments of reflection that surface when speaking about her family, community, and lived experiences. Even when episodes engage with heavy topics like dispossession, dehumanization, and colonial violence, the podcast refuses to

flatten Indigenous life into solely pain. Instead, Dr. Johnson mobilizes contemporary technology in a way that affirms Indigenous listeners, nurturing pride, recognition, and relational connection rather than extraction or spectacle.

The love, joy, and authenticity of storytelling are not only present in the released podcast episodes but are all deeply embedded within the processes of creating each episode. From scriptwriting to recording to editing, Indigenous relational ethics guide every decision made. Western academic and media traditions often elevate neutrality, distance, and emotional detachment as indicators of credibility. This privilege of detachment assumes that the researcher or producer can stand outside the story, untouched by it. For Indigenous Peoples, such distance is neither possible nor desirable. Indigenous Ways of Knowing require *relational accountability*. Knowledge is not extracted; it is carried.

Furthermore, *The Auntie Is In* actively resists gendered stereotypes. Green's analysis of the "Pocahontas Perplex" illustrates how Indigenous women have been historically confined to narrow and contradictory stereotypes. Indigenous women are romanticized, seen as compliant cultural mediators, or dismissed as hypersexualized, tragic, threatening, or vanishing altogether [23]. These representations still exist today in the media and academia, shaping public expectations of how Indigenous women should act, speak, and exist in the modern world. As such, *The Auntie Is In* breaks down these stereotypes by centering Indigenous women who are academics, caregivers, professionals, community members, and family—all equal in value and respect. Dr. Johnson's presence as an academic, a member of Samson Cree Nation, and an auntie goes against colonial expectations of what an Indigenous woman "should be."

Behind the scenes of *The Auntie Is In*, audio editing is not purely technical; it is an intimate and emotionally dependent practice of care. When editing episodes, careful attention is paid to how Dr. Johnson tells her stories: where a pause signals reflection, where a breath carries weight, where tears emerge and need to be honored rather than erased. Equally important is knowing when moments may be too vulnerable for public circulation and protecting them out of respect for personal and collective boundaries. *This* is relational ethics in practice. Moreover, the editing process is filled with joy. Dr. Johnson's laughter often spills across recordings. While some laughter is softened to protect listeners' ears, it is never treated as excess or a distraction. Even when trimmed, that joy lives on in her cadence, tone, and rhythm. These editorial choices ensure that what reaches listeners is not a sanitized or flattened voice, but instead a true and authentic one; a voice that carries warmth, humor, humanity, and most importantly, Indigeneity.

In this way, audio editing becomes a site of Indigenous methodology. It protects the affective truths of storytelling while resisting Western expectations of objectivity, restraint, and emotional absence. Rather than reproducing deficit-based narratives, *The Auntie Is In* affirms storytelling as a living, relational mode of knowledge transmission. Storytelling that honors vulnerability, safeguards community, and insists that laughter, love, and care are not distractions from truth; instead, they are *essential* to it.

The persona of "The Auntie" is not just a metaphor but an embodiment of Indigenous joy, humor, relationality, and care. Auntie conversations, jokes, and laughs would be dismissed as informal, invalid, or unserious within Western epistemologies. In contrast, for Indigenous Peoples, it demonstrates how Knowledge is carried through love, laughter, teasing, and storytelling. By resisting

colonial binaries that separate intellect and emotion or professionalism and kinship, *The Auntie Is In* reaffirms Indigenous Ways of Knowing in Western-dominated media/spaces. In doing so, our podcast not only challenges stereotypical representations of Indigenous Peoples but also reclaims Indigenous authority over how Knowledge and stories are shared, understood, and brought to life using a contemporary medium.

#### 4.2 Oral storytelling and spreading truths

Colonial scholarship, narratives, and academia have long framed Indigenous Knowledges as endangered, fragile, or static, positioning them as artifacts in need of rescue rather than as living systems of truth and Ways of Being. This narrative of disappearance obscures the fact that Indigenous Knowledges have always been adaptive, relational, and dynamic.

Within Indigenous epistemologies, storytelling is not merely a cultural practice but the *primary* means through which truths are transmitted, contested, and affirmed. Kovach emphasizes that Indigenous inquiry is rooted in oral narratives because it aligns with Indigenous thought patterns that do not rely on settler-imposed binaries, where meaning is carried through metaphor, symbolism, and interpretation rather than categorical or qualitative definition [24]. Kovach writes that oral history allows listeners to “walk inside the story to find their own teachings,” making truth a relational and participatory process that requires us to look inwards [24, p. 60]. This approach challenges Western assumptions that truth must be singular, fixed, empirical, or detached from lived experience.

*The Auntie Is In* operationalizes this epistemological grounding by creating a digital space where Indigenous truths – about land, identity, colonial violence, care, humor, and survival – are spoken aloud and carried through Dr. Johnson and her guests’ storytelling. Podcasting enables tone, cadence, pauses, and emotional inflection to remain intact, preserving the integrity of oral truth-telling.

#### 4.3 Accessibility

The history of settler colonialism within Canada has rendered many Indigenous Peoples today disconnected from their cultures. This is not by accident; rather, it has been an intentional attempt at assimilation by settler society to dispossess Indigenous Peoples within Canada from their lands, cultures, and communities [2, 9]. For example, *The Indian Act of 1876* brought about the nation-wide banning of the Potlatch – performed by Indigenous Peoples along British Columbia’s northwest coast – and the Sun Dance – performed by Indigenous Peoples across the prairies. The respective bans were in effect from 1885–1951 and 1895–1951. Although neither of these sacred ceremonies ceased completely during these bans, they were forced underground and shrouded in secrecy [25, 26]. As the Potlatch and Sun Dance were forced underground, their cultural significance was dimmed, their impact risked being lost in the generational transfer of knowledge, and the assertion made by the federal government that Indigeneity was to remain in the shadows was internalized.

Today, many Indigenous Peoples, young and old, walk through life without a connection to their cultures, their Peoples, and their lands. Although we, as the

Blue Sky Research Lab, are grateful to have a comprehensive understanding of Canada's history, we also recognize that not everyone has had the privilege to learn about the history of Indigenous Peoples within Canada. Many people within Canada – whether Indigenous or settlers – do not know the complete story of how this settler state came to be, or even the intricacies behind its contemporary operations. *The Auntie Is In* aims to change that. Without access to their community, an Indigenous individual often seeks knowledge about their culture and identity on the internet. The BSRL shares stories in an easily accessible format that allows individuals to learn and attain knowledge about Indigenous Ways of Knowing that come from communities. Knowledge Holders and Elders are invaluable within a community. For individuals without a community, *The Auntie Is In* podcast shares and acknowledges where these stories come from in a way that centers Indigenous individuals and communities (Figure 3).

In the fast-paced world we find ourselves in today, the importance of sitting down and listening to a story is so easily lost. Today, everyone has access to a phone, computer, or tablet. By presenting this knowledge via a podcast, our approach utilizes the contemporary digital landscape, easily accessed in the pockets of nearly every individual within Canada (and beyond), to reconnect Indigenous Peoples with a sense of community, while also educating settler listeners on the depth and breadth of the Indigenous experience right now. Additionally, each podcast episode minimizes discipline-specific jargon, opting instead for an accessible and conversational tone to meet any listener where they are. This is in direct contrast with Western academia's penchant for exclusivity and needlessly complex glossaries of terminology inaccessible to the non-academic. By doing the research, presenting it in an accessible way that is free for all to enjoy, and bringing the community, culture, knowledge, and joy to the listener, we are taking an active role in undoing the legacy of assimilation, dispossession, and shame enacted by the Canadian settler state. We hope to reconnect those with their Indigeneity, allowing them a foundation from which to further explore who they are and where they come from, while simultaneously making a few settler accomplices in decolonization along the way.



Figure 3.

Listeners discover our podcast primarily through intentional search, rather than passive algorithmic exposure. This suggests that audiences are actively seeking out relational, community-centered conversations, positioning the podcast as a resource accessed through trust and relevance rather than sale or platform-driven recommendations.

#### **4.4 For community**

When future academics are taught how to conduct Social Science research through university courses and fieldwork, it is often situated in the belief that we are to become omnipresent observers whose goal is to preserve and document. However, the research process is not so cut-and-dry. To better understand this, two concepts that are important in Cree culture, but not typically found within a textbook, must be highlighted. The first is *wîcihitowin*, which “refers to the life-giving energy that is generated when people face each other as relatives and build trusting relationships” [27, p. 7]. The second is *wâhkôhtowin*, which “refers to kinship relationships and teaches us to extend our relational network” [27, p. 7]. Indigenous academics are not the same as settler scholars; as a result, one must shift their attitude. When this shift does not happen, the research process risks becoming extractive. When the research process becomes extractive, people and communities are put in harm’s way, knowledge is misinterpreted, and the output lacks a connection to the community that informed it. Extraction never produces quality material. Nevertheless, it is an academic’s job to publish – and to publish often – especially if they have yet to form an established career. This leads to an ethical dilemma: one’s own career aspirations achieved via extractivist research may seem more appealing than a commitment to maintaining meaningful relationships. Generating work to gain acclaim is one thing. It is another thing to invest in a body of work that represents the community you are documenting, a body of work with their voices shining through that belongs to them just as much as to you.

A researcher’s job is to become immersed in culture and community to properly understand what they are writing and documenting. The behind-the-scenes research, interview preparation, transcription, and writing are just as important as showing up to a ceremony and being in the moment. It is a tremendous request to ask Indigenous communities to share intimate knowledge and open themselves up to outsiders from post-secondary institutions, who historically have very rarely had the community’s best interests in mind. When you connect with those you are learning alongside, your work becomes richer in value and insight. Indigenous knowledges and worldviews are “interconnected intergenerational webs of relationships” [27, p. 2]. Thus, stories are not just stories, and being together is not a waste of time, but a chance to create a deeper understanding of *why* you are doing this work.

#### **4.5 Building an interdisciplinary team: From undergraduate and graduate students to community members**

It is important to be present and to understand the multiple facets of Indigenous cultures. There is no one-size-fits-most model for conducting research with Indigenous Peoples. Research within Indigenous communities is inherently interdisciplinary. Indigenous research requires collaborators to adapt with changing circumstances and to welcome changes to the research plan. At the Blue Sky Research Lab, we have assembled a team that spans differing levels of education and a range of academic disciplines, including faculty, graduate and undergraduate students at the University of Alberta, as well as community members/assistants, *owîcihtâsowak*. A team is not complete if it is not representative of the work you are doing.

#### **4.6 A range of perspectives captured**

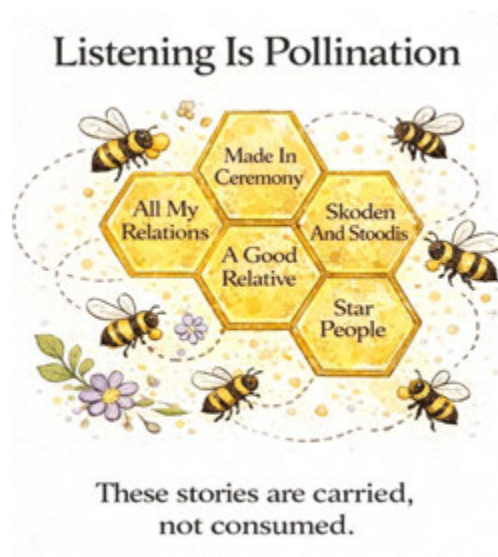
One of the main goals of *The Auntie Is In* has been to highlight a range of perspectives, knowledge, truths, and lived experiences. So far, our podcast has been able to showcase scholars, professionals, Indigenous Elders and community members, youth, and non-Indigenous accomplices in anti-colonialism. Throughout the third season of *The Auntie Is In*, Dr. Johnson interviewed several guests who have been part of her life at one point or another, allowing them to share their stories. In Episode 4, Dr. Johnson interviewed her parents, Paul and Luci Johnson, where they shared their perspectives on Dr. Johnson's academic journey, her being away from home, and their roles in guiding her through the struggles she has faced within academia [28]. Episode 9 highlighted the perspectives of friends and fellow podcasters Alix Bret and Amy Smith, two non-Indigenous allies, accomplices, and educators. Bret and Smith discussed relationship building and maintenance with Dr. Johnson, and what it means to be an accomplice, as well as advocacy work, and finding ways to discuss Indigenous issues and realities in a way that does not feel forced [29]. Dr. Johnson [30] introduced her new little sister/niece, "Honey Girl," in Episode 3. She describes the joys and experiences of being an "auntie" to a little human being, whom she can teach and share life experiences with, as well as the reciprocal love, joy, and wisdom that she experiences from an Indigenous child, who has warmed the hearts and spirits of the Johnson family. In Episode 13, Dr. Johnson interviewed her closest friend and confidant, Auntie Kim Bruno [31]. They shared multiple laughs as they recalled how they met and reflected on how they support and uplift one another daily.

Moreover, Dr. Johnson interviewed Indigenous actress, film maker, producer, and storyteller Jennifer Podemski in Episode 14 [32]. In this live-recorded episode, Dr. Johnson and Podemski discussed the lack of Indigenous representation in the film industry, academia, and how Indigenous women and healthy matriarchal support systems are so important. Their discussion, as two Indigenous women who often find themselves to be the only Indigenous women in the room, illuminates the reality many Indigenous women face in their day-to-day lives. In the season's last episode, Dr. Johnson invited her research assistants, the BSRL team members, to share what the four elements, *Fire, Earth, Water, and Air* mean to them [33]. The BSRL team members had the space to share their learnings and knowledge, and reflect on what they had learned and experienced in the making of the third season of *The Auntie Is In*. By capturing the voices of the community, of peers, of professionals, and of friends and family, *The Auntie Is In* highlights the myriad ways that harnessing contemporary technologies of the digital landscape can be used by Indigenous Peoples to assert narrative self-determination (**Figure 4**).

### **5. Digital and social media**

#### **5.1 Promotion of research outputs and the podcast through social media platforms**

The BSRL works to share knowledge and stories of Indigenous communities in a way that is accessible and far-reaching. *The Auntie Is In* currently has 6,529 plays on Spotify, with listeners coming from all around the world. Through statistics collected by Spotify, we can see specific insights about our listeners. Through social media, *The Auntie Is In*



**Figure 4.**  
*Repeated engagement with specific episodes suggests that listeners are not merely consuming content but carrying stories across contexts and relationships. Framing listening as pollination emphasizes circulation through care, return, and transmission rather than extraction or passive consumption.*

has reached 30 countries globally, with the top five countries that listen to our podcast being Canada (85.1%), the United States (7.5%), Germany (2.7%), India (0.9%), and the United Kingdom (0.8%) (**Figure 5**). The age range of our listeners varies significantly, with most of our listeners being over 35 years old. This average age highlights the ways in which adults are seeking out truths about Indigenous Peoples within Canada.

The Blue Sky Research Lab also promotes other research outputs on social media through Instagram. This allows our work to be shared and revitalizes Indigenous Knowledges with the communities we work with and for.



**Figure 5.**  
*The podcast's international reach reflects small-scale distribution circulation, rather than mass broadcasting. Teachings move through trust-based networks, where knowledge travels through relationships and intentional sharing, rather than profit/platform-driven scales.*

## 5.2 Audio enhancing tools to preserve indigenous knowledge and give back to the communities we work with and for

Beyond the production and digital dissemination of the podcast, the BSRL also understands audio technologies as tools of care, preservation, and reciprocity when working alongside Indigenous communities. Audio enhancement and restoration are not neutral or purely technical practices; they are relational acts that can support intergenerational connection, memory, and the continuity of Indigenous Knowledge Systems.

An example of this, which is near to our hearts, emerged through our relationship with an Elder in the Kluane First Nation (Yukon Territory). The Elder entrusted the BSRL with several CDs containing audio recordings of songs originally recorded in the late 1940s. These recordings held significant personal and cultural value, carrying the voices of relatives whose presence is no longer experienced through physical forms. After carefully digitizing the recordings and returning the original CDs to the community, a member of our team recognized that the skills developed through editing *The Auntie Is In* could be used to improve the listening experience of these recordings.

The offer to enhance the audio was made without expectation of exchange, recognition, or authorship. It was not framed as a research output, a collaboration for publication, or a contribution toward academic objectives. Instead, it emerged from a place of relational responsibility: we had the tools and the skills, and the community had shared something precious. Offering those skills back was simply the right thing to do.

The audio was carefully cleaned to reduce crackling and distortion caused by the recording capabilities at the time of the recordings. No changes were made that would alter the songs themselves. The goal was not to modernize or reinterpret the recordings but to allow the voices within them to be heard more clearly by those they mattered most to. When the enhanced recordings were returned, the Elder shared that their mother was deeply moved to hear the songs so clearly.

This example reflects how the BSRL approaches technology, not as a means of extraction or ownership, but as a set of tools that can be utilized in service of community needs (**Figure 6**). Audio enhancement in this context becomes a form of



**Figure 6.**

*The increase in audience size, followers, and listening time occurred through personal and relational engagement. This cultivated form of growth emphasizes relational accountability, reciprocity, and care as central to podcast engagement.*

giving back – an extension of *wícihitowin* and *wáhkôhtowin* – where skills are shared to strengthen relationships and support intergenerational continuity. It also challenges Western academic assumptions that technological expertise must be tied to clearly outlined research outputs such as publications, authorship, or institutional recognition. Instead, value is found in the impact on lived experience, emotional connection, and community wellbeing. In this way, technology becomes a vessel through which Indigenous Knowledges are not only preserved, but returned and maintained in a good way, carried forward by the communities to whom these belong.

## **6. Conclusions: Reflections on the use of technology and looking into the future**

Although technology can be understood in different ways, it is clear that audiovisual technologies, in particular, entail immense possibilities for knowledge dissemination. For the BSRL, this is key when working to advance anti-colonization efforts through the sharing of Indigenous realities, Indigenous Knowledges, and a comprehensive scope of settler Canada's past, present, and future. These different means of knowledge dissemination have allowed for a dismantling of harmful narratives and stereotypes, in addition to the preservation of Indigenous Knowledges. Not only does our use of technology advance decoloniality and the preservation of Indigenous Knowledge Systems, it also allows everyone the opportunity to reconnect with family, learn about lost heritage, or find community online if not afforded one in person. We are at a time in which technology presents the opportunity for knowledge dissemination without the insidious influence of the settler colonial agenda. Furthermore, technology is not something Indigenous Peoples are just now discovering but are reclaiming and harnessing to serve one another with intention. Most importantly, this process of reclamation must not be done *for* Indigenous Peoples, but *with* them. Walking alongside each other, helping one another when we stumble, fall, or veer off the path with a sense of caring and obligation to our relations will see us all step confidently into the future.

As a team, we understand that technology is a valuable tool in the dissemination of Indigenous Ways of Knowing(s) and a crucial measure in community building in digital spaces. It allows individuals to be connected to the stories, teachings, realities, and experiences that colonial forces have sought to sever them from. We also understand that technology is not inherently neutral; who harnesses it, how much power is wielded over it, and its intended use are deciding factors in both encouraging and discouraging technological implementations with Indigenous Peoples. Therefore, there needs to be serious discussion and action on how to protect Indigenous voices and Traditional Knowledges when preserved and disseminated online, both for the BSRL as well as all others engaged in similar work. We wish to know further the degree to which these technologies – and those who create and maintain them – can act as accomplices in the decolonial mission, allowing Indigenous Knowledges to be memorialized and disseminated through these means, to be kept in the hands and hearts of Indigenous Peoples and communities.

The future of technological employment, in the name of anti-coloniality, should focus on data sovereignty. This means allowing cultural protocols surrounding Indigenous Knowledges to drive its preservation and dissemination, in place of

academic or governmental policies. Additionally, current and future technological implementations should serve to aid the communities from which they are sourced, as well as pointing out aspects of the colonial agenda that may be embedded within the technologies we take for granted. This requires maintaining a critical eye on potential sites of harm where colonial extraction may occur in the process of implementing technologies. We must go forward in this work, willing to accept every gift of knowledge and experience we encounter, and use these teachings to inform best practices to ensure meaningful work is done. This is why *The Auntie Is In* podcast grounds itself in the teachings of the community and advocates for a better tomorrow for all Indigenous Peoples. Most importantly, it acknowledges the role of aunties who have carried their communities' hopes as their own, given advice even when they were not at their best, and, ultimately, the laughter, care, and love that is needed in Canada's colonial society today.

## **Acknowledgments**

To the many ancestors, knowledge holders, and Elders who have supported our work from Samson Cree Nation and the Maskwacis territory, we are thankful for you and all that you do. We are grateful to Braiding Knowledges Canada (BKC), who has funded *The Auntie Is In* podcast through "The Wâhkôhtowin Knowledge Hub," as well as its ongoing support of the Blue Sky Research Lab. We are grateful to the University of Alberta for supporting our collaborative work as we work together. And most importantly, the Blue Sky Research Lab team, which consists of over twenty research assistants working as one for a common goal of community.

## **Conflict of Interest**

The authors declare no conflict of interest.

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## Chapter 8

# Dialogicity as Education Practice and a Search for a Numbering System for the Nheengatú

*Eduardo Soares*

### Abstract

Here we examine a workshop held in the state of Amazonas, Brazil, for in-service Indigenous teachers. This is a case through which we approach their demands and engage with their efforts to navigate Western culture, which they identify as White culture. These efforts are shaped by a crucial dilemma that can be understood in light of the historical events that have unfolded in this region over more than four centuries. Dialogicity is a central concept in our analysis of the encounter with these teachers. First, they determined what they wished to take from the workshop. Second, their demands were aligned with their struggle to maintain their culture while, at the same time, adapting to what Western culture can offer them. During the workshop, the instructor and the participants collectively explored ways of addressing questions related to mathematics education while also engaging with the broader struggle for the rights of Brazil's Indigenous peoples. This chapter begins with a brief introduction, followed by a discussion of the concept of *dialogicity*. It then presents the workshop, whose description incorporates historical events connected to the participants' cultural heritage. Before the conclusion, the paper offers an analysis of the workshop, using dialogicity as a key concept to examine how it contributed to participants' engagement with the dilemmas they face. It may also enable a deeper understanding of their perspectives in relation to Western culture.

**Keywords:** indigenous teachers in-service training, mathematics for Indigenous communities, dialogicity, Indigenous interests and Western culture, teaching numbering system for Indigenous communities, mathematics for Nheengatú

### 1. Introduction

In this chapter, we explore the concept of dialogicity within the context of Indigenous education. We take a workshop for in-service Indigenous teachers as a case study, highlighting how dialogicity addresses inherent challenges within First Nations educational frameworks. Being a topic of academic discussion for decades, dialogicity has gained prominence, driven by official curricula in countries that emphasize learner-centered pedagogical approaches. Nevertheless, the concept holds

particular significance when the focus shifts to cultural exchanges, which are a central topic in shaping the future of Indigenous communities.

While general curriculum guidelines are established, practicing dialogue in the classroom presents a challenge: balancing the formal requirements of various school subjects with students' own interests. Accordingly, most researchers examine classroom dialogues by focusing on how much teachers allow students to express themselves on predefined school topics. This approach often sidelines students' existential questions, considering that the most valued outcomes of these dialogues are already determined in advance and relate primarily to mastering school content.

In a society strongly reliant on scientific thinking, a primary, well-established function of the formal education system is to transmit the core tenets of scientific culture to new generations. This educational transmission is operationalized through the structural division of the school curriculum into distinct disciplines, each with its specific programs and methods. The overarching objective of this standardized organization is to establish clear guidelines that are intended to define the most effective activities and pedagogical approaches for students to learn science.

However, within the school environment, the actual implementation of the official curricular program sometimes faces social demands that are not directly addressed by the knowledge prescribed by the formal education system. This creates a tension between the curriculum the school offers and the actual needs of the community it serves. This tension is often made more significant when the school's programs do not adequately address the cultural contexts of the local community.

This scenario is particularly evident in First Nations' societies, which possess a distinct cultural heritage. The school in these communities would ideally assume an additional function, contemplating the need to preserve the students' original culture. Consequently, it becomes necessary to establish a dialogue between formal school knowledge and other forms of traditional knowledge, explicitly addressing the specific demands articulated by the students themselves.

Hence, the concept of dialogicity takes on an expanded meaning, posing new challenges for all involved in educational activity. Questions raised by students and their families may have unforeseen dimensions. Moreover, some questions can be interpreted as existential, considering that these students live in societies where they have often lost part of their original culture. Consequently, they face the dilemma of choosing between old traditions and the dominant culture of the colonizers. An existential question, in this framework, is one that expresses such a dilemma, even if the person formulating it is not fully conscious of the underlying conflict.

The workshop described in this chapter provides an example of dialogicity stemming from an existential question posed by the in-service Indigenous teachers. They asked how to create a numbering system that could align with their mother tongue. At first glance, the issue may seem simple; nevertheless, it is situated within a historical movement that will be presented further below. The experience demonstrated progress in understanding school practice as a way to broaden world perceptions through the genuine consideration of needs articulated by the learners.

The workshop was held in the Amazon region with 65 Indigenous teachers. All participants live and work in villages located along the Rio Negro and its affluent, the Rio Içana. After completing specific teacher training programs, these educators are hired by the municipality to teach children and adolescents from their local Indigenous communities. For the workshop, they had a specific demand that would improve their language and their way of teaching math. The narrative of this

experience will be revisited later. Before proceeding, we will examine the concept of dialogicity, which will provide a framework for reflection on the events that took place.

## 2. About dialogicity

The term *dialogicity* has been used in the field of education, most commonly in relation to the challenges of implementing student-centered pedagogies in practice. In [1], for instance, the authors examine discrepancies between curriculum prescriptions that advocate student-centered approaches and the teaching practices actually observed in Finland and Hong Kong. Drawing on various scholars, the authors argue that the mutual recognition of different voices, evidently including students' voices, is central to their understanding of dialogicity. Their research investigates how dialogues unfold when teachers align school knowledge with ongoing curricular mandates.

A similar comparative study monitoring teachers in South Africa is presented in [2]. Additionally, [3] analyzes classroom dialogues with the same objective: verifying the extent to which student-centered teaching goals are achieved. They identify three different moments in the conversations: the teacher proposes the dialogue, students provide answers, and the teacher organizes those answers to connect them with the established school curriculum [4] deals with the theme in distance learning practices in Russia and China. They point to the need for this teaching modality to include face-to-face meetings so that dialogicity can be properly exercised. In Garcia-Mila et al. [5], the authors examine the effects of adopting dialogicity in exploring specific themes in Tarragona, Spain.

In Lehesvouri et al. [6], the authors present an overview of several publications related to dialogicity. These studies emphasize the importance of students as agents whose voices must be considered an integral part of the learning process. The authors also find that many researchers point to the difficulties of implementing dialogue in math and science classrooms. This challenge may be related to the fact that mathematics and sciences have very well-established paradigms, which are reflected in rigid programs provided by governmental bureaucracy.

Adopting a somewhat different perspective on dialogicity, some authors, inspired by Paulo Freire, focus on new teaching approaches. In Soares, LJG and Pedroso, APF [7], the authors designate dialogicity as an inherent element of humanism. Dialogicity stands in opposition to educational processes in which learners are not considered participants in the production of knowledge. This perspective could imply the transformation of reality by those involved – educator and learner – thus making it a category that drives critical thinking. In Oliveira, IA [8], the author emphasizes student participation as fundamental to knowledge construction and highlights dialog as a core characteristic of liberating education. This approach criticizes traditional schooling that minimizes learner participation and operates on the assumption that knowledge is simply transmitted under the educator's sole control.

Banking education, as designated by Paulo Freire, maintains a strong reproductive bias toward the prevailing social conditions, marked by the oppression of certain social groups over others. Freedom, in this context, is understood as overcoming oppression – that is, building a participatory society

capable of recognizing and dealing with the demands of its various constituent groups. The dynamic condition of dialogicity should be highlighted, as it implies the unfinished nature of the subjects, considering their constant involvement in successive educational processes. The affirmation of dialogicity depends on the questioning of reality. This problematization depends on inviting learners to expose their interests, while dialogicity simultaneously allows those interests to be analyzed in depth.

From the humanistic perspective, dialogicity can be understood as an educational process that emerges from the participation of its agents. One assumes the determination to promote a sharing of issues and knowledge so that each participant, whether educator or student, can broaden their horizons and advance in their understanding of the world. The school content will not have a purpose in itself but will be offered as a tool to address issues that the group recognizes as important to explore. It is as good as it can be as an ideal; however, the challenge of putting those principles into practice remains and is presented again in each situation, in each new context.

Let us return to the workshop narrative. We hope it illustrates the possibility of putting a challenging form of dialogicity into practice.

### **3. Arriving in the Rio Negro region**

In 2007, the author was part of a group of mathematics educators at the Federal University of Minas Gerais State (UFMG) when they received an invitation to work with Indigenous teachers in the protected Indigenous area of São Gabriel da Cachoeira (hereafter, São Gabriel), in the far northwest of Amazonas State. The invitation came from the city's secretary of education, a Franciscan nun. She had been informed about the work being done in Belo Horizonte, Minas Gerais State, by a young man visiting the Indigenous lands in São Gabriel. He suggested the UFMG group, which already had prior experience working with Indigenous teachers. Consequently, she contacted the educators to request an eight-day workshop, in addition to the five days required for travel to the region. The distance between the two cities is approximately 3,340 km.

São Gabriel is the last Brazilian city before the border with Colombia. The municipality covers an area of 109,183 km<sup>2</sup>. According to official statistics, the 2022 population was 51,795 individuals. The vast majority of residents belong to one of the many Indigenous groups inhabiting that part of the Amazon forest; there are very few non-Indigenous residents.

Along with her invitation message, the secretary sent a question formulated by the Indigenous teachers themselves, which was to be addressed during the workshop. The teachers were asking how the Índios<sup>1</sup> could write numbers and perform calculations. The author attempted to obtain more information that could help in making sense of the question, but its full meaning only became clear upon arrival at the location.

The author then prepared to work in a manner similar to that to which he was accustomed when working with Indigenous teachers from his home state. He organized a kit of texts and materials, which included four tables displaying non-Indo-Arabic numbering systems; three sets of colored, squared cardboard pieces; two guiding texts – one for an investigation about honey bees, the other about the Tangram puzzle – and other materials like rulers, protractors, and scissors.

To travel from Belo Horizonte to São Gabriel, one must take a plane to Manaus, the capital of Amazonas State, followed by another 800 km flight to São Gabriel itself. Upon arrival, staff from the municipal education office took the author to the river harbor, where two men were waiting with an aluminum canoe.

The canoe navigated at a speed close to 60 km/h. After two hours, they turned onto the Rio Içana, a tributary of the Rio Negro. In that region, the Rio Negro is vast and dotted with many islands. Initially, navigating among them seemed treacherous, but fortunately, the two guides were very experienced navigators. During the trip, numerous villages were visible along the shore, as were several typical boats (Figure 1).

Before ascending the Rio Içana, the travelers had to stop at a village and present a special permit to enter the Indigenous land. Entry was prohibited for any non-Indigenous person unless they had specific work to do with the inhabitants, as was the author's case. After presenting the permit, they still had to navigate for two more hours on the Rio Içana. They then reached Assunção do Içana, the village where all the Indigenous teachers had gathered to participate in the workshops organized by the municipal education office.

Assunção do Içana is a small village featuring roughly 40 houses, a large church, and a residence for Salesian nuns. There is also a soccer field and a sand volleyball court. The nuns have an electricity generator, which works during some hours per night. The village also has a public telephone powered by a solar panel, which allows people to make long-distance calls. Rio Içana is relatively calm there and has some sandy beaches that are good for swimming (Figure 2).

The work with the teachers was conducted inside a *maloca*, a traditional Indigenous longhouse located approximately 500 meters from the village (Figure 3). Historically, these structures housed multiple family groups. The *maloca* has a rectangular footprint, measuring roughly 12 meters wide by 25 meters long, with an apex of 5.5 meters. The roof's steep angular declination results in low lateral walls, standing at approximately 1.5 meters tall. The structure lacks windows but has two doors: one at the front and one at the back. Symmetrically located around this main building are four small, octagonal kiosks, two on each side. According to the Indigenous residents, these supplementary structures are mandatory due to religious requirements.



**Figure 1.**  
*A village on the shore and a typical boat.*



**Figure 2.**  
*Assunção do Içana – a beach, the soccer, and the volleyball court.*



**Figure 3.**  
*The maloca behind the kiosk and the boat anchored on Rio Içana.*

The *maloca* lacks adequate natural lighting for studying. When clouds block the sunlight, the interior becomes even darker, forcing the group to work outside on two occasions (**Figure 4**). However, as soon as the clouds dissipated, the heat drove them back inside. During the nights, the electric generator provided energy, allowing the teachers some luminosity for relaxing, talking, and playing games, primarily dominoes. Many of them slept inside the *maloca*; some were accompanied by relatives, such as one woman who brought her husband and their toddler.

Anchored in the river in front of the *maloca* was a two-story wooden boat provided by the city hall, which had transported most of the teachers to Assunção do Içana (**Figure 3**). The boat was equipped with materials to support the workshops, including an electrical generator, a computer, and a printer. It also featured beds for the staff working with the teachers, several areas designated for hammocks where the crew slept, and all necessary cooking appliances to feed over 70 event participants.

Each morning, most of the teachers began their day with a bath in the river before heading to the boat for a breakfast of cookies, milk, and coffee. Their discipline was remarkable; the author was amazed by how smoothly such a large group operated.



**Figure 4.**  
*Maloca's interior and the work outside.*

The teachers informed him that in any chaotic situation, he merely had to shout the Nheengatú<sup>2</sup> word *puraki*, and everyone would immediately cease their activity. He never needed to use the word, however, leading him to wonder about its meaning.

The math workshop spanned eight days, from October 18 to 25, including Sunday morning. Sunday afternoon was free, allowing everyone to visit the village for swimming and recreation.

The 65 teachers belonged to three different nations: Baré, Baniwa, and Werekena. All of them were at least bilingual, speaking Portuguese and Nheengatú; some of them spoke more than three languages. Upon the author's arrival, a workshop on Nheengatú literacy was concluding, led by two young non-Indigenous teachers. One of these educators was the individual who had facilitated the UFMG group's introduction to the education secretary. The other was a Ph.D. student whose research focused on spoken Nheengatú grammar, which ultimately resulted in the [9].

Soon after being introduced to the Indigenous teachers, the author offered a greeting using the first words he had learned: *purāga ara*. Inappropriate, as the phrase is reserved for mornings only and it was already afternoon, the teachers responded with great kindness. Their relationship evolved very positively over the following days.

The Nheengatú language did not originate in the Amazon region, where there were many languages when the Europeans arrived in the sixteenth century<sup>3</sup>. Nheengatú was largely adapted by the Jesuits from Tupi-Guarani, a language widely spoken by Indigenous groups living along the Atlantic coast in the eastern part of the colony. The priests incorporated Portuguese words, particularly for concepts unfamiliar to the Aboriginal population. The Jesuits also produced a formal grammar for Nheengatú. In the Amazon during the seventeenth century, they sought to enforce the use of a single, universal language among all Indigenous peoples to facilitate communication for the white colonists.

Twenty-three distinct languages are currently spoken in the upper Rio Negro region. Nheengatú serves as the first language for approximately 4,600 individuals, a group that includes 900 Werekena people, as well as members of the Baniwa and Baré communities. While the original Baré language is now extinct, nearly 5,000 speakers of the original Baniwa language currently reside further north along the Içana River. Among the Werekena, only 20 elders still speak their ancestral language,

and about 100 others can understand but not speak it. Efforts are currently underway to preserve this traditional language<sup>4</sup>. Nheengatú holds official language status in the municipality of São Gabriel da Cachoeira, alongside Portuguese. Two other languages, Tukano and Baniwa, are designated as co-official. São Gabriel da Cachoeira is the only city in Brazil with more than one official language.

The presence of Nheengatú in the Amazon leads us to some historical events, which are important to be told for a better comprehension of the context of this narrative.

#### **4. A history of oppression and violence**

Most of the historical information provided below can be found in [10]. This work seems trustworthy, as well as the researchers who were taken as references. Besides, the editors worked in collaboration with FOIRN<sup>5</sup>, the main Indigenous organization in the Rio Negro region, so their work might be very close to the way the Índios would tell an important part of their history.

Violence and slavery marked the presence of white people in the Rio Negro region since the sixteenth century. The Portuguese explorers considered the aboriginals as potential slaves for work in the cities that were being developed in the Northeast and North of Brazil. Because of their deep knowledge of the forest, the explorers believed the aboriginals to be good workers in the extraction of commodities like nuts, piassava, and, from the beginning of the twentieth century, latex.

For making slaves, the Portuguese people would burn down Indigenous villages and capture the men. Sometimes they took the women and the children as well, depending on their value as house workers in the cities. White people brought some diseases from which the Indigenous had no defense, mainly smallpox and measles. Those diseases exterminated almost everybody many times in many villages. Besides the motivation to make and sell slaves, the Portuguese were also interested in enlarging the colony's borders. Many of the expeditions to the upper Rio Negro were publicly funded.

The whites used to trade with some tribal chiefs, giving them artifacts like metal tools and guns, making them allies. Then those chiefs paid them back by capturing Índios from other tribes, the same as what was happening in Africa. Other tactics consisted of using captured aboriginals to combat and capture new ones. White colonizers often approached Indigenous communities by distributing large quantities of cachaça, a potent spirit distilled from fermented sugarcane. After excessive consumption, the men would typically become very ill, which facilitated their capture. Today, the sale of cachaça is prohibited in these Indigenous lands, although the spirit is widely sold throughout the rest of the country. One fellow teacher said that if somebody wants cachaça there, he or she has to buy it on the black market for about 10 times the regular price.

The exploitation of the Indigenous nations, nevertheless, was not that easy for the colonizers. The Indigenous peoples consistently resisted, employing various strategies ranging from direct confrontation to evasion. They would often retreat to locations inaccessible to white individuals, such as the dense forest interior or remote waterways. During many periods, the villages along the Rio Negro and other shores were deserted because the populations either died of diseases they could not fight or ran away to escape from the conquerors.

The twentieth century began with new and harsh threats to the tribes. The development of the car industry caused a great demand for rubber worldwide, and this demand increased even more during the First and Second World Wars. Slavery in Brazil was officially abolished in 1889, but in practice, it persisted in the Rio Negro region. Rubber dealers often visited villages and employed old tactics to recruit men for work in the jungle. They would promise fair wages, but in reality, they trapped workers in a cycle of debt peonage. Workers were forced to live on the dealers' land and purchase necessary supplies exclusively from their stores, which were the only available places to both reside and shop. Consequently, the workers were left with no actual earnings because, according to the landowners' calculations, their debt always exceeded their supposed salaries, keeping them permanently dependent. The author had the opportunity to talk to one elder who had been subjected to that situation in the 1970s. His narrative mirrors the historical accounts detailed in scholarly papers concerning the Indigenous populations of the Amazon region.

The Catholic Church was always allied with the oppressors, although it apparently had contradictory goals. In the beginning, the Jesuits themselves took advantage of Indigenous labor. They participated in, authorized, and blessed the white people's incursions. The missionaries also took control of the administration of many Indigenous villages, effectively becoming the ultimate local authorities. In addition, they strongly opposed all Indigenous faiths, arguing that their intention was to save souls. The priests frequently mocked Indigenous customs, which they consistently associated with evil. From their perspective, it was preferable for Indigenous peoples to be enslaved in the cities rather than lose their souls in the forest.

On the other hand, from the Indigenous point of view, the Jesuits were not the worst group that tormented them. In a certain sense, the priests protected the Índios from other invaders, avoiding even much worse treatments. One can think this way when considering, for example, that the Indigenous left the villages dominated by the Jesuits just after an official decree from the government expelled the Jesuits from the entire colony in 1755 (Cabalar and Ricardo, editors, 2006, p. 79). The Jesuits' resistance to stopping the spread of the Nheengatú language, as well as other issues, resulted in the above-mentioned decree. During that period, the Portuguese Court needed to demonstrate to their Spanish counterparts that they had effectively conquered the Rio Negro region and that Portuguese was already the dominant language spoken there. Hence, since then, Nheengatú was no longer an officially sanctioned language.

In those days, the Carmelites, Franciscans, and Capuchins arrived in the Rio Negro lands. They replaced the Jesuits but were not allowed to administer the villages as the Jesuits did. The government gave them only spiritual authority. In 1914, a decree from Pope Pius X put the Salesians in charge of Indigenous education; thereby, they started building schools, and many of their children were compulsorily sent there.

Much like in other regions of the world, the priests aimed to eradicate all vestiges of Indigenous culture. Children were prohibited from using their native languages, burdened with religious duties, and subjected to physical punishment for any conduct the priests considered unsuitable. As a result, their lives became entirely detached from their ancestral cultures.

"Our parents were allowed to visit us once a month, and if we didn't speak to them in Portuguese, we'd be punished by being denied lunch or sent to sit in

a corner.” This resounding testimony, given to a journalist<sup>6</sup> by an Indigenous man, suggests one explanation for the meaning of Nheengatú today: at the time of the Salesian schools, Nheengatú was already the mother tongue of some tribes, and because it was forbidden by the Catholic priests, the language became a symbol of resistance – paradoxically, the same language that was introduced by the Jesuits long ago.

Only from the 1970s onward did the church change its position. During that time, the Evangelicals were already working with some Indigenous communities, and their approach was somehow different. Evangelicals, followed by Catholics, started to encourage the Índios to organize themselves and empower those organizations in order to fight for their rights. A key item on the agenda was the reclamation and official legitimization of their lands. It is noteworthy that when traveling the Rio Içana from its mouth up to Assunção do Içana, most villagers are Catholic. Upstream from Assunção do Içana, the communities are Evangelical and speakers of the Baniwa language.

The Salesian boarding schools ended in the 1980s. Also, in that decade, someone discovered gold in Rio Negro’s region, and it attracted many adventurous gold miners whose interests opposed those of the First Nations’ communities. The demarcation of Indigenous territories still took too long to be implemented. Besides the difficulties with the gold miners, the Indigenous organizations had to face strong opposition from the national army. The army staff did not want those territories to be under Indigenous determination; rather, they wanted all the Brazilian Amazon to be integrated into the whole country by systematic occupation under the coordination of the central government. In the seventies, Brazil was under military dictatorship, and it seemed impossible to convince the military to let the Índios decide autonomously their destiny. Amazingly, as it sounds, it is still the dominant idea among the troops.

The dictatorship ended slowly. In 1988, the National Congress released the first constitutional act after the military coup d’état. The presidential elections restarted in 1990, and in 1996, the Indigenous organizations accomplished the official recognition of most of the territories around the Rio Negro region, which they had been claiming. Even after the dictatorship ended, the national army maintained a strong influence over presidential decisions. Nonetheless, the military’s arguments against Indigenous organizations were superseded by the realization that no other people knew the region better than the Indigenous nations themselves. Furthermore, there is no indication that the territories would be safer for the country if they were owned by non-Indigenous people. Ultimately, an agreement was reached: the army would have permission to enter Indigenous territories freely in the interest of national security.

The territories were divided among Indigenous nations according to those that traditionally inhabited them. From the seventies onward, the Indigenous communities have been organized, and, as mentioned, some Indigenous nations lost their original language and adopted Nheengatú as their mother tongue. After the recognition of their territories, it came time to improve the way they lived, which included their wishes about how to relate to modern white society. The issue is not simple at all and will be revisited here later.

Nowadays, the Indigenous communities engage in traditional activities such as agriculture, hunting, and fishing. They also produce handicrafts and export goods to various cities across the country. Some individuals work as teachers, while

others are employed by the municipal government. The men typically create handicrafts, making baskets and tools for fishing and hunting, which non-Indigenous people often purchase to adorn their homes. The Índios also collect small fish to sell as decorative pets. In 2008, São Gabriel had its first Indigenous mayor.

In 2007, the historical moment was, and still is, proper for the consolidation of what was achieved. With no more Salesian boarding schools, the Índios assumed responsibility for their children's formal education, and this shift necessitated the implementation of teacher training programs. The city hall could count on the central government and some NGOs to organize workshops for the teachers. Those workshops were costly because the tickets and the transportation along the rivers were very expensive. For all the workshops, the secretary of education followed the principle of asking the teachers what they needed the most before inviting people to work with them.

## 5. First activities

The author arrived in Assunção do Içana with the need to solve the above-mentioned matter, due to its vagueness. Hence, the Indigenous teachers were asked to help him by writing what they meant by that question and what else they would like to ask. The day before the beginning of the workshop, the non-Indigenous teachers in charge of the previous workshop agreed to ask the Indigenous teachers to write about their demands in Mathematics. Then, they ratified their interest in developing ways to speak and write numbers in Nheengatú. They also wanted to learn some practical work about the arithmetical operations that could be useful for their teachings. However, even with the texts that they wrote, doubts still remained. It was only after the first meeting that the author was able to solve the matter he had in mind.

Most of those teachers work in classes with multi-age students, ranging from little children to adolescents. They explained that the villages along the rivers are far from the city and also quite distant from each other. Considering the cost of transportation, it is hard to group same-aged students and send them daily to a sort of regional school, which would have one class for each age. Therefore, the students of each village have to be taught in the only school available, and their numbers are not sufficient to fill more than one class. The children are literate in Nheengatú, which is often replaced by Portuguese from the fourth-grade onward [9].

In each village, the educators and parents collaboratively determine the school's curriculum with the explicit intention of preserving local customs and culture. Consequently, practical knowledge essential for communal activities, such as planting manioc or pineapple, is formally integrated into the students' required learning. This collaborative approach allows the community to balance their traditional wisdom with the expectations and knowledge of the white culture<sup>7</sup>. It seems certain that this balance would not be fair without a deep notion of what can be learned from the white culture and, at least in what was perceived during the workshop, in this sense, the teachers' knowledge is still precarious. However, there has been a real endeavor from the teachers, the Índios, and some other NGOs, as well as from the municipal government, to improve the education system in São Gabriel.

On the first working day, the participants told the author that they were striving to improve Nheengatú, developing ways to write the language. They also wanted to develop a numbering system that could express any quantity and assist in written calculations. They had numbers up to 10, based on sets of 5. From 1 to 5, the numbers were: yepe, mukûi, musapiri, irûdi, pu. From 5 to 10, they would be: pu yepe, pu mukûi, pu musapiri, pu irûdi, pu pu. From 10 to 15, they would be: pu pu yepe, pu pu mukûi, pu pu musapiri, pu pu irûdi, pu pu pu, and so on and so forth. One can imagine the difficulty of talking about larger numbers.

After evaluating the situation, the author decided to provide information about some numbering systems, which were created throughout human history. Hence, the teachers might know different sets of rules that had been used to solve the problems they themselves were facing. In addition, they could learn something about the creation of the Indo-Arabic system; they could also expand their ideas about foreign cultures.

The proposal necessitated a careful consideration of the concept of time, primarily because existing numerical systems were developed long ago, some in the very distant past. To address this challenge, the author introduced a practical method: using a cotton cord tied to a maloca's pole to create a physical timeline. Close to the pole, there was a point chosen to represent the current year. The participants were then invited to attach marks to the cotton cord; each mark would correspond to any event that could be considered meaningful to them. The chosen event and its date should be written on a piece of paper, which should be attached to the cotton cord's point according to the time line's proportionality.

From the pole to the *maloca*'s front door, the cord measured about 20 m. The teachers agreed with the proposal and began writing the events and tying knots. Some events were related to their personal lives, others were connected to the history of their communities, and still others were linked to the traditional Brazilian history textbooks. Thus, they chose the arrival of the Portuguese in America, the date when Brazil became a country, the year when slavery was officially abolished, the beginning of the republic, and so on.

One particular event captured the author's interest. Early in the colonization of Brazil, in 1534, the King of Portugal divided the territory into immense tracts of land and distributed them to his trusted nobles. These divisions became officially known as the Capitanias Hereditárias (Hereditary Captaincies).<sup>8</sup> Decades ago, educators often compelled students to memorize historical dates, which were typically forgotten by the following year. The author certainly did not expect anyone to recall the exact year the colony was divided. Yet, an Indigenous man assigned significant importance to that specific date; one can wonder why.

Prior to the arrival of the Portuguese in the Americas, the participants remembered very few historical dates, primarily those related to the life of Christ. Once they finished tying their notes, the author invited them to continue the exercise by extending the timeline another 30 meters outside the *maloca*. Upon reaching this new point in history, the group engaged in a discussion about ancient civilizations, focusing mainly on the Egyptians and Babylonians. Returning inside, the author presented the teachers with two charts, illustrating the Egyptian and Babylonian numeral systems, respectively.<sup>9</sup> Each chart showed the translation of some numbers between the Indo-Arabic system and the one that was represented there. Then the participants were challenged to find out the translation of many other numbers which were not in the charts. By doing so, they could learn some of those numbering systems' rules.

The Egyptian numeral system is not hard to understand, considering that it is additive, based on sets of 10, and has symbols for the units up to 10 and for the powers of 10. This is not the case with the Babylonian system, which is positional and has only two symbols. After these two systems, the Chinese numeral system was introduced with the same dynamic proposal that had been made before. Afterward everybody turned to the cotton cord again, this time to locate the length that should represent the Mayan civilization, whose territory was not that far from the place where they were. The Mayan numeral system is positional and vertically organized, which makes it very challenging.

The group eventually returned to the cotton cord timeline, this time to locate the centuries during which the Indian and Arab cultures developed the numbering system that ultimately spread globally. They discussed the inherent rules of this system, which the Indigenous teachers could readily recognize. The author emphasized why the Indo-Arabic system replaced all other systems, making it clear that it is the only one suitable for all calculus. This fact underscored the difficulty of creating a new numeral system and developing all the necessary algorithms within it.

The following day, the participants decided to divide themselves into seven groups. Each group was challenged to create a numbering system that would suit the Nheengatú. The groups spent all morning and part of the afternoon working on the task. Three of them decided to maintain the rules of the Indo-Arabic system and only change the drawings of each algorithm. The others invented new rules as well as new drawings. The class had to choose only one system; hence, the teachers decided that they needed to learn more about each one in order to vote for the best.

Evidently, the three number systems that had the same rules as the Indo-Arabic did not create any embarrassment in being understood. The four others had to be explained bit by bit, and the explanations lasted until the morning of the third day. When everybody felt confident about voting, each person chose the numbering system which he/she considered the best by writing its denomination on a piece of paper. Then the votes were counted, and the group that won took on the task of correcting some details and expanding the system for numbers as large as thousands, which they did in the following days. The result is illustrated in **Figure 5**. It is noticeable that for the 100 and the 1,000, some participants suggested that they should follow their elders, who called them *sentu* and *mili*, respectively. Actually, those words have Portuguese roots, as well as many others in Nheengatú.

In the afternoon of the fourth day, and during the next day, the group worked with pedagogical techniques for approaching the algorithms in elementary schools – the second demand presented by the teachers. At that moment, it was decided that the numbering system that was created would represent quantities, but the Índios would keep using the Indo-Arabic system for doing calculus. After that, the author had to continue the workshop, talking to the participants, considering that there was no certainty about what to do next. The situation leads us to some theoretical issues, which will be addressed below.

## 6. The dialogical perspective

A historical dilemma refers to a situation where two opposing forces are undeniably present and constantly maintain tension. This is clearly exemplified within the Indigenous communities' schools, where teachers instruct in Portuguese and Western

|   |  |             |    |  |                         |     |  |                               |
|---|--|-------------|----|--|-------------------------|-----|--|-------------------------------|
| 0 |  | Nemaã       | 10 |  | Mukūi<br>pu             | 30  |  | Musapiri<br>mukūi<br>pu       |
| 1 |  | Yepe        | 11 |  | Mukūi<br>pu yepe        | 40  |  | Irūdi<br>mukūi<br>pu          |
| 2 |  | Mukūi       | 12 |  | Mukūi<br>pu mukūi       | 50  |  | Pu<br>mukūi<br>pu             |
| 3 |  | Muisapiri   | 13 |  | Mukūi<br>pu musapiri    | 60  |  | Pu yepe<br>mukūi<br>pu        |
| 4 |  | Irūdi       | 14 |  | Mukūi<br>pu irūdi       | 70  |  | Pu<br>mukūi<br>mukūi<br>pu    |
| 5 |  | Pu          | 15 |  | Mukūi<br>pu pu          | 80  |  | Pu<br>musapiri<br>mukūi<br>pu |
| 6 |  | Pu yepe     | 16 |  | Mukūi<br>pu pu yepe     | 90  |  | Pu irūdi<br>mukūi<br>pu       |
| 7 |  | Pu mūkui    | 17 |  | Mukūi<br>pu pu mukūi    | 100 |  | Yepe<br>sētu                  |
| 8 |  | Pu musapiri | 18 |  | Mukūi<br>pu pu musapiri | 150 |  | Yepe<br>sētu<br>pu mukūi      |
| 9 |  | Pu irūdi    | 19 |  | Mukūi<br>pu pu irūdi    | 540 |  | Pu sētu<br>irūdi<br>mukūi pu  |
|   |  |             | 20 |  | Mukūi<br>mukūi<br>pu    |     |  |                               |

Figure 5.  
The chosen numbering system.

mathematics, effectively introducing external cultural elements. Furthermore, these communities maintain continuous contact with nearby cities for trade, healthcare, and media updates. While many community members are Christians, they also secretly maintain traditional beliefs, shielding them from the priests.

Navigating choices within these inherent oppositions is a daily reality for many Indigenous communities, and the mathematics workshop was no exception. It fostered a dialogue between cultures, represented by invited foreigners and Indigenous participants, and discussed two coexisting forms of mathematics: one related to the advancement of the Nheengatú language and the other derived from Western tradition, each serving different purposes.

One can say that that tension constituted the driving force of the Indigenous movement.<sup>10</sup> They could avoid or, at least, ease it if they decided to stay away from white culture and live with their traditional wisdom. In fact, it is estimated that there are still about 76 tribes in Brazil which have no contact with the so-called civilization,<sup>11</sup> four of them close to the Rio Negro region. Since the 1980s, the central government policy has been in favor of respecting the Indigenous decision and providing resources for contact, which could be requested by any tribe at any time.

Rather than isolating themselves, the Baré, Baniwa, and Warekena nations chose to confront the challenge of sustaining their culture while interacting with a white civilization that poses a long-term threat to their existence. This threat is clearly perceived when speaking with elders, who often express significant concerns about the cultural changes occurring in younger generations. One teacher's testimony also illustrates this dilemma. Her father was a French descendant, and her mother was Índia. She decided to embrace the Indigenous customs and learned Nheengatú while she was an adolescent. Nowadays, she lives in a village like the others, and her dream, she said, is to have electricity and a television in her house.

Reflecting on the overview of this narrative, three key points within the educational field can be highlighted. First is the utilization of the historical development of numeral systems as a didactic resource. Second, this resource was implemented through a dialogical approach. Third, the event prompts consideration of precisely what the participants learned throughout the activity.

The use of History and Philosophy of Science (HPS) as a didactic resource has been a significant matter of debate within science and mathematics education [11, 12]. Considering that textbooks represent the customary way of approaching the curricular disciplines, it seems clear that traditional science and mathematics teaching systematically ignore the contexts in which scientific thought has evolved. Maybe it would not be criticized if the general perception were that regular teaching was efficient enough in addressing social needs for science and mathematics education. However, conventional teaching has been widely criticized by scholars, who point to the undesirable consequences of decontextualizing science and mathematics from their historical foundations and from students' cultural perspectives (example.g., see [13–20]). This critique raises the question of why science has become so decontextualized in school settings.

Kuhn [21] presents some indications which can help us in dealing with this question. The Kuhnian ideas about the way science is organized in paradigms are well known, as well as the revolutionary evolution which results in new paradigms. According to him, once a paradigm largely prevails, the main purpose of scientific education becomes the introduction of the paradigm and its respective language to the new generations. In attending to this objective, scientific education enshrouds the history of science. Thus, it leads to the impression that all the thinkers in the past were contributing to the construction of modern concepts, as if science evolved as a continuous process, without any abrupt break with past predominant conceptions. From this perspective, because textbook authors supposedly must get straight to the modern way of interpreting nature, it would be a waste of time if they intended to explain how scientific ideas evolved. So, Kuhn argues:

*“For reasons that are both obvious and highly functional, science textbooks (...) refer only to that part of the work of past scientists that can easily be viewed as contributions to the statement and solution of the texts’ paradigm problems. (...) The depreciation of historical fact is deeply, and probably functionally, ingrained in the ideology of the scientific profession, the same profession that places the highest of all values upon details of other sorts” [21, 176].*

Latour [22] discusses the same process from a different point of view. According to him, inherent to scientific practice, as soon as a new concept is widely accepted, its

history becomes a black box; in other words, the story of this concept disappears from the scientific literature.

The omission of HPS instruction results in the transmission of scientific and mathematical knowledge within schools as being beyond question or conflict, potentially leading to the previously mentioned decontextualization. Kuhn suggests that the school system is eager to introduce the contemporaneous scientific language to the students, while Latour argues that, in scientific practice, the history of any concept loses its value as soon as everybody incorporates this concept. Both explanations illuminate the reactionary nature of conventional teaching, where the curriculum centers strictly on the description of scientific concepts and mathematical formal rules. However, this very formal approach to the disciplines can be identified as one of the elements that contribute to this description of students' feelings:

*Many of the students we interviewed were not only struck by the amount of rules and procedures they had to learn, but the meaningless nature of the content. Indeed, many of the student descriptions conveyed a sense of alienation from their work, which students variously described as strange, foreign, and weird [22, 385].*

If one can say that, for traditional teaching, the transmission of formal language used in scientific fields is at the center of pedagogical strategies, for constructivists, the main target would be the stimulation of the occurrence of conceptual changes in students' minds (e.g., see [23]). The two teaching perspectives differ radically in the sense that, while traditional teaching takes for granted that students can learn whatever the teacher explains in a reasonable fashion, the constructivists are aware of the fact that a conceptual change results from an internal and complex process that takes a long or short time depending on many individual factors. On the other hand, both perspectives share the idea that teachers have significant control over what the students learn. The dialogical perspective, a third alternative, postulates that what is learned in any teaching activity is not given beforehand.

Dialogicity requires openness to students' cultural and social needs. As a result, the teacher does not have control over how the debate evolves, but he/she is subject to exchanging his/her cultural baggage at any time. This is what Freire [24] means when he says: "In this manner, the educator is no more the only one that educates, but the one who, while educates, is educated himself/herself in a dialogue with the student which, while is been educated, also educates" [24, p.39].<sup>12</sup> In our case, the Índios opened the debate with a question that represented much more than a technical adjustment for their language. They were actually in a process of taking into their own hands the development of their own culture, establishing ways to deal with the white one, which represents both the historical pain inflicted upon them and something that could help in their search for survival with dignity in the challenging modern world.

In the workshop, the history of various numbering systems was used as an initial response to their question. This approach was deliberate, as these systems could offer valuable models for addressing the problem at hand. Additionally, exploring the contexts in which each system was developed expanded participants' understanding of White culture, highlighting it as a dynamic amalgamation of contributions from diverse peoples across different periods in history.

However, one can ask if this enlargement really occurred on the part of the Índios and, moreover, at what level they truly integrated the results of the experiment into their own culture. These questions could lead to further investigations; however, in a dialogical teaching perspective, we must consider that the teacher has no control over what will be achieved by the students – the Indigenous teachers in our case. The fertilization metaphor (Soares, 2009) may help to better understand this situation. A teacher acts like a gardener who fertilizes the soil, looking for some results, but with no control over what will happen to each individual plant.

Then one can wonder if, when we take this lack of control as something inevitable, we are avoiding the issues related to what is learned by the students. Far from it, the point is that we do not have control over what each person really learns while participating in an event. One may agree with researchers who argue that it is possible to administer questionnaires before and after an experiment and, on that basis, postulate the occurrence of a conceptual change in an individual. However, such an assessment would capture only a limited aspect of what the person has learned and may not reflect the most meaningful learning outcomes. Inspired by Roth and Lee (2002), one would argue that the knowledge generated by the dialogue was a collective achievement, and each participant appropriates this knowledge according to his/her personal previous experiences and his/her participation in the activity.

If the author were asked about something that impressed him while working, he would say it was the tension he perceived when he had to decide what to do after approaching the numbering system's issue and the strategies for working with the arithmetical operations. In previous experiences with indigenous teachers in his own state, he learned that the teachers would like to know mathematics to the point that they could teach in any regular school, regardless of whether it was for indigenous students or not. Furthermore, they would like to know the same mathematics that was taught at the university for regular undergraduates.

Nevertheless, the situation was different between Minas Gerais and Amazonas state. First, the indigenous populations in the latter are much closer to the regular cities when compared to most of the indigenous populations in Amazonas, which live closer to the wild. Besides, the course that was, and still is, offered by the university in which he was working did not have this dialogical perspective. In Minas Gerais, the course is a formal one, and nowadays it is recognized like any other graduation course.

The decision about what was important to know about white culture was not his, for sure, but he had to decide what part of the mathematical teaching should be offered in the workshop from that point onward. Without any other reference, he decided to introduce the activities he had in his baggage and let the fellow teachers do whatever they wanted.

## **7. Novelties introduced in the workshop**

The workshop continued with the introduction of an exploration in geometry themed around the honey bees' alveolus shape, which included a study of regular polygons and the use of the protractor. This was followed by work on area and perimeter measurements, explored with the help of Tangram puzzle pieces, and, after that, an exploration of numbers' multiples and divisors. The indigenous

teachers did not say anything that could be taken as an evaluation of what had been proposed. They simply did what they were told, patiently and very self-centered. While performing any individual task, whether it was an easy or difficult one, every single one of them called the author's attention to his or her own notebook. He was already accustomed to those characteristics, which they shared with other Indigenous teachers, such as those from his own state. Because of those similarities, he avoided suggesting any opportunity for painting something; if he did, he imagined, they would take hours painting – they love to paint.

After three days of introducing new ideas, the author was eager to learn how the participants were evaluating the proposals. He, therefore, paused the workshop and asked whether it still made sense in light of their real professional needs. The participants responded that everything they were learning would be very helpful in their teaching. Some of them added that, with the use of these new tools, they hoped their students would no longer skip mathematics classes. This candid remark was received warmly; the group had a moment of loud laughter.

Then the author became confident that their professional relationship was going well, just as he perceived our informal interactions. At night, while most of the Indigenous teachers gathered inside the *maloca* to play and talk, they invited him many times to join them, which gave him the opportunity to learn a bit about their faith and lifestyle. A woman told him, for instance, that there is a being that lives near the rivers, and its body is like fire, full of light. Once, her brother-in-law was fishing at night when that being appeared. The Índio man tried to illuminate the being with his electric light, which he should not have done, as the being turned toward him and started running in his direction. Fortunately, the Índio man was able to drive his canoe faster than the being and reach his house safely. That was not the only story the Indigenous teachers told him. While telling those stories, they seemed very serious and were explicitly aware of the fact that those stories were part of their culture and were contrary to their Christian beliefs.

## **8. Conclusion**

The workshop concluded with the presentation of the final version of the numbering system by the group that developed it. From the dialogical perspective discussed here, whether or not the Índios integrated this numbering system into their culture is not the most significant outcome of the workshop. The adoption of a single numbering system by Nheengatú speakers depends on further political developments. The Indigenous teachers learned that they had tools and power, which allowed them to create some systems; they are now able to create another one if needed, and that is what matters the most.

The extent to which participants broadened their perceptions of foreign cultures was beyond our control. They acted within the limits of the historical conditions available to them; thus, individuals may draw on educational experiences in different ways according to their own personal circumstances.

In the end, the teachers organized a goodbye party where they read poems, sang, and danced. They performed some traditional dances, among them one called *Puraki* (Figure 6). That is how the author discovered the meaning of this word, which should be used in cases of chaotic behavior in the classroom. *Puraki* is the Amazonian electric fish. In the dance, several men carried a big bamboo with multiple holes.



**Figure 6.**  
*The Puraki dance.*

Each man kept blowing into one bamboo hole while the group walked in coordination toward several women. The women pretended they were washing clothes in an imaginary river. When the men got very close to them, they shouted loudly: *Puraki*. Then all the women fell because of the electrical shock they got from the *Puraki*. Everybody laughed, the women went to the other side of the field, and the dance restarted.

Back in São Gabriel, the author was hosted for one night in a Salesian house. There, he met an old priest who had been working with Indigenous communities all over the Rio Negro region for a long time. Among other illnesses, he had contracted dengue once and malaria several times. Despite this, the elderly man appeared peaceful and content, and he shared some of his stories. There was another Salesian too, a young man who had arrived in São Gabriel a few months earlier from a big southeastern city. The young priest was complaining, saying that the Índios were lazy and did not understand his message while he was telling them what they should do. The old priest laughed and told the young one that he should pay more attention to Indigenous culture and accept it. Then one might have thought that they were discussing ways to deal with the tensions that surround everyone who intends to work with Indigenous people.

The next day, on the airplane, because there was no boarding service, a man offered the author some fruit, and they started to talk. He was a factory owner and a very rich person. Then another guy moved closer to them and approached him, saying that he was happy to meet this very successful businessman. They started to talk, and the factory owner said that he was looking for a 300,000 m<sup>2</sup> plot of land close to Manaus in order to build a brand-new motorcycle factory. Actually, he was having problems finding that land, either because the available ones were expensive or because the rest of the lands were protected by environmental policies and regulations. The other guy told him that it would not be a problem if they worked together. He knew important people in Manaus and could easily resolve the situation by paying for the availability of those protected lands.

In 2025, while the author was working on this chapter, he was riding a bus in Chile and overheard a conversation between two Brazilian military personnel seated behind him. One of them told the other that he had lived for two years in São Gabriel da Cachoeira while working for the army. He made disparaging remarks about the Indigenous peoples, claiming that they were lazy and merely taking advantage of the

national government. Moreover, since 2024, many politicians have sought to dismantle Indigenous land rights that took so long to be recognized and regulated.

Those are remarkable examples of how most of the Brazilian white elites and military view the Indigenous communities. Moreover, it indicates how fragile the laws are and how the Indigenous organizations need to be empowered.

## **Acknowledgments**

Special thanks to Cissa Nunes Soares for her help in improving the text.

## **Notes**

1. In Brazil, most indigenous people call themselves Índios; the word means Indians. In modern Brazilian Portuguese, the word “Indianos” means Indians. The author personally thinks that we should reject the designation Índio, which was given to aboriginals by European explorers for historical reasons. However, we will keep this denomination only because the indigenous themselves still have not chosen another one.
2. It is pronounced neen-gah-TOO. The modern spelling is nheeëgatu.
3. It is estimated that the Portuguese encountered about 700 spoken languages in Brazil. The estimate was mentioned in a New York Times report in 2005: “Language Born of Colonialism Thrives Again in Amazon,” by Larry Rohter, available at: [www.nytimes.com/2005/08/28/international/americas/28amazon.html?pagewanted=1](http://www.nytimes.com/2005/08/28/international/americas/28amazon.html?pagewanted=1).  
In Cruz [9], the estimate goes up to 1,175 languages.
4. See: [www.etnolinguistica.org/lingua:werekena](http://www.etnolinguistica.org/lingua:werekena) and [www.etnolinguistica.org/lingua:Nheengatú](http://www.etnolinguistica.org/lingua:Nheengatú)
5. FOIRN means Federação das Organizações Indígenas do Rio Negro (Federation of the Indigenous Organizations of Rio Negro).
6. The journalist is Larry Rohter, and the report is available at: [www.nytimes.com/2005/08/28/international/americas/28amazon.html?pagewanted=1](http://www.nytimes.com/2005/08/28/international/americas/28amazon.html?pagewanted=1)
7. In their conversations, the Indigenous teachers conveyed the impression that they categorize people into two broad groups: the Indigenous and the Whites. This perspective prompted an exploration of the concept of “White culture,” highlighting it as a cultural construct shaped by contributions from many diverse peoples.
8. The name indicates approximately lands perpetually under the command of somebody and their heirs.

9. The author is aware of the fact that the systems he used were actually versions among others that were used by ancient cultures. However, in his opinion, this detail was not important for the purposes of the activity.
10. For a better understanding of “tensions as driving force of social movement,” consult [25].
11. See: <http://tapecuim.blogspot.com/2010/11/tem-mais-de-70-grupos-indigenas.html>
12. Free translation: The original phrase is: Desta maneira, o educador já não é o que apenas educa, mas o que, enquanto educa, é educado, em diálogo com o educando que, ao ser educado, também educa.

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## Chapter 9

# A Weaving of Knowledges to Stand on Their Own: Assessing the Braiding of Indigenous Knowledge in Western Academia in Twenty-First Century Reconciliation Canada

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### Abstract

Academia is undoubtedly a colonial space. Understanding the foundations of how academia operates and thrives as a colonizing entity that suppresses or alters Indigenous epistemologies is crucial before institutions can fully grasp decolonization and work with and for indigenous peoples and their lands. Current Canadian trends in reconciliation aim to support the voices and knowledges of indigenous peoples through the Calls to Action of the Truth and Reconciliation Commission of Canada, thus guiding the Indigenization strategies of many universities, including the U15 Canadian Research institutions. This chapter embraces indigenous orality practices and integrates roundtable discussions to examine the concept and practice of “braiding knowledge.” We stress questions relating to what collaboration with and for indigenous peoples looks and feels like. Braiding knowledge cannot become another buzzword driving the momentum of indigenous research in colonial institutions; we reflect critically on whether this work is possible or if it merely repeats harmful appropriation by cherry-picking Indigenous knowledge.

**Keywords:** indigenous ways of knowing, braiding knowledges, true collaboration, reconciliation, Canada, indigenization, decolonization

***We are constellations***

*There's a battle ahead,  
but we've had instructions for how to survive  
buried within us marrow deep.  
We are here – tip of the spear,  
armed with sacred knowledge.  
For our ancestors laid out instructions  
among the stars for how to love fiercely.*

*We are constellations,  
embodied representations  
of what it takes to heal this world.  
The powers that be have always tried to break us  
by threatening our existence,  
taking our children,  
sterilizing our women,  
removing us from our homelands,  
creating an epidemic  
where our people go missing and murdered.*

*They have always tried to steal  
what we were born to protect:  
our lifeways, languages,  
prayers, culture, relatives,  
and songs. The very land  
each human being walks on.*

*We stand here together  
with moccasins on the ground.  
Braiding ourselves together like sweetgrass,  
three strands: freedom, justice, and healing.  
These are our demands.  
No one is free until we're all free.*

*The actions we take now  
are making medicine bundles  
for future generations to find.  
We are tip of the spear –  
aligned, shooting precise,  
and straight into a future  
where our Mother Earth and all her inhabitants  
are treated as the sacred.*

*– Tanaya Winder*

## **1. Introduction**

Robin Wall Kimmerer is a Potawatomi botanist best known for developing the idea of braiding knowledge and how each braid strand is strengthened by many strands being woven together [1, p. x]. Therefore, Braiding Knowledges is

a relational framework that weaves together Indigenous and Western knowledge systems, which is a purposeful action since each braided strand (knowledge system) is strengthened by being brought together. Using two knowledge systems is not a new framework. For instance, Etuaptmumk, or the Two-Eyed Seeing approach developed by Mi'kmaw Elder Albert Marshall of the Eskasoni First Nation, brings together Indigenous and Western worldviews for decision-making. Elder Marshall stated that Two-Eyed Seeing is the ability "to see from one eye with the strengths of Indigenous ways of knowing, and to see from the other eye with the strengths of Western ways of knowing, and to use both of these eyes together" [2, p. 335]. Another example that utilizes two different knowledge systems is the concept of the Kaswenta, or Two-Row Wampum treaty, where the two systems operate in parallel with each other in a peaceful coexistence. The Kaswenta teachings encourage researchers and communities to work through their diversities and to establish mutual respect, trust, and finding common ground [3, pp. 1–2]. Braiding is significant in our time and place as it leads many university initiatives. We begin this chapter by situating ourselves in relation to one another and to the communities, lands, waterways, and responsibilities that shape our collective work.

Máykʰ, Tân'si. Our collective authorship as community and academic authors reflects our commitment to relational accountability and honoring Indigenous Knowledges and voices. Affirming Indigenous protocols, we acknowledge the ancestral and traditional territories of the Indigenous Nations where we live, work, gather, and carry out our scholarship. This chapter was written collectively on the territories of Nêhiyaw (Cree), Niitsitapi (Blackfoot), Métis, Nakoda (Stoney), Dene, Haudenosaunee (Iroquois), and Anishinaabe (Ojibway/Saulteaux) – lands that are now known as parts of Treaties 6, 7, and 8, as well as the homeland of the Métis, the traditional homelands of the Cui Ui Ticutta (Pyramid Lake Paiute), and on the traditional, ancestral, and unceded lands of the K'wík'wəłəm (Kwkwetlem), Səlil'wətaʔ (Tsleil-Waututh), Sk̓w̓xwú7mesh Úxwumixw (Squamish), X'wəłk'wəyəm (Musqueam), scəwəθən (Tsawwassen), and Coast Salish Peoples. As we write in a virtual space, it is critical that we take intentional actions to advance reconciliation and indigenize our online environment by acknowledging the relationships with Indigenous peoples and the communities where our connections and responsibilities lie.

By acknowledging relationships, we can understand how indigenous knowledge can be shared throughout generations and with other communities. Wâhkômiwêw, *how he/she relates to others through the ties of kinship*, emphasizes what it means to be connected to place, individuals, and communities. This is particularly important to understand how Indigenous and nonindigenous peoples can come together to collaborate in academic spaces, but also how wâhkôhtowin, *being related to each other*, through miyo-wîcihiwêwin, *good relations*, can build knowledge outside of our own peripheries. We introduce ourselves in the direction of the sun (clockwise), but you will notice how relations extend through a commonality of one individual.

Dr Natahnee Winder is a citizen of the Duckwater Shoshone Nation. On her mother's side, she is Pyramid Lake Paiute and Shoshone, and on her father's side, she is Navajo and Southern Ute. She grew up on the Southern Ute reservation. Dr Winder is an Assistant Professor at Simon Fraser University in British Columbia and completed her PhD at The University of Western Ontario (UWO). Samantha Dancey grew up along the border of Treaty 6 and Treaty 7 and is a settler with Ukrainian and Northwestern European ancestry. She has a background in molecular

biology and is currently completing an MA in Sociology at the University of Alberta (U of A) under the supervision of Dr. Paulina Johnson. Darian McCullough comes from Coast Salish territory on the west coast of British Columbia. Her mother is Métis, and her father is Irish and French Canadian. She is the Blue Sky Research Lab's (BSRL) Research Coordinator. Dr. Patsy Steinhauer is from Saddle Lake Cree Nation and is a faculty member in the Faculty of Education at the U of A. Senyuan Chen comes from Quan Zhou, a southeastern city in China's Fujian province. He is Han Chinese and is also completing an MA in Sociology under the supervision of Dr. Paulina Johnson. Dr. Noella Steinhauer is the elder sister of Dr. Patsy Steinhauer, a retired faculty member from the Faculty of Education at the U of A, and a member of Saddle Lake Cree Nation. Dr. Paulina Johnson is from Samson Cree Nation in Maskwacis, Alberta. Samson Cree Nation is a sister-nation to Saddle Lake Cree Nation. She is an Assistant Professor in Sociology at the U of A and Co-Research Director of Braiding Knowledges Canada (BKC). Dr. Johnson directs the BSRL at the U of A and completed her PhD at UWO. Tanaya Winder is Dr. Natahnee Winder's sister, a citizen of the Duckwater Shoshone Nation, and is Pyramid Lake Paiute, Navajo, and Southern Ute. Marieliv Flores Villalobos is from Trujillo, Peru – a city in northern Peru. Marieliv is mestiza (of Indigenous and Spanish ancestry) and is currently a PhD student in Public Health at the U of A, working with Dr. Johnson and Dr. Denise Spitzer. Paul Johnson is from Samson Cree Nation and is Dr. Paulina Johnson's father. Dr. Diana Moreiras Reynaga is a Postdoctoral Fellow at the U of A. Originally from Mexico, she is mestiza and trained in anthropology and archeology. She met Dr. Johnson in graduate school at UWO. Kimberly Bruno is a research assistant at the U of A, a cousin and best friend of Dr. Johnson, and a citizen of Samson Cree Nation. She was raised in the Mountain Cree Camp near Hinton, Alberta. As is evident in our introduction above, our connections extend through relationships with Dr. Paulina Johnson from her time at UWO up to the present day through research relationships at the U of A. Relationships are fundamental to reconciliation in academia, and we emphasize these connections here to show the importance of community.

Currently, in Canada, specific mandates through the Truth and Reconciliation Commission's (TRC) release of the 94 Calls to Action highlight an openness among universities to incorporate Indigenous ways of knowing into their structures and foundations for reconciliatory initiatives. Though great in theory, in practice, this reality often falls short. As scholars working within Indigenous methods and research, we came together to address the role of reconciliation through the current concept of "braiding knowledges". Rather than write an article addressing the tensions and benefits, we believe that an open and honest dialogue would be beneficial for all parties involved. And so, our conversations led us to ask: *Can Indigenous Knowledges be truly braided within Western academic institutions without being diminished, appropriated, or extracted?* This chapter details our examination of the academy as a colonial space and how Indigenous Knowledges can be ethically and authentically braided within Western academic frameworks, or whether such efforts risk reproducing the colonial hierarchies they seek to unsettle and transform. We were engaged with this topic through a roundtable discussion and focused on six main questions between community and academic scholars, along with opening and concluding poetry for reflection.

## 2. The meaning of braiding knowledges

Braiding Knowledges cannot shift away from or dilute the impacts of ongoing settler colonialism and assimilation efforts imposed on indigenous peoples. Therefore, researchers must be careful when framing Braiding Knowledges as “integrating” knowledge systems, and the word “integration” should be avoided [4, p. 245]. When Indigenous and Western knowledges are “integrated,” it erases the ongoing settler colonialism, racism, and assimilation that Indigenous Peoples experience. It must be firmly understood that Indigenous Peoples received unique instructions from their Creator to steward the land and water ways in their respective territories, which leads us to our first question: ***What does Braiding Knowledges mean to you?***

**Paulina:** I am one of the Co-Research Directors of Braiding BKC, which works to bring together Indigenous Knowledge within the Natural and Applied Sciences. It allows Indigenous Knowledges and Ways of Knowing to expand biology, botany, engineering, and similar fields in the sciences, enabling the exploration of different foundational worldviews, and that is what it is supposed to be. Braiding Knowledges means not forcing these two different theoretical and philosophical dichotomies together; it is about allowing Indigenous Knowledge to come to the forefront of academia. For the longest time, Indigenous Knowledges have been sidelined, marginalized, and kept as alternatives. Braiding Knowledges means that you are working together to support Indigenous Knowledge in being seen as critical. It is informative and allows the voices of Indigenous People to be seen, heard, and valued. One of the biggest misconceptions is that we can properly bridge Indigenous Knowledges into a colonial system that’s not designed for us. Braiding Knowledges must examine all the intersections of racism, sexism, discrimination, and socioeconomic conditions that are related to colonization. This is fundamental in this work before we can integrate Indigenous worldviews into a system that upholds whiteness, oppression, and dominance. Braiding Knowledges is about allowing community members, who may not have Bachelor’s degrees or PhDs, to stand as authorities, ***because without community knowledge, we do not have research.***

**Natahnee:** Indigenous Knowledge Keepers’ perspectives and teachings are at the forefront. It’s about recognizing that our Knowledge Keepers have PhDs. It may not be in a Western sense, like ivory tower education, but they already have PhDs. For individuals who are in academia, we do not have their knowledge. Universities really need to recognize and privilege Indigenous epistemologies. I think universities that truly want to understand Indigenous Knowledges need to create positions or communities of practice for Elders/Knowledge Keepers to come in and teach; they don’t need to have a university degree because they are already teachers within our own communities.

**Samantha:** I find that there’s a lot of inconsistency with how it’s used. Braiding is often used interchangeably with weaving. Two-Eyed Seeing includes both Indigenous and Western perspectives, but Braiding introduces a third strand. BKC has a model that uses ethical space as the third strand to acknowledge the colonial history and positions of power in the context in which both systems exist. As someone who comes from a Western science background in biology, I never learned about Indigenous ways of knowing. The idea of Braiding provides a way for people with an education like mine to grasp why incorporating Indigenous Knowledges is important.

**Tanaya:** When I think of Braiding Knowledges, as a community-based artist and musician, I try to weave my Indigenous practices and culture into how I teach poetry and make music. I think of that word "braiding." Those of us with long hair who know how to braid understand that you need three strands that are about the same thickness and width. If you're braiding in a rush and one strand is thick while the other two are not, then you are not going to have a nice-looking braid. I think that whatever Knowledges we are braiding, we must make sure to give all those subjects, people, or groups equity and equal space, equal opportunity, and equal value – making sure it is equitable so it's a strong braid. ***Braiding with intention.*** If you have ever tried to braid your hair really fast or sometimes too loosely, that braid can come apart. Braiding Knowledges means having that intention and awareness about what you're braiding and why. Because all that energy and medicine go into things. Whether you are braiding sweetgrass or your hair, everything has a purpose. Everything can be a ceremony. Sometimes Western academia or the Western world forgets to have intention and slow down. In the same way, when we are together, and do our introductions and share – that is part of laying that strong foundation. Knowledge has been a weaponized word before, where only certain people hold "worthy" knowledge. Braiding Knowledges means starting from that place of grounding and clarity, holding ceremony, holding prayer, to intentionally weave together different things with purpose, where we are building together.

**Marieliv:** When I first came here from Peru, I started hearing about Braiding Knowledge and learning more about Indigenous Knowledges. I thought at first that it was a set of different knowledges that you could put together. As I got more involved in the culture and in ceremony, thanks to Dr. Johnson and her family, I reflected more on the intention of Braiding Knowledge per se, and how I am situated within it. Braiding Knowledge means taking the moment to really understand what I am doing, how I am doing it, and why I am doing it. I can get moments of being uncomfortable, or realize it is better to be quiet and learn more. I've come to understand that we cannot just bring two different systems – Western and Indigenous – together and claim we are doing something together from that, because we are literally speaking two different languages, right? It means taking the moment to think about the intention and recognizing the limits of what I can understand for now.

**Patsy:** Braiding Knowledges in Nêhiyaw thinking speaks about the process and the ethics driven by the reality of interconnection and holism that are present in our ontological descriptions. It is a three-part process that is in our language and is a responsibility to understand the word. We framed it within the idea of tamowin, in that three-part concept of nisitohtamowin, *which means to understand or to come to that understanding*. To come to that understanding, your mind, body, and spirit must be present and synchronously engaged. Braiding Knowledges is about what a good friend of mine, Manulani Meyer, talks about holographic epistemology. The concept of mind, body, and spirit is present in all ancient cultures, shaping our ongoing understanding. She explains that the intellectual aspect – the knowledge – is usually where we focus. Knowledge relates to intellect, or the mind, as it involves knowing and understanding. When we examine this from an intellectual perspective, it is about the mind grasping knowledge. However, as we engage with this knowledge, we begin to experience and internalize it.

Lakota Elder scholar uncle Lionel Kanua said our body will run through our DNA, and it takes time for it to be in our blood memory. This is ancestral knowing, and then it links with that spirit or the notion of understanding. I'll draw upon my uncle Reuben

Quinn in his book to emphasize our Cree law structure, where he talks about the first four laws. Loving is the first law, and it is intentional to love each other – not the notion or law of love like *sâkihitowin*. It's more like *sâkihiwêw*, *to be loving to each other*, and then there is *sâkihitowak*, *to love **one** another*. *Wîcihtâtok*, *to help each other*, is the second law, followed by being joyful and then being strong. Those first four laws demonstrate the processing that is required for us to live it in that human body.

This means that the DNA within us changes as we learn within those laws, but it is also carried within us unknowingly. This means that, for us to understand, we must learn in an experiential way, connecting our mind, body, and spirit, which then builds upon the knowledge our DNA carries through blood memory for our spirit and selves to fully understand.

Our elders often speak about this notion of working through the three-part process rigorously. It's guiding us on how we are to think about things or reflect deeply, to arrive at an understanding or a process. Braiding Knowledges delves deeply into a philosophical Indigenous thought reality, honoring its holism. It's about respecting simultaneous, synchronous reality and honoring our whole selves as we engage in thought – mind, body, and spirit –to attain knowledge, knowing, and understanding.

**Senyuan:** I think about Braiding Knowledges as something that is crucial on paper but very delicate in practice. I think academia is still a colonial institution; it is still able to choose and define what is knowledge, as well as how that knowledge is used. I think of buzzwords or cherry-picking as examples of this. I worry about what these outcomes mean for research – specifically, whether or not ideas will be reproduced. It swings both ways, right? Research can both reproduce narratives but, at the same time, redefine and/or challenge them. Braiding Knowledges is critical, but it is always important to reflect back on positionality and the consequences, both positive and negative, on the research that is done and why it was conducted.

**Noella:** *Nisitohtamowin*, as Patsy said, the key to the root word is three, and much like the scientific method, it has three parts. If someone asks you, “do you understand?” They will say it constructively, especially when you are a child or if you are learning how to do something. It always involves observing something – that is the one part—then practicing it repeatedly until you know. Almost like that hypothesis at the end of the scientific method, our way of understanding and our knowledge system is understanding the equity that is embedded in those braids and all those knowledges. We must be mindful of the fact – and I am not going to say a whole lot more—that they are all equal in their power, and they can stand individually because each of them has its own epistemological kind of framing. We say things are equitable, but are they really?

I think that is one of the key things that people have to remember: Our knowledge has sustained us on this land, and we thrived. To say our knowledge is not as good or equal is not a good thing. And the Academy has been very good at saying one knowledge is better than the other. Over the years, we have had to start challenging the institution and the Academy itself, which is such a big thing. I remember Patsy said, “I’m tired.” Well, she is tired, and I am tired. We have been at this whole idea of talking about Indigenous Knowledge since we were graduate students in the late 1997–98 period. In those times, when we were talking about things like this, people laughed at us – even some of our own people – but we were always trying to legitimize the importance of recognizing how valuable our knowledge systems are. I like the idea of braiding because it denotes, as someone or a few of you have said,

that equity is embedded in the framing of it or in the thinking of it. And if you braid too fast, as Tanaya said, well, you are not going to have a pretty good-looking braid. **Our goal always is to make sure all of them are equal.**

**Paul:** I understand that it is integral to have our knowledge interwoven into other perspectives. At the same time, dealing with being in Western Canada, and ultimately Alberta, is volatile, and we are in a volatile time. We are sharing our knowledge, but who is it really serving? Is it serving us Indigenous people in Canada, or is it ultimately going to go to some institution that does not really care about what they have? That is why we must be cautious about it. It is great that we are filling the gaps of knowledge that are not there and are lacking in Western knowledge. Our Indigenous culture has not been seriously taken into account, even though we have lived on this continent for millennia. Why hasn't everybody, even Western scientists, acknowledged that North America was not a barren land that nobody inhabited, when everybody else in the world was inhabiting parts of their continents? That is a naive way of thinking. We have been here, and we must always prove that we existed before anybody else. There was no barren land mass that we crossed in Alaska. We are always having to prove who we are, how we are valuable to the land, and how we lived off the land within the hostilities and the beauty. And historically, if it was not for the Indigenous peoples in Canada, settlers would not have survived their first winter.

We need to be cautious about how much information we give out on Indigenous aspects because sometimes it could be used against us. We have seen this many times, especially right now with treaties not being understood as historic and binding. We will not rewrite the treaties for the sake of those who are ignorant or to serve the separatist's ideas in Alberta. Can Canadian Western academia evolve? I do not know, but are we dream scaping? Like Senyuan says, they pick and choose what is true knowledge, and like Noella said, they laughed at her. Laughter is the first reaction of fear, and *they fear us*. That is the part where I think they begin to learn about who we truly are in respect to our knowledge that has existed just as long, if not longer, than theirs. It creates fear because everything they thought they knew could be wrong.

**Kim:** Braiding Knowledges is a great way of moving forward with understanding our land and climate change, and focusing on issues that impact our day-to-day living and our future. It involves bringing Indigenous Knowledges and Western science together to understand Mother Earth and how to heal it. Having respect and understanding for each other's Knowledges, intertwining them, and building a bond.

Cultivating a space for mutual understanding of Indigenous and Western Knowledges has been an ongoing conversation since the late 1990s. Many Indigenous scholars and Community Knowledge Keepers have pushed upstream to have their voices heard and for Indigenous Knowledges to be mutually respected, demonstrating that it is as rigorous as Western knowledge. Scholars like Noella and Patsy have pushed open the door for the next generation of scholars to pick up the next journey of paddling the currents in the academy to weave Indigenous and Western Knowledges together. Weaving these Knowledges to combat climate change and gain a deeper holistic understanding to advance reconciliation efforts is both needed and necessary. It is important to proceed with caution, as stated by Elder Paul Johnson, and to be vigilant about what is shared and what is the intention. This leads us into the next discussion question: *“What does true collaboration with and for indigenous peoples look and feel like?”*

### 3. Collaboration with and for indigenous peoples

To begin our conversation, we turn to the community authors with the intention to honor and privilege their voices:

**Noella:** We have always had to fight for our space. I think true collaboration is an understanding of how people view collaboration. When you collaborate with the First Nations people, the engagement is thoughtful and meaningful. People think collaboration with us is the land acknowledgment, an elder to say a prayer, and some dancers; then the indigenous peoples have to go. Was that a collaboration? That is unfortunately what some people think collaboration is: let's invite some people over to do this, or let's feed them.

Understanding what collaboration means, giving people the time and the space – the actual, real space – to engage. When I was in Ontario, I asked a person, “How many people did you collaborate with?” She said, “Oh, over 50”. I said, “Did you have a meeting?” She said, “No, I just phoned them, and I told them what I was doing.” I said, “Oh, what kind of feedback did you get?” to which she replied, “No, I just told them what I was doing.” For her, that was collaboration. There must be common ground for us and some understanding, because we are not going to push our way. If people really do have a desire to engage in meaningful collaboration, we have to define for both sides what is meant by collaboration. It does not mean doing a land acknowledgment. People think it is such a big deal. My aunt said, “Someone told me, we'd like to invite you to come do this and do the land acknowledgment.” She said, “I'll do the first part of the first thing you asked me to do, but I'm not going to do the land acknowledgment.” They could not understand why, and she did not explain to them. I thought, “good for you!” If they get that a few times, maybe they will figure it out, because they probably have already heard how irrelevant land acknowledgments are. It needs to be meaningful, and people need to understand what both sides actually mean.

**Paul:** I concur with Noella. We always have to be cautious of what someone is really asking; we have to ask, what is the end game? You must always be cognizant of what information is shared and how it is going to be used – used against us or for us? That is the question I always ask. They shower you with gifts and money and whatnot, or the biggest one is they give you tobacco. They do not really understand what they are offering or asking. Usually, when giving a person some tobacco, you are asking for a prayer and knowledge transfer. But if the elder has already spoken, already done the prayer, what are you really asking of me with that tobacco offering? So, everything comes with a question. I come from an economic development background, and a lot of companies – oil companies specifically in Alberta – the first thing they bring is tobacco and gifts, but there is always a hidden agenda in what they are really asking for. They are not really asking to work with us; they are working for compliance, and that is the part we need to work on. We are not compliant. We will work with you, not for you, and they must also respect us, and that is the braiding part.

**Tanaya:** Thank you, Paul and Noella. I love being a part of panels where I am learning too. I feel like a lot of people ask me to collaborate on different things, and I was not even thinking: what is the end goal? I just jump in because that is how we are raised. You go do those dishes – I will help. Go take out the trash – I will help. So, I am loving that I am learning on this panel that it is okay to slow down, take a breath, and ask those questions. It is okay to ask those who want to be in partnership with us: what

does a healthy relationship look like to you? Healthy collaboration means leaning into consent. It is pausing and asking: what does collaboration mean to you? What is the end goal? Because I might have something different in mind than my collaborators. It is important to make sure values align with the people that you are collaborating with. If not, that is where a lot of disagreements happen. It is important to establish what those values mean and live with them in practice. It is also good to think about inevitable conflicts that will happen – we are humans, there's going to be misunderstandings, there's going to be arguments. Let's talk through what we are going to do if a rupture happens. How are we going to repair it? Who do we want to call in and have those conversations with? It is really planning for all of those things and making sure everybody does feel valued; everybody does have that voice. The people we are collaborating with need to know: you are not just collaborating with me, you are collaborating with my family and with my nation.

**Natahnee:** When I work with a group of people, I go in with the best intentions – a good heart, mind, body, and spirit – while simply asking, “What can you commit to this project?” And, understanding how am I going to compensate people for their time and effort in contributing? I think a lot of people continue to ask indigenous peoples to contribute, but they do not really try to create that relationship at the beginning, nor do they try to maintain that relationship going forward. It is about making sure that the community and whoever you are working with are always involved in every single step of the project. You do not ever want to misinterpret or do something in a bad way, and I think that is what a collaboration is – an ongoing relationship process to ensure you did it well and that it was a true collaboration. If they do not want to work with you again in the future, then you know you did not do it the right way and that you were not forthcoming about what you wanted or those outputs. Also, for true collaboration, I think when you finish a project, if the community asks you not to use a transcript or asks to just keep it for the community, you respect that. It is understanding that sometimes things might just have to stop or go into hibernation for a while, and then you can pick it up later.

**Paulina:** Sometimes academia is so fixated on having a result or something tangible, but what happens when the community says, “We don't want to share this,” or “This is no longer on the table.” Then, in academia, if you do not have anything to share, it is seen as though you have not done that work. True collaboration is having indigenous peoples in academia but also seeing them in the community and understanding what work is entailed. We have been really trying to advocate for this with ceremony, or even the preparation of going into the community – that is work, that is labor. Also, when you are working with a community, what happens when an Elder or a community member passes away? There is an emotional toll on you. We are told that if we rest, as academics, we are not doing anything productive. If we are going to have a true collaboration with indigenous peoples, it is also about understanding the foundations and the worldview of those peoples and not expecting those worldviews to fit into this box that academia kind of puts us in.

The realistic aspect when you are doing work is to have a community with you. Often, the best people who are going to have your back are your relatives or individuals who know what you are doing. They see it from both sides – they see the hardships that you are up against in academia, but then they also see the hardships you are facing personally, spiritually, and emotionally. If academia could gain an understanding of that, it would be so much easier. If they are going to bring

indigenous peoples into these institutions, they should have the proper support in place.

True collaboration means not only the academics you bring in, but also the community who is there and that you are honoring them in the way that they are founded, rooted, and grounded. If we are going to Braid Knowledges with Indigenous communities, we must examine the impacts of colonization, racism, and the power imbalances. We are here to work as a collective—that is what we do best. We are working for reconciliation. You cannot have reconciliation without truth. So, the truth of the matter is the violence, the dehumanization, and the injustice that occur, and if you cannot acknowledge that, you have basically tokenized us from the beginning.

Universities must not only have an Indigenization Plan but also demonstrate the actual movement forward in what they are aiming for. If a researcher oversteps or does not do things right within the community, I think that they should be gone immediately. I know that is cutthroat, but for so many times with indigenous peoples, if we overstep or mess up, we are blamed, and then we are basically gotten rid of. Yet, if a nonIndigenous person does the same, they're like, "Oh, well, they didn't know any better." They knew better. They just did not care. So, it is that double standard and the differing expectations placed on indigenous peoples versus nonindigenous individuals that need to be addressed in academia.

**Mariveliv:** It also requires a personal decision. It was about understanding that academia has this idea that we have to own the truth, that they have to own knowledge. Working through collaboration means that ownership is not real, right? That is not necessarily something that needs to happen. Understanding my position as an outsider, but also as a person who benefits from the colonial project, means that sometimes I need to be silent and let others talk. In Spanish, I would say: *trabajar la tierra para otros*; work the land so others come and plant the seeds, and you can see the flowers and all the colors on it. Understanding my limit as a person who is working in academia, I am not from the Indigenous community, but I am here, and I do my best to contribute to this work.

**Patsy:** I think true collaboration is moving from this notion of uninformed, superficial engagement to the sacred, because it is there where that ethical reality is respected. We can call it Ceremony, but for the purposes here, I am just going to say sacred. I think in that superficial context, there are these rules about how the notion of Western collaboration is applied to, for, and with indigenous peoples. It really approaches it with a compliant attitude or consciousness. We are looking for that approach of bringing it back to the dominant compliant context. The sacred kind of reality is about preparation and sometimes involves protocol. These notions become very superficial because they are not really understood in terms of the sacredness of what we are responsible for and serving.

The province was giving \$150,000 grants to schools to collaborate with the First Nations, Métis, and Inuit communities. It was quite open and broad. I was at a Nation. A city school showed up with one of the collaboration grants and had the whole process set out. This is how the collaboration was going to go: they were going to come in; they were going to get 10 songs from the community. Of those 10 songs, they were going to share them with the children back in their district so that the children would know those traditions, and they were doing their part in keeping the knowledge alive. There was a big disconnect; a big overstep of protocol was overlooked, and all the preparation was done one-sided. We need to have standards

that are very explicit for people to know that true collaboration is about knowing what you are saying and listening to what it is. Those ethical, spiritual, and sacred principles must be followed. In that meeting, when they were told by the community, “You’ll need to do protocol, you’ll need to actually commit the summer to some ceremony,” they refused. They came back a second time and said, “No, we absolutely refuse. Our contracts do not pay us over the summer, so therefore we are technically not working.” All these technicalities help in that superficial commitment to collaboration. At the end of that meeting, the school district representatives were getting very frustrated. The elder said to them, “You asked the question, and if you don’t like the answer, then don’t ask the question.” This notion of collaboration can become very important to know where the situatedness is angled. It really does require that web of relational knowing to be embodied in the process because it is sacred. Collaboration is sacred, especially for Indigenous Peoples, because it does not involve just human engagement as it might in a Western scholarly way. It does not only involve mental capacities or the intentional human short-term goals or objectives. It involves so much more: collaborative accountability to a much more multidimensional reality, multidimensional entities in that Indigenous thought structure. It is important that whoever is speaking and whoever is listening both have the criteria of knowing what is required for that to be respectfully spoken and heard – and heard and spoken.

For true collaboration with and for indigenous peoples to occur, all relations involved must come to a consensus to understand how collaboration is defined, the process, and how dissemination of output will be carried out. It is also grounded in *wiyinikêwina*, *Creators Laws*, versus *wiyasiwêwina*, *the laws of the country*, as Creator's Laws are the sacred laws of indigenous peoples and value the importance of Indigenous ceremonies from start to finish on a project but, importantly, for the spirit of all our connections that we work and advocate for.

#### **4. Braiding knowledges and reconciliation**

After we have discussed the challenges in collaboration and working with nonindigenous peoples, the group started to converse on how reconciliation fits into Braiding Knowledges, its place in academia, and what is needed for true collaboration to proceed. We asked two sets of questions: *does the concept of Braiding Knowledges fit into the actions of reconciliation? And can Indigenous Knowledge truly be braided within Western academia and Canada?*

**Samantha:** It is uncommon to be engaging in work that actively contributes to reconciliation daily. I think of what Dr. Johnson was talking about earlier, about how we cannot do Braiding without recognizing racism and colonialism. We cannot do reconciliation without addressing those. We cannot truly braid Indigenous knowledge with Western knowledge or science without recognizing the harm that science has done in the past. Science has been used against people, used as a justification for racism, used as a justification for ableism, etc. Science has been used as a weapon by those who are in power. Throughout my education, we only talked about a little bit of the not-so-great history of Western science. Unless we start talking about the hard history of Western science from the get-go, there can be no change.

**Paulina:** Indigenous peoples are rooted in observation and understanding of the land. We have been doing science from the very start; our ways of knowing and understanding the world have always been there. For Western science, I have said it before: they need to catch up with indigenous science. They also need to check themselves, because being self-aware is a key in indigenous research. Like thinking, “Oh, did I overstep?” or “Did something happen?” I feel like a lot of Western scientists are not mindful of their actions and their intentions. It is two very different philosophical groundings; one always clashes with the other, and it is the western science that clashes with the indigenous science. It is always trying to prove that it is superior, right, and informative, and that “We don’t need Indigenous Knowledge.” A lot of pharmaceutical knowledge comes from indigenous knowledge of medicines and plants. Are indigenous peoples getting the intellectual property or even royalties on that? Absolutely not.

**Marieliv:** In the Andean culture in Peru, braids are important, like getting your hair braided. Women have long hair, and sometimes they put colored ribbons in it to make it look pretty. Both of my grandmas, when they were young, used to have long hair. They are proud of their braids in the few pictures they have. This reminds me of something that Tanaya was saying for the first question. When we do our braids, we use three sections of our hair, but when it is done, you can only see two of them. You do not see the third one. Years ago, I had a professor who used that analogy to talk about intersectionality – how racism and classism are embedded in society, but you do not see it, right? It looks pretty once the braids are done, but we must remember the third section that we are not seeing. That could be the spirit world, the history, the painful history. That could be all our self-accountability and the reactions we take as scholars, as humans, as friends. It is so important to reflect on the one that we are not seeing.

The takeaway from our conversation about Braiding Knowledges and reconciliation constantly returned to the third strand, *the one that we do not always see*. This third strand represents settler colonialism, racism, and the walls of the ivory tower that do not align with indigenous ways of knowing and protocols. These unseen truths and lived realities are interwoven into the fabric of our society. We also acknowledge that there is a systemic pattern of privileging one knowledge system over another. We shifted our final question to: *what does the future of Braiding Knowledges look like?*

## 5. The future of braiding knowledges

If we are really talking about equity, then each braid must stand on its own. The first strand to be braided is indigenous knowledge and everything that encompasses indigenous perspectives, worldviews, and protocols. Taking the next strand is what collaboration means with Western science. The final strand is to understand the role of racism and colonialism in the entire braid. We need to talk about these realities (**Figure 1: Braiding Knowledges**) to understand what the future looks like. There need to be concrete intentions, as opposed to the aspirational or the use of buzzwords that achieve no institutional, academic, or societal change, before Braiding Knowledges can be accomplished. Without that, we do not have an equal platform to even begin the process, so it does not become empty words or rhetoric.



**Figure 1.**

*What do the three strands mean when coming together? Indigenous knowledge, Western knowledge, and the unseen realities of settler colonialism.*

**Samantha:** I think the future of Braiding Knowledges involves having a lot of hard conversations and confronting a lot of things. There are so many people who have good intentions, and they want the best for other people, but they need to understand that they/we – scientists and settlers – cannot be in sole control.

**Patsy:** It can easily fall into this, as Tahnee Galford says, a recolonization process, depending on who is leading the reconciliation. It is that perspective which is critical. Diversity is a construct that comes from the equity theory, and sometimes that can get misapplied. For indigenous peoples, we know about the universal way in which we can commune with each other and understand that, worldwide, there is a familiarity. But on that other plane, we respect the specific specificity, as my mentor Manu Meyer says. I wanted to end with this quote that an undergrad shared in my class yesterday, and she was quoting Marie Battiste's text, *Decolonizing Education*: "**Nothing about us, without us.**"

**Senyuan:** The future of Braiding Knowledges involves a deconstruction of ignorance. To elaborate, Noella mentioned that a lot of researchers are very superficial or disingenuous with what they say and mean. I think about when Paul mentioned ulterior motives and how academics usually have their own research to focus on, sometimes putting relationality on the back burner. I think it all ties back to this defense of ignorance, whether it be a scheme or genuine. When Dr. Johnson said, "It might have been cutthroat to say that," but I think it is not. While we often hold the claim-maker accountable, I think it is equally valid to hold settler researchers to the same expectations for accountability. It is a double standard currently, but it is still the moral responsibility of academics to understand and consider the culture, to understand that there is a history of colonization. The institution is still colonized, and we need to truly collaborate for the future of Braiding Knowledges. I think it is important for academics to understand that you are not coming in here just to get something out of it. You are not here to just research a community. **You are here to**

***collaborate, and there needs to be more responsibility on academics to resolve that ignorance and better understand their accountabilities.***

**Noella:** I am thinking about what Patsy is saying, “the significance of that perspective, of recognizing where you come from and how you contribute to the work of Braiding Knowledges.” One important thing that needs to happen is we must explore and understand where we are coming from. When I had undergrads, I often asked them to explore their culture, their own stereotypes, and their own cultural framing and positionality. They always said, “oh, I’m not racist. I accept everyone as the same,” and on and on. These were the same people saying, “but we still have to help our poor Indians, our poor First Nation people.” There is so much in that statement. I think sometimes people, especially those working with Indigenous people, fall into the benevolence trap. They think, “I have to save these people”. For Braiding Knowledges, it is important that people understand their perspective. Recognizing that we have some stereotypes we may be harboring, or that we have perspectives that may impact our work by preventing us from seeing things – especially in the sciences – is crucial. Science is notorious for thinking, well, the scientific way is number one. But what about our science? I think it has good responsibility moving forward, but in terms of a collective, I think it is important that people, together, understand where they are coming from, their positionality, and the epistemic privilege they may or may not have.

**Paulina:** Colonial languages do not have proper definitions of what respect, honor, and care mean in an Indigenous context. For the future of Braiding Knowledges to occur, if we share these concepts and use the colonial language, we have already failed, as we have to interpret them into languages that do not adequately understand the spiritual and interconnectedness of those terms themselves. I personally think that if we share these concepts from an Indigenous perspective, but Western academia and those working for indigenous peoples do not actually fulfill or acknowledge them, you are not braiding knowledges. You are tokenizing us once again for your own benefit. I also must state that making indigenous peoples translate our concepts into easy ways of thinking so that they can understand also highlights the problems of braiding. It is not fair for us to simplify complex realities without any effort from those on the other side who are not willing to put in the work themselves. Using us to teach every way of thinking or mindset of where we are coming from should not be our only role. I want the labor that is always put on indigenous peoples to be removed from us, so that we can do what we are always supposed to do at the forefront of research and knowledge, rather than on the sides or being silenced.

**Tanaya:** I have always been hopeful, positive, and overly optimistic. The future I radically imagine for Braiding Knowledges is one where we do not have to keep advocating, where people’s first instinct is to check in, define respect, find care, and all those things. If they are the ones elevating and uplifting us, then we do not have to advocate for ourselves as much. We just come in with that respect. We come in having our indigenous knowledges elevated the way they always should have been. Indigenous peoples carry within our DNA and our bones the roadmap to survival and to how to thrive and do these things we always have. In Braiding Knowledge’s future, we are upheld and uplifted with both hands.

**Marieliv:** I think my answer is more emotional than rational, but I would like to start by saying that I find it so important that we are having this conversation right now, in this context, when so many people out there are being targeted for who they are. In the entire world, we are seeing wars resulting in people not being able to

communicate with their families. We are seeing how immigrants are being targeted, being killed, and it keeps happening, and it is not new. We have seen this before, and we have seen these techniques used against indigenous peoples around the world as well. I want to shake up this environment. I really want to have hope that academia can transform itself to be more open, with good intentions of understanding and learning from Indigenous Knowledges and ways of living.

**Paul:** I would say, probably, that the future can go strong and forward if the indigenous perspective is respected and, more importantly, entrusted upon them. Don't be afraid to say your piece, and rather than sit there and be consensual in any rational way, like funding and all that stuff, push the envelope. We need to be more forthright and tell our perspective to a certain degree while keeping certain knowledge that they do not need to know.

**Darian:** It is important to take a step back and move away from doing things primarily through Western institutions and thinking. This will take time and patience to try to break out of the cycle of how we do things. But I do not know if it is truly Braiding Knowledges if we are entering braiding within the Western world. Going back to what Tanaya said about making sure the braid strands are of equal weight, we need to ensure that each part of braiding is held in the same regard and given the same treatment to move forward in an equitable way.

**Kim:** It is about ensuring that our indigenous and western points of view are acknowledged equally, and that working together will be beneficial. Focusing on bigger issues such as, climate change, working together to set a place for the future of the next generations to come. True collaboration is about creating a trustworthy bond, knowing that who you collaborate with understands and respects you, our community, and our traditional ways, and that they have the best intentions when forming that bond.

**Diana:** I am still learning what Braiding Knowledges means. I would like the future of Braiding Knowledges to look bright, involving true collaboration, as discussed already, with open communication and transparency from all sides. With selfawareness and selfaccountability, researchers should approach the work with a good heart and intentions, as well as strive for better integration of the spiritual and the sacred into Braiding Knowledges.

## **6. Concluding thoughts**

Braiding Knowledges has different approaches, definitions, and processes. There is no consensus. This is similar to what Gaudry and Lorenz (2018) found regarding how universities invest in indigenization within the academy. We are still waiting for transformative change, and everyone has a role in this process [5, p. 226]. Instead of providing academic closure to this chapter, the goal is to challenge the academy by honoring and uplifting Indigenous voices, perspectives, and ways of knowing and doing. We end our chapter with a poem by Tanaya Winder to stimulate ongoing reflections and story talk about Braiding Knowledges. Miyo-ayâwin. Kanagami'wat(ü).

### ***We Braid This Wisdom***

*Before we were born,  
our ancestors wrapped us  
in a blanket of stars*

*as they gathered around  
a ceremonial fire.  
Medicines were burned,  
and songs were sung  
to carry their prayers  
into life, being and breath.  
Our Ancestors showed us  
every constellation as they  
spoke to us in the language of the sky.  
They took turns holding us in their arms,  
whispering stories of  
where we come from  
and where we belong.*

*We braid this wisdom  
with systems that have threatened our being –  
Western knowledge and settler colonialism.  
Each separate strand  
offers lessons meant to weave  
into the path forward.  
We carry these teachings  
in our bones – Mother Earth  
does not belong to us.  
We belong to her.*

*We belong to the water of life,  
that connects us to all living things.  
The water that replenishes, washes away, and cleans.  
Remember: everything in this universe  
has a voice and something to teach.*

*We braid these ways of knowing  
to help us survive and sustain.  
A reminder for us to ignite  
our sacred flame; to use the medicine  
of its blaze to clear our path.*

*– Tanaya Winder*

## **Acknowledgments**

Thank you to the Blue Sky Research Assistants Drake Worth and Eva Thompson for their work on the round-table audio transcription, and to Drake Worth for creating **Figure 1**.

## **Conflict of Interest**

The authors declare no conflict of interest.

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*Edited by Hardy Hanappi*

Indigenous peoples exist in many, if not most, of the world's countries today, usually as fairly peripheral if not invisible minorities. Often they are viewed (if they are viewed at all) as remnants of tribal or premodern pasts or, at best, as quaint illustrations of "traditional cultures." However, although they have suffered colonialism, conquest, disease, dispossession, and cultural loss, the indigenous peoples who have survived this onslaught (and many have not) are increasingly active in the promotion, preservation, or sometimes revival of their cultures and identities. The historical experiences and contemporary activities of indigenous peoples are diverse, and the very label is contentious, but in unison with more tolerant and supportive states and a dense web of translocal institutions, indigenous peoples are vocally and increasingly successfully expressing their intentions to maintain their uniqueness while also participating, in their own ways and on their own terms, in the modern world. The chapters of this volume explore the complex terrain of indigeneity and several specific cases in Anglophone settler-colonial states and in non-Anglophone or non-Western states, where indigenous peoples are confronting dominant populations, contributing to modern non-indigenous projects, or using modern non-indigenous concepts and technologies to become modern while remaining indigenous.

*Sandro Serpa, Social Sciences Series Editor*

Published in London, UK

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**IntechOpen**

ISSN 2977-6473

ISBN 978-1-80631-749-3

