humanities

Global Indigeneities and the Environment

Edited by
Karen L. Thornber and Tom Havens

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Tom Havens is Professor of History at Northeastern University and Professor Emeritus of History and of East Asian Languages and Cultures at the University of California, Berkeley. He has served as Editor in Chief of The Journal of Asian Studies and as Director of the East Asian Library at the University of California, Berkeley. He is the author, co-author, or co-editor of a dozen scholarly books, including Fire Across the Sea: The Vietnam War and Japan, 1965–1975 (Princeton 1987), Parkscapes: Green Spaces in Modern Japan (Hawai`i 2011), and Marathon Japan: Distance Racing and Civic Culture (Hawai`i 2015). He is currently preparing a book titled Land of Plants in Motion: Japanese Botany and the World.

Preface to "Global Indigeneities and the Environment"

Global Indigeneities and the Environment is a bold experiment in joining two emerging scholarly fields of inquiry, Indigenous Studies and Humanistic Environmental Studies, in a borderless, indeed global, context. This book presumes that indigenous peoples can be known through their cultural products—in word and song, in the dramatic and visual arts—and that their identities, while primarily local, are often global in implication. It also presumes that indigenous peoples interact closely with their environments, whether for inspiration, sustenance, or exploitation, and that they are especially vulnerable to ecological crises, whether human or nonhuman in origin. Equally, the book presumes that the intersections of Indigenous Studies and Humanistic Environmental Studies can best be mapped with tools from a broad range of disciplines and methodologies, such as those on display in this volume.

Global Studies in the twenty-first century focus on the connections among world regions through a variety of disciplinary optics, without privileging any one region, language, or culture over others. Global environmental studies include scientific analyses of climate change, anthropogenic ecological damage, and threats to biodiversity of plants and animals on a worldwide scale. Humanistic Environmental Studies address these and similar concerns globally with a focus on human impacts, ranging from medicine and public health to people's engagement with their nonhuman surroundings.

In exploring the many exciting insights offered in this volume, I invite you to begin with Karen L. Thornber's "Humanistic Environmental Studies and Global Indigeneities", which serves as a concise yet deep introduction to the rich palette of research included in *Global Indigeneities and the Environment*. The individual chapters that follow bring new light and fresh methodologies to their respective topics, offering challenging opportunities and novel approaches for further research in the study of indigeneity and the environment on a global canvas.

<div align="right">Tom Havens, Guest Co-Editor</div>

Humanistic Environmental Studies and Global Indigeneities

Karen Thornber

The Environmental Humanities constitute an emerging transdisciplinary enterprise that is becoming a key part of the liberal arts and an indispensable component of the twenty-first-century university. Bringing together scholars from a number of environmentally related fields in the humanities and allied social sciences—including Ecocriticism (Literature and Environment studies), Environmental History, Environmental Philosophy, Environmental Anthropology, and Human Geography—the Environmental Humanities has, in the past decade, become a substantial collaborative scholarly endeavor. Journals including *Resilience: A Journal of the Environmental Humanities* (est. 2014) and *Environmental Humanities* (est. 2012), as well as book series such as Routledge Environmental Humanities, are providing an increasing number of venues for scholars in the humanities and related social sciences to introduce new approaches for grappling with the world's environmental challenges. For their part, initiatives such as the Andrew W. Mellon Foundation-funded Humanities for the Environment (http://hfe-observatories.org), which includes the African Observatory, Asia-Pacific Observatory, Australian Observatory, North American Observatory, and European Observatory; in addition to institutes and projects, such as Environmental Humanities at Princeton, Environmental Humanities Project at Stanford, Environmental Humanities at UCLA, Australian Environmental Humanities Hub, Environmental Humanities Laboratory (KTH Royal Institute of Technology, Sweden), Rachel Carson Center for Environment and Society (Munich), Transatlantic Environmental Research Network in Environmental Humanities, and the African Network of Environmental Humanities—not to mention the Harvard Global Institute Environmental Humanities Initiatives—are providing a growing number of opportunities for scholars in a variety of humanistic and related social science disciplines to embark on collaborative environment-related research and teaching.[1] Indeed, the institutional and scholarly umbrella of environmental humanities has provided specialists in a variety of humanistic and related social science fields with a forum to join forces on shared

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[1]   For more on the African Network of Environmental Humanities see Agbonifo [1].

environmental concerns, as well as to work together with engineers and scientists, politicians and business leaders, within and outside the academy.

Understandings of the Environmental Humanities generally are quite broad and the field's aims ambitious. In "Developing the Environmental Humanities: A Swiss Perspective," Philippe Forêt et al. declare the environmental humanities to be "a metadiscipline that brings into conversation several subfields ... [and] seeks to offer new and more synthetic insights into cultural, historical and ethical dimensions of our most intractable environmental problems" ([2], p. 67).[2] In addition, Forêt et al. note that the Environmental Humanities work to "recast established environmental problems as cultural issues and so provide fresh ideas to environmental research" ([4], p. 68). Similarly, in "Four Problems, Four Directions for Environmental Humanities," Astrida Neimanis et al. define the Environmental Humanities as "a term for a range of multifaceted scholarly approaches that understand environmental challenges as inextricable from social, cultural, and human factors" ([5], p. 70). They argue that, "More than information exchange, the environmental humanities should be utilized as a transdisciplinary meeting ground and a laboratory for culturing new approaches, methods, theories and desires in relation to significant environmental matters" ([5], p. 86).[3] Furthermore, Neimanis and her colleagues emphasize that the environmental humanities respond to what Gisli Palsson et al. refer to as "the need to re-frame global environmental change issues fundamentally as social and human challenges, rather than just environmental issues" ([7], p. 5).

Seeking to understand how different communities within and across national borders have grappled with ecological challenges, the Environmental Humanities, or more accurately humanistic environmental studies, works to promote the cultural transformations necessary both for reducing ecological devastation and for preparing for an increasingly uncertain and potentially traumatic future.[4] Lawrence Buell's comments on the importance of humanistic work to ameliorating environmental destruction also apply to adjusting to an age of biodiversity loss and climate chaos: "For technological breakthroughs, legislative reforms, and paper covenants about environmental welfare to take effect, or even to be generated in the first place, requires a climate of transformed environmental values, perception, and will. To that end

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[2] See also Mathae and Birzer [3], Sörlin [4]. Each of the above initiatives has a comprehensive website outlining objectives and programming.

[3] Neimanis et al. give examples of successful models, including the collaborative project and collection of work *Thinking with Water* [6].

[4] Although the term "environmental humanities" is gaining increasing traction and generally refers to research and teaching in both the humanities and the humanistic social sciences, the term itself does not appropriately recognize the importance of humanistic social science endeavors. As such, it can be somewhat off-putting to social scientists and other scholars both within and outside the humanities. Similarly, I modify "environmental studies" with "humanistic," since the term "environmental studies" generally does not include humanistic research and teaching.

the power of story, image, and artistic performance and the resources of aesthetics, ethics, and cultural theory are crucial" ([8] p. vi). Ideally, humanistic environmental studies not only draws on the expertise of individual humanists, social scientists, and others engaged in interdisciplinary work across world areas but also brings together scholars from across the humanities, social sciences, and related fields—from Anthropology, Architecture, Art History, Economics, Ethics, History, History of Science/Medicine, Literature, Philosophy, Psychology, Religion, Sociology, Urban Planning, and adjacent fields. Fundamental as well is collaboration with scholars in the Digital Humanities, Public Humanities, and especially Medical Humanities, given the devastating effects of environmental destruction on human health.[5]

Humanistic environmental studies focuses largely on cultural products—including everything from architecture, literature and nonfiction writing, drama, music, the visual arts, film, and other media to the discourses of activism, politics, history, medicine, and religion. This attention to cultural products stems largely from their power to change radically environmental consciousness, for better or for worse, and to mobilize or silence communities. Cultural products often allow societies to envision alternative scenarios and to think imaginatively about implementing changes that enable adaptation, increased resilience, lessen fear, modulate risk, and make the competition for resources more manageable, or at least less catastrophic. In so doing, cultural products give particular insight into how societies, communities, and individuals understand environments and engage with environmental challenges. They expose how people dominate, damage, and destroy their environments and reveal how they grapple with an uncertain and potentially traumatic future. By engaging rigorously with a wide range of cultural products, humanistic environmental studies, in the words of Elizabeth DeLoughrey, Jill Didur, and Anthony Carrigan, has the "radical potential to change our ecological futures" ([9], p. 25).[6]

This Special Issue of *Humanities* stands at the crossroads of humanistic environmental studies and Indigenous Studies, a similarly interdisciplinary and collaborative field that is rapidly growing both nationally and internationally and is paying increasing attention to global indigeneities.[7] Current estimates of the global Indigenous population vary from between 250 and 600 million individuals belonging to somewhere between 4000 and 5000 "Indigenous" groups dispersed worldwide, from the Americas to Africa, Asia, Oceania, and Europe. Most of these communities

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[5] The terms "digital humanities," "public humanities," and "medical humanities" can be as misleading as the term "environmental humanities," given the important place of humanistic social science research in these endeavors.

[6] DeLoughrey et al.'s [9] volume focuses on postcolonial approaches to the environmental humanities, with particular emphasis on narrative practices.

[7] Charles et al. [10] argue that colonized Indigenous people globally share similar experiences despite differences in histories and contexts.

have their own language(s), belief systems, and relationships to one another, non-Indigenous communities, the state, and the land ([11], p. 135).[8] Moreover, as Mary Louise Pratt rightly notes, "Indigenous" is almost never the primary identity of "Indigenous" peoples, who instead are first Adivasi, Aymara, Cree, Dayak, Hmong, Kung, Maori, Quiché, or any number of other identities ([14], p. 399). At the same time, the umbrella of indigeneity, although not without serious hazards, draws attention to "inhumane, colonizing, and oppressive treatment that nation states and the international community have perpetrated on indigenous population" [15]. It also enables peoples separated by language, culture, history, and geography to recognize each other and collaborate ([14], p. 399).[9]

In this spirit, global indigeneity brings to light the "interconnectedness of regional, national, and global issues confronting Indigenous communities" [16]. As the Institute for Global Indigeneity at the University at Albany: State University of New York states on its website, "Understanding Indigenous issues in a global context ... helps to link narratives of Indigenous peoples, extend their agency in contexts that still feature hostility and barriers to opportunity, and ultimately, broaden the conversations about self-determination and sovereignty." Likewise, as Chris Anderson argues, "global indigeneity is marked as much by the similarity of its resistance to colonialisms as it is by the kinds of elements—relationship to land, spirituality, etc.—that are often thought to bind indigenous peoples together" ([2], p. 304).

Also important in this context is the transnational Indigenous peoples' organization Advancement of Global Indigeneity (AGI), envisioned as an "international advocate for the advancement of opportunities for Indigenous peoples," which

> intends to build and mobilize a coalition of Indigenous individuals and communities around the world that can act on behalf of and work to strengthen the self-determination capabilities of their respective communities ... The collective power of Indigenous voices needs to be joined together to impact and promote peaceful coexistence, global understanding, and international policy development. There is an urgency to share our Indigenous voices and perspectives, not only for the future of Indigenous peoples, but also for the future of all the peoples of the earth ([17], p. 509).

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[8] See also Anderson ([12], p. 287); de la Cadena and Starn [13].
[9] See also Anderson [12].

This is not to minimize the importance of specificity, of rigorous examination of individual communities. Rather it is to encourage global and interdisciplinary perspectives that build on such examinations.

Doing so is particularly important when examining how human societies have grappled with ecological challenges and crises. Indigenous peoples generally are believed to be more deeply connected with the environment than are other populations and to have suffered more profoundly from exploitation of resources. For instance, the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP 2007 [18]), recognizing that respect for Indigenous knowledge, cultures, and traditional practices contributes to "sustainable and equitable development and proper management of the environment," declares in Article 29: "Indigenous peoples have the right to the conservation and protection of the environment and the productive capacity of their lands or territories and resources ... States shall take effective measures to ensure that no storage or disposal of hazardous materials shall take place in the lands or territories of indigenous peoples without their free, prior and informed consent." Similarly, Article 32 warns, "States shall provide effective mechanisms for just and fair redress for [the development, utilization, or exploitation of mineral, water, or other resources] and appropriate measures shall be taken to mitigate adverse environmental, economic, social, cultural, or spiritual impact" [18].[10] Yet it goes without saying that all too frequently the mechanisms provided and measures taken both nationally and transnationally are not effective and lead to tremendous suffering, both human and nonhuman.[11]

The eleven articles in this Special Issue—written by innovative thinkers in American Indian Studies, Anthropology, East Asian Studies, Historical Climatology, History, Indigenous Studies, Comparative Literature, Social Ecology, and Social Justice—provide new perspectives on these concerns. Most are firmly grounded in a particular community, or even subset of a community, but they place their analyses in much broader disciplinary and geographic perspective.

Global Indigeneities and the Environment opens with two articles that examine the concept of "indigeneity," addressing the local and global consequences, challenges, and promises of promoting the "Indigenous." First, Michael Dove, Lauren Baker, Samara Brock, Chris Hebdon, and Francis Ludlow's "The Double Binds of Indigenity and Indigenous Resistance" points out that, just as the concept and identity of

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[10] The UNDRIP was the result of decades of collective struggle. As Anderson notes, "in addition to the various forms of resistance against local resource-extraction attempts, cultural domination, and entrenched inequities, Indigenous peoples and their allies also came together more globally in their attempts to raise consciousness of and challenge the massively destructive effects of global colonialism/capitalism" ([12], p. 302).

[11] For more on understandings of indigeneity and relationships between indigeneity and environment, see Castellanos's [19] and Gaard's [20] works.

"indigeneity" has enabled communities to "articulate their cultural distinctiveness and independence, justify claims to land and resources, forge wide-ranging alliances, and achieve a global visibility," with some peoples even adapting themselves to this concept, so too has "indigeneity" been criticized for its limitations and for "engendering disputes over definitional boundaries, inclusivity and its performance." The article begins with an explication of indigeneity and the challenges and potentials that it presents, followed by three case studies: how Indigenous movements have led the transformation of Ecuadorian politics, the UN-REDD Programme in Peru and Ecuador (Reducing Emissions from Deforestation and Food Degradation), and the Pebble Mine prospect in Alaska.

For its part Michael Hathaway's "China's Indigenous Peoples? How Global Environmentalism Unintentionally Smuggled the Notion of Indigeneity into China" looks at the long and contentious history between environmental and Indigenous groups and reveals the struggles of global environmental organizations to foster the notion of Indigenous people and rights in a country that officially opposes these concepts. In the 1990s, Beijing declared that, unlike the Americas and Australia, China had no Indigenous peoples, that the country instead was a space of "ethnic minority" groups. In sharp contrast with Taiwan, which has an increasingly powerful aboriginal consciousness, China is one of the few nations officially opposed to the category of "indigeneity." Moreover, there is little grassroots support; the one group most easily recognizable as Indigenous is the Tibetans, who are either largely unaware of the possibilities of or uninterested in this status; some Tibetan activists have suggested that they are striving for *more* than can be achieved by adopting the mantle of "indigeneity."

Following Dove et al.'s and Hathaway's contributions are three articles on the environmental activism of Indigenous peoples. First is Anna J. Willow's "Indigenous ExtrACTIVISM in Boreal Canada: Colonial Legacies, Contemporary Struggles, and Sovereign Futures." This study approaches contemporary extractivisim—"manifested in massive hydroelectric developments, clearcut logging, mining, and unconventional oil and gas production [that] removes natural resources from their points of origin and dislocates the emplaced benefits they provide"—as an environmentally and socially destructive extension of an enduring colonial societal structure. Willow examines the "extrACTIVIST" resistance to extractivist schemes through four case studies, drawn from across Canada's boreal forest. She argues that because extractivism is colonial in its legacies and causal logic, effective opposition cannot emerge from environmentalism alone but instead arises from movements that pose systemic challenges to conjoined processes of social, economic, and environmental injustice. She reveals extractivism and ACTIVISM to be two complex and non-exclusive sides of an ongoing global debate concerning how resources should be used and who should be empowered to determine their use.

Far from demanding the cessation of all extractive operations, the fundamental core of Indigenous extrACTIVISM is the quest for survival through land-based self-determination.

Then, J. T. Way's "The Movement, the Mine and the Lake: New Forms of Maya Activism in Neoliberal Guatemala" explores the social, economic, cultural, and political issues at play in two recent events in the Sololá and Lake Atitlan region of the Guatemalan Mayan highlands (2004–2005): (1) the violent breakup of anti-mine protests; and (2) the multiple reactions to a tropical storm that threatened the lake ecosystems. By mapping events in Sololá against development, agrarian transformation and rural urbanization, Way argues that resilient Maya community structures, although unable to stop the exploitative tide, continued to provide local cohesion and advocacy. The article places these incidents in the larger context of Mayan political activism and concludes with a discussion of the increasing importance of creating and controlling community structures to confront spiraling violence at home.

Charlotte Coté's "'Indigenizing' Food Sovereignty, Revitalizing Indigenous Food Practices and Ecological Knowledges in Canada and the United States" discusses the food sovereignty movement in North America. Initiated in 1996 by La Via Campesina, a transnational association of peasants representing 148 organizations from 69 countries, the food sovereignty movement advocates the right of all peoples to healthy and culturally appropriate food and the right to define their own food and agricultural systems; it is grounded in the idea of revitalizing Indigenous food systems and practices through the reaffirmation of spiritual, emotional, and physical relationships to the lands, waters, plants, and all living things that sustain Indigenous communities and cultures. Coté analyzes the concept of food sovereignty to articulate an understanding of its potential for action in revitalizing Indigenous food practices and ecological knowledge, understanding the food sovereignty movement as part of larger efforts to restore profound relationships with [the] environment. The article focuses on the cultural responsibilities and relationships Indigenous peoples have with their environment and the efforts being made by Indigenous communities to recuperate these relationships through the revitalization of Indigenous foods and ecological knowledge systems as communities assert control over their own foods and practices.

Willow's, Way's, and Coté's articles on Indigenous activism are followed by three related studies on changing Indigenous understandings of nature and conservation in the United States, Japan, and the Ecuadorian Amazon. David Tomblin's "The White Mountain Recreational Enterprise: Eco-political Foundations for White Mountain Apache Natural Resource Control, 1945–1960" reveals the White Mountain Apache Tribe (Native American) as engaged in a perennial struggle to control natural resource management within reservation boundaries, explaining how

Indigenous peoples are constantly reinventing their relationship with the land, their communities, and outside influences. The White Mountain Apache Tribe developed the White Mountain Recreational Enterprise (WMRE) in 1952, the first comprehensive tribal natural resource management program in the United States; this enterprise has fought numerous legal battles over the tribe's right to manage cultural and natural resources for the benefit of the community rather than outside interests. Tomblin demonstrates how in so doing, the White Mountain Apache Tribe embraced both Euro-American and Apache traditions, resisting certain Euro-American ideals while incorporating others in order to survive. He argues that, far from a simple compromise, this was instead a strategy for maintaining cultural identity.

Similarly, ann-elise lewallen's "Signifying Ainu Space: Reimagining Shiretoko's Landscapes through Indigenous Ecotourism" discusses how the Ainu, formally recognized as Japan's Indigenous peoples in 2008, have since then sought to recuperate land and self-determination by physically reenacting Ainu traditional knowledge through ecotourism in Hokkaido. The Ainu argue that ecotourism taps into memory held in places (embedded memory), which is hidden under layers of *wajin* (ethnic Japanese) settler history in Hokkaido; they emplace visitors in a vast landscape of human-deity relations. lewallen relates Japan's attempts to have Shiretoko (northeast Hokkaido) nominated as UNESCO World Heritage site both to legitimate Japanese claims to Shiretoko and to reinscribe the authority of Japan as the proper steward and rightful owner of this Ainu space; Japan initially applied for Shiretoko's designation as a World Heritage natural site in 2004, but based on the assumption that Ainu no longer resided in the region, the national government failed to include Ainu representatives in its bid. It is in this context that lewallen examines how Ainu attempts to assert ancestral claims are stymied by the realities of settler colonialism and the erasure of the Ainu presence from the landscape of Hokkaido and Japan, the Japanese government going so far as to argue that Ainu "indigeneity" as recognized in Japan might or might not correlate with international categories of Indigenous peoples. In contrast, Indigenous ecotourism places Ainu at the center, enabling them to author and control discourse on themselves and the land.

And finally Juliet Erazo's "Saving the Other Amazon: Changing Understandings of Nature and Conservation among Indigenous Leaders in the Ecuadorian Amazon" brings to light the irony of Indigenous leaders increasingly favoring oil development in their own backyards while simultaneously opposing oil development in the downstream Yasuni National Park. Erazo analyzes how the concept of "wilderness" has emerged as a meaningful imaginary for Amazonian Indigenous leaders and youth alike, who increasingly subscribe to Northern environmentalists' romanticization of "the Amazon" as a wild place, distant from the places where they work and live. The article links contemporary events to environmental historian William Cronon's 1990s critique of First-World environmentalism, making clear

how many Indigenous inhabitants of the Amazon are changing conceptions of their environments in new, unexpected, and often surprising ways.

This Special Issue wraps up with three articles on creative engagement with the environment. First is Sandie Suchet-Pearson et al.'s "*Morrku mangawu*—Knowledge on the Land*: mobilizing Yolnu mathematics from Bawaka, North East Arnhem Land*, to reveal the situatedness of all knowledges," which examines a system of mathematics distinct from Western norms. Yolnu mathematics, *morrku mangawu*, refers to the complex matrix of patterns, relationships, shapes, motions, and rhythms of time and space that underpin the ways the Yolnu peoples of North East Arnhem Land in northern Australia nourish and are nourished by the environment. This system of mathematics relies on the connectivity of the human and more-than-human, challenging Western knowledge, including Western ideas of math and environmental management. Suchet Pearson and her collaborators discuss how for the Yolnu community, learning mathematics is a way of learning country—Yolnu mathematics is "living mathematics," underscoring the plurality, the situatedness, the more-than-human diversity.

This study of Indigenous mathematics is followed by two contributions on Indigenous literature, Ivanna Yi's "Cartographies of the Voice: Storying the Land in Native American Oral Traditions and Literature" and John Ryan's "No More Boomerang: Environment and Technology in Contemporary Aboriginal Australian Poetry." Yi analyzes how through their oral traditions and written literatures, Native American storytellers and authors invent new postcolonial cartographies by storying the land, that is to say, by "investing the land with the moral and spiritual perspectives specific to their communities." This article examines how native places are made, named, and reconstructed through storytelling, demonstrating that the land itself becomes a repository of the oral tradition. Spanning the Mayan *Popol Vuh*; Algonkian, Western Apache, Hopi, Iroquois, and Laguna Pueblo stories; and contemporary fiction and poetry of Joy Harjo and Leslie Marmon Silko, Yi reveals the dialogic relationships with the land experienced by Indigenous peoples and their emphasis on maintaining a direct relationship with the land.

For its part, Ryan's "No More Boomerang" spotlights interconnections between the environment and technology in Aboriginal Australian poetry, where the land is a "nexus of ecological, spiritual, material, and more-than-human overlays." Focusing on the writings of three literary-activists—Jack Davis, Oodgeroo Noonuccal, and Lionel Fogarty—Ryan examines creative engagement with the impacts of late modernist technologies on Aboriginal peoples and the land alike; critiquing invasive technologies that adversely impact both the environment and Indigenous cultures, these writings also invoke Aboriginal technologies that once sustained and in many places continue to support both peoples and the land. To be sure, Fogarty, Noonuccal, and Davis do not reject Western technology, and in fact they acknowledge their

indebtedness to Western forms of writing and technology. Indeed, theirs is an invitation to reconsider earlier types of technology, and to imagine new types of technology, that have fewer deleterious consequences for country and culture.

The Indigenous peoples who are the focus of the articles in this Special Issue herald from Alaska and Canada to the Amazon, and from the Americas to Oceania and East Asia. But there is considerable room for growth. In an issue of necessarily limited length, we attempt here to offer some of the most innovative scholarship that is globally indigenous in character if not in combined geographical coverage, with Africa, Europe, and South and Southeast Asia our most visible lacuna. The number and types of challenges addressed in this Special Issue are also inescapably constrained: the scholars whose work is presented here grapple with a broad range of Indigenous struggles from numerous perspectives, but there are many more that deserve our attention and that will need to be the focus of future scholarly endeavors by experts in an even wider variety of fields.

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The Double Binds of Indigeneity and Indigenous Resistance

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Abstract: During the twentieth century, indigenous peoples have often embraced the category of indigenous while also having to face the ambiguities and limitations of this concept. Indigeneity, whether represented by indigenous people themselves or others, tends to face a "double bind", as defined by Gregory Bateson, in which "no matter what a person does, he can't win." One exit strategy suggested by Bateson is meta-communication—communication about communication—in which new solutions emerge from a questioning of system-internal assumptions. We offer case studies from Ecuador, Peru and Alaska that chart some recent indigenous experiences and strategies for such scenarios.

1. Introduction

Contestation over rights, livelihood security, and self-determination are key features in interactions between indigenous peoples, contemporary state actors and often-globalized non-governmental and commercial interests [1–5]. While continuities and instructive parallels can be traced in encounters by indigenous peoples with colonial and imperial powers during the earlier twentieth century and beyond (e.g., [6–10]), the underlying dynamics of these struggles have evolved markedly since the later twentieth century with the ascendancy of the concept of "indigeneity". Indigenous peoples have broadly embraced this concept and identity, using it to articulate their cultural distinctiveness and independence, justify claims to land and resources, forge wide-ranging alliances, and achieve a global visibility that is twinned with a moral forcefulness to demand attention and redress from policy makers and organs of national and international governance and law [11–15]. Yet indigeneity as a concept, and project, has not been without critique, being subject to limitations, risks and appropriations, and engendering disputes over definitional boundaries, inclusivity and its performance [14,16,17].

According to Gregory Bateson ([18], p. 241), a "double bind" occurs for an actor when "every move which he makes is the common-sense move in the situation as he correctly sees it at that moment, but his every move is subsequently demonstrated to have been wrong by the moves which other members of system make in response

to his 'right' move." These are situations "in which no matter what a person does, he can't win" ([18], p.201). This aptly describes the contradictions often faced by indigenous peoples and others when deploying the concept of indigeneity [19,20], a problematic that must be considered alongside its historical utility for advancing indigenous struggles, and its continued role as a foundation from which new concepts and strategies are evolving. Our study thus begins with a review of the broad challenges and potentials that the concept of indigeneity continues to present (Section 2), particularly a foundational "double bind" in which the more modern or global indigeneity is seen as being, the more its authenticity as an identity is questioned.

We then offer three case studies that chart recent experiences and strategies adopted by indigenous peoples in responding to "no-win" situations that are superficially presented as, or at first sight appear to be, "win-win". More specifically, Section 3 examines the concept of "sumak kawsay" in how it emerged in Ecuador as an "alternative to development", and how its political life has involved indigenous theorizations of Amazonian societies as "already developed", on par with the West's view of itself. Our second section details indigenous analyses and critiques of the limitations of the REDD+ initiative (the UN Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries) and emerging strategies to mobilize indigenous networks to combat these limitations and preempt expected double binds resulting from the programme's implementation. Our third case details the utilization of external technical assistance among Bristol Bay (Alaska) native groups as part of what can be deemed (at least in the immediate term) a successful resistance strategy against minerals mining, in which we posit the potential for the emergence of a double bind in which the sophisticated technical definition and mapping of Bristol Bay natural resources in competition with state mapping risks an "arms race" and may breed dependence upon assistance from non-governmental organizations (NGOs) in cycles of future mapping and counter-mapping.

2. The Double Bind of Indigeneity

Anthropology and the allied social sciences have always focused on the "local". But in the course of the twentieth century, as globalization seemed to exert an increasingly hegemonic impact on localized human systems, there was a corresponding increase in academic interest in defining and defending the local, in particular indigenous identity, knowledge, and rights. This academic interest was paralleled and spurred on by an upsurge in indigenous advocacy worldwide [21–23]. For example, the rubber tappers of the Amazon rose to global attention when they rearticulated themselves as indigenous people of the forest [24]; and the little-known peasant land reform movement of the Zapatistas of Chiapas in Mexico rose to global

prominence after it was reframed as a movement about Mayan indigeneity [14,25]. At the very time that the concept of indigeneity was being appropriated beyond the academy, however, it began to be critiqued within it. There have been several different bases for this critique: empirical, ontological, political, and hermeneutic.

The criticism on empirical grounds was stimulated by the ascendance of world system studies in the 1980s. Eric Wolf [26] famously argued in 1982 that even isolated communities were caught up in global historical processes, which were even responsible for this very isolation. Exemplary of this shift in thinking are studies like that of Edwin Wilmsen [27], who in 1989 argued that even iconic examples of isolated people like the San of the Kalahari Desert were integrated into modern capitalist economies both materially and discursively. Following this argument, indigenous peoples are not necessarily as isolated from other populations as once assumed.

Some scholars have taken this argument a step further to argue that globalization is actually responsible for indigeneity, which raises ontological questions. Two different arguments have been made in this regard. First, some scholars suggest that indigeneity is a product of confrontation with the non-indigenous modern world. For example, where clear tribal identities are found today in Indonesia, Tania Li ([28], p. 158) argues that they can be traced to histories of confrontation and engagement, warfare and conflict. Second, others posit that the articulation of indigeneity is made possible by modern institutions. Frank Hirtz [29] thus argues that recognition of a people as indigenous is embedded in the emergence of world society and its forms of communication and institutions. As a result, through the very process of being recognized as "indigenous", these groups enter more firmly into the realm of modernity.

Questions of validity aside, some scholars have argued that indigenous status has not been as politically helpful to indigenous peoples as initially thought, that it contains perils as well as benefits. Li ([28], p. 170) writes that the "indigenous slot" is a narrow target, which is easily over- or under-shot: if people present themselves as "too primitive", they risk government intervention; whereas if they present themselves as "not primitive enough", they risk intervention on other grounds (since the non-indigenous are seen as having no intrinsic rights to land). Similarly, Beth Conklin ([30], p. 723) writes that "There is a fine line between the exotic and the alien–between differences that attract and differences that offend, unnerve, or threaten". Once indigenous status has been attained, official expectations of appropriate behavior can also be exacting. However, the greatest harm of all may be incurred by those who cannot claim indigenous status.

As Li ([28], p. 173) notes, "[the Indonesian] government could set out new rules to identify and accommodate a few 'primitives' or traditional/indigenous people, and even acknowledge their rights to special treatment, without fundamentally shifting its ground on the issue that affects tens of millions: recognition of their

rights to the land and forest on which they depend." For scholars such as Fernand de Varennes, however, "to lump the claims of indigenous peoples with those of minorities" is "a tendency that should be avoided" if indigenous autonomy and rights are to be advanced ([31], p. 309). Yet the case of Ecuador (Section 3) shows that meaningful successes can be achieved by indigenous peoples when focusing efforts beyond their own rights, in mobilizing broad popular support to effect change relevant to many social groups and causes.

Perhaps the most thought-provoking debates over indigeneity pertain to the involvement of indigenous peoples themselves in the articulation of indigenous identity. In sharp contrast to the increasingly cautious academic approach to indigeneity, the concept has traveled, been transformed, and enthusiastically deployed the world over [32,33]. Of concern to some is the notion that local communities have not just adapted the concept to their own uses but have done the reverse: adapted themselves to the concept. Jean Jackson [34] writes about how local notions of history and culture in Vaupes, Columbia, have been changed to fit their perception of what outsiders define as "Indianness"; Laura Pulido [35] writes of the deployment of romanticized ecological discourses and culturalism in the South-Western U.S. as a means of resistance using the "master's tools"; and Li ([36], p. 369) worries that an external "sedentarist metaphysics" is shaping the belief and practices of indigenous peoples in Indonesia.

Drawing on the Marxist sociologist and cultural theoretician Stuart Hall, Li [28] lists variables that contribute to the success of articulations of indigeneity: resource competition, a local political structure, a local-state contest, a capacity to articulate identity to outsiders, and urban activist interest. She observes that simple portrayals of indigeneity connect with outsiders, whereas complex portrayals or "fuzzy" ones do not. Successful articulation also depends on the ability to connect to pre-existing discourses: the "audibility" of a story is greater if it fits a "familiar, pre-established pattern" ([28], p. 157). The self-conscious articulation of indigenous identity has, however, often been interpreted as the "faking of indigeneity". As Beth Conklin ([30], p. 725) writes: "Theatricality is, to Western eyes, easily equated with acting, and the putting on and taking off of native garb can look like posing—the antithesis of authenticity". She recounts vitriolic exposés in the Brazilian press, including juxtaposed photos of exotically costumed Kayapó activists and pictures of the same individuals offstage, dressed in Western clothes and engaged in "civilized" pursuits. Conklin ([30], p. 724) further notes that:

> To acknowledge that the body images of native activists are produced in relation to Western discourses and media dynamics is not to say that Amazonian Indians have sold out... All politics are conducted by adjusting one's discourse to the language and goals of others, selectively deploying ideas and symbolic resources to create bases for alliance.

Focusing on the authenticity of performances of indigeneity is myopic given that, as Conklin implies, there is both an "audience" and wider role for such performances. Nor have indigenous scholars been silent on these topics. For example, Linda Tuhiwai Smith ([37], pp. 72, 74) similarly critiques the double-binds regarding "who is a 'real indigenous' person, what counts as a 'real indigenous leader', [and] which person displays 'real cultural values'", since "at the heart of such a view of authenticity is a belief that indigenous cultures cannot change, cannot recreate themselves ... nor can they be complicated, internally diverse or contradictory. Only the West has that privilege." Tuhiwai Smith ([37], p. 36) has also noted the danger of indigenous peoples and scholars themselves falling into the trap of writing or representing themselves "as if we really were 'out there', the 'Other', with all the baggage that this entails." These sort of feedback dynamics are not unexpected: Anthony Giddens [38] examined the "interpretive interplay" between social science and its subjects and concluded that theory cannot be kept separate from the activities composing its subject matter, a relationship he termed the "double hermeneutic". The characterization of such behavior by self-conscious intent is troubling to some. Whereas a perceived lack of conscious intention in practices that conserve natural resources, for example, is widely deemed to prove the absence of indigenous "conservation", with regard to articulation of indigenous identity, just the opposite is often believed to be true.

Academics have long been familiar with the idea of recurring paradigm changes in science [39]. Concepts like indigeneity are subject to this same dynamic. Dissatisfaction with the fate of localized resource-use systems under totalizing systems of modernity stimulated interest in indigeneity and indigenous systems of resource knowledge and use over the past several decades. When the concept of indigenous knowledge was first recognized or promoted, it thus represented a useful counter to the customary denial that rational indigenous knowledge and practice could even exist. The concept of indigeneity was to prove very successful, giving rise to a whole new field of study, a novel thrust in "new social movements" literature (e.g., [40]), and spurring an efflorescence of international legal recognition for indigenous rights to land, culture, and self-determination (by bodies such as the United Nations and the International Labor Organization). Yet as such rights were won, academics increasingly focused on difficulties with the concept, precisely at the same time as indigenous peoples themselves were increasingly employing the concept to great effect.

Our first case study examines the emergence and implications of "sumak kawsay", a concept proposed by Ecuadorian indigenous social movements as an alternative to a concept of "development" that assumes that lack, or scarcity, is natural. Sumak kawsay, or "good living" (buen vivir), was nominally adopted by the Ecuadorian state in 2008, giving the term an influence on broader Ecuadorian culture

and national planning. In 2009, Bolivia's first indigenous government adopted a similar concept, and sumak kawsay has also attracted the attention of scholars and citizens worldwide.

3. Sumak Kawsay, Ecuador

> We imagine that the management of natural resources will have to be under the legal authority of indigenous peoples and that this will be our contribution to development. From the point of view of management, our main pillar are the technologies of Pastaza indigenous peoples which we go on complementing with knowledges from other Amazonian indigenous peoples, other academics, and Western academics; incorporating certain tools, and methods of planning, systematization, and conservation, only to the extent that it contributes to our objectives .... We're proposing an equilibrated "human-nature" management, looking toward using resources in the long run, because well, we don't have any others.
>
> (—-Leonardo Viteri, 23 March 2001 ([41], p. 87))

Beginning with a major uprising in 1990, indigenous social movements led the transformation of Ecuadorian national politics for a remarkable fifteen years [42]. This period saw the political disruption of nearly a dozen presidencies and, by the time a stable government was established under the leadership of Rafael Correa in 2006, a historically unique openness to addressing indigenous demands prevailed. In particular, during the drafting of a new constitution in 2008, the Constituent Assembly approved a framing of the constitution in terms of "sumak kawsay" (often translated as "good living" or "life in harmony"), a concept first proposed by Ecuadorian indigenous movements as an "alternative to development" [41,43–46]. This section traces a brief history of this concept's political life [47].

Though it is composed from two common Quichua words—"sumak" (good, beautiful, delicious, perfect) and "kawsay" (life, existence)—sumak kawsay is a relatively new term [48]. While "alli kawsay" (good life) had been used for decades if not centuries in Ecuador, and has deep moral resonances in Quichua culture, the term sumak kawsay only begins to appear in Ecuador by the late twentieth century in texts such as a Quichua-language Bible from the Chimborazo region of the Ecuadorian Andes, a region abutting the Amazonian province of Pastaza. In that Bible, "peace" and "shalom" are translated as "sumaj causai" [49].

The 1970s saw the beginning of Ecuador's oil boom. Along with missionization and land colonization, the oil boom was part of an intensification of capitalist extractivism in the Ecuadorian Amazon that brought tremendous social and environmental change. Indigenous resistance grew throughout the 1970s and

1980s [50]. By the late-1980s there were well-organized Amazonian calls for "a new paradigm for economic development" ([51], p. 153), particularly from neighboring Shuar, Achuar, Shiwiar, Waorani, and Quichua peoples in Ecuador's Pastaza Province [41]. Anthropology, often deployed by indigenous intellectuals and scholars themselves, played a key role in the representation of these Amazonian resistance processes. In 1976, the Federation of Shuar Centers co-published *An Original Solution for a Contemporary Problem* [52], which both critiqued and expanded upon anthropological concepts to fit regional struggles for land and self-determination. Based on fieldwork between 1976 and 1980, French anthropologist Philip Descola [53] wrote about "shiir waras" as an Achuar concept referring to domestic peace and the maintenance of a hunting and swiddening system for living well. Descola described this Achuar concept as referring to the successful articulation of a system of living in the forest that "makes chronic failure more or less impossible . . . ", and gives "an almost automatic guarantee of success" ([53], p. 428). Quichua (Runa) authors from Sarayaku published a number of texts about "sumak kawsay", with one of the community's most prolific authors being Carlos Eloy Viteri Gualinga [44,54,55], who in 2003 received a degree in anthropology. All of the above texts came from, or were written about, Ecuador's Pastaza Province, and all dealt in various ways with issues of social change in the face of rapid forest industrialization (see also [56]).

Submitted for a master's thesis in applied anthropology, Carlos Viteri's ethnography, based on his upbringing in Sarayaku, described the workings of a Runa system for living "an ideal condition of existence without lack and crisis" ([55], p. 47). Viteri emphasized that development is usually defined from the perspective of outside, colonial actors, who portray their own society as the pinnacle of civilization. The outsider is the one always considered to be already developed. Historically, they had also tended to see the Amazon as an empty, rather than a peopled, land. Such a paradigm placed Runa in the contradictory position of being categorized as "the least developed", "the poorest of the poor", when living most "traditionally" in the forest, for example, with "the existence of one's own language, organization, arts, etc." ([55], p. 21). Responding to these assumptions, Carlos Viteri argued that there is no Sarayaku tradition of enacting advancement as a linear process, no conception of a "road of progress" in which one begins behind and gets ahead in a movement from underdevelopment to development. Similarly, he refused the notion that there is a Sarayaku Runa tradition of chronic poverty, noting that the closest Quichua concept, *mútsui*, assumes that lack, such as might be caused by unforeseeable disasters or from not exercising foresight, is temporary and extraordinary ([55], p. 72). "In contrast with súmak káusai," he wrote that,

> development is conceived of only in regard to lack and problems, and consequently it sets out a behind state of underdevelopment in order to appear like the "medicine" or formula for overcoming this behind

state through a linear transit. Súmak káusai, on the other hand, functions as a social practice oriented precisely to avoiding a fall into aberrant conditions of existence ([55], p. iv).

In this formulation, there is no assumed lack of development. Instead, sumak kawsay is described as a system for *not de-developing*. As Carlos Viteri's cousin Franco Viteri remarked in an interview, "[T]he forest is already developed . . . What petroleum industries do is destroy what already *is* developed" [57]. As Carlos Viteri outlined it, moving towards this ideal of sumak kawsay necessarily implied neither departure from identity nor departure from place, but instead the maintenance and strengthening of both. Viteri's account suggested a formal ontology in which fully developed forest life has "always already" ([58], p. 199) existed. This different set of assumptions about the forest's state of development probably owed to a Runa theory that the forest is constituted by the inter-relations among many kinds of living selves, which are themselves figured as people (Runa) [58]. Seen in this way, the forest is like a city, full of people, rather than empty. This helps explain why Viteri [44,55] insisted that sumak kawsay shouldn't be thought of as a species or kind of development (e.g., "indigenous development") that would assume a natural state of emptiness and lack, but rather as a conceptual alternative in which there is assumed to be an already developed world potentially threatened by forces of de-development.

"While the elites embrace chimeras", Viteri ([55], p. ii) remarked, "the Amazonian nationalities maintain their own quotidian dynamics." Leveling a critique from the dignified position of another "always already developed" society was tantamount to Runa claiming the same idea that the West has historically made about itself [59]. Viteri's work helped clarify and amplify sumak kawsay as part of an exit strategy from a conceptual impasse in which Runa people "couldn't win"—-developing while de-developing. Viteri's early statement in a 1993 publication ([54], p. 150) that "There is no good living without good land" [*no hay sumac causai sin sumac allpa*] indicated that the sumak kawsay concept was closely tied to struggles for land and autonomy in Pastaza, a process that involved defining indigenous nationalities and territories that the state didn't recognize, as well as conceptualizing how governance might work within and among them once established [41].

In the late 1990s and early 2000s, sumak kawsay was taken up by key organizations in the national indigenous movement [46]. As a result of their advocacy, the term came to be adopted by Rafael Correa's winning political party in 2006, and in 2008 was made into a guiding concept of the nation's new constitution. Carlos Viteri went to work heading the government's Institute for the Eco-Development of the Amazonian Region (ECORAE), and he became a supporter of expanding the oil frontier. Meanwhile his home community of Sarayaku continued to resist oil operations. National sumak kawsay took on a more conventional shape,

re-conceptualized from the state's perspective. In the constitution, sumak kawsay lost its semantic connection to a concept of an already-developed life, and was instead figured as a national aspiration, as in the Preamble of the Constitution [60]: "We women and men, the sovereign people of Ecuador ... Hereby decide to build ... A new form of public coexistence, in diversity and in harmony with nature, to achieve the good way of living, the sumak kawsay." It became a term that any Ecuadorian could define more or less as one wished. With the government promoting some meanings over others, the term morphed into a key—and highly flexible—philosophical concept and slogan for the transformative ambitions of President Rafael Correa's "Citizens' Revolution." In government documents such as the National Plan for Good Living, sumak kawsay is represented as a horizon to be reached at the end of a revolutionary process of ecological modernization (e.g., [61]). "The Socialism of Sumak Kawsay", according to a leading government intellectual, René Ramírez-Gallegos, is the endpoint of a three-phase process: from neoliberal capitalism, to socialism with markets, to the socialism of sumak kawsay [62].

This governmental discourse thus rendered a statist reinterpretation of the term sumak kawsay along the lines of "Ecuadorian development", focusing on what Ecuador might become in the future, rather than on the question of how certain kinds of advancement might or might not destroy what is already developed. Not unlike the Biblical translation of "sumaj causai", national good living policy has emphasized an evolution and a providential peace to be reached. Situated within an imagined community (that of the nation-state), the term has tended to be used quite loosely and abstractly, and often without reference to the places it emerged from, like the forests of Pastaza, or the critical literatures of indigenous scholars such as Viteri. Most importantly, the Ecuadorian government's continued claim to have ownership of all subsoil resources [63], such as the crude oil under Sarayaku, has reasserted a familiar "can't win" situation—where the sumak kawsay of the nation-state is based on loss of healthy forest, and the displacement of Pastaza indigenous peoples, for industries such as oil, timber, mining, and cash farming [64].

In the above sense, the articulation of sumak kawsay and its subsequent re-articulation or part co-optation by other interests evokes the image of a classic double bind, but the story is not yet over. The wide circulation of this Quichua term has opened new channels and possibilities for communication. In some ways it represents a kind of globalizing of indigeneity, or a call for indigenizing the globe [65]. Bolivia adopted a concept similar to sumak kawsay into its constitution one year after Ecuador, spurring international dialogues, and good living is now a mainstream, if often loosely used, reference concept in Ecuadorian public development planning and civil society discussions. Academic articles referencing sumak kawsay number over 1200 [56]. It also has shared many of the features noted by Li [28] of successful articulations of indigeneity: audibility within a pre-existing discourse, resource

competition, local political structures, a local-state contest, a capacity to articulate identity to outsiders, and urban activist interest.

As Charles Hale ([66], p. 184) notes of indigenous struggles in Central America, "Paradoxically, among the most daunting obstacles is [now] not repression or denial of rights, but, rather, partial recognition and the bureaucratic-political entanglements that follow". While a conceptual hurdle was jumped, the problem of the state's monopoly on violence and subsoil resources has been harder for Runa to challenge, and sumak kawsay has probably had as many ramifications outside as inside Ecuador. This also aptly prefaces our following case study, in which United Nations REDD and REDD+ programmes, announced as tools to mutually serve the interests of indigenous communities and meet conservation and climate change goals, have in practice been accompanied by and hold the potential for further considerable undesirable consequences for indigenous communities. The conception and objectives of these programmes arguably capitalized upon the growing acceptance of indigeneity as a legitimate identity and (in a further double bind) capitalized upon the success of indigenous peoples in articulating and justifying claims to land and resource rights and to support from international finance for conservation and development. Despite initial, cautious interest in the potential benefits of REDD+ for forest peoples, many indigenous leaders and organizations have become increasingly outspoken about the limitations and risks of the programme, thereby anticipating and pre-emptively confronting future double binds that may result from the programme's implementation.

4. REDD Programme, Peru and Ecuador

As the international community has reached consensus about the anthropogenic origin of present global climate change, efforts to craft global responses and policy solutions to combat climate change have intensified. In December 2015, 195 nations attending the 21st Conference of the Parties of the United Nations Framework Convention on Climate Change adopted the Paris Agreement, setting a long-term objective to hold the increase in global average temperatures "to well below 2 °C above pre-industrial levels" ([67], p. 3, Article 2.1). This is to be facilitated by a (non-binding) collective commitment of a minimum of USD 100 billion in new climate finance per year starting in 2020 to support developing countries' mitigation and adaptation. At least some of these funds will go to "policy approaches and positive incentives for activities relating to reducing emissions from deforestation and forest degradation" ([67], p. 6, Article 5.2), building upon and extending the existing UN Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (REDD) [68]. Proponents of REDD, as well as the updated REDD+ programme [69], the remit of which has been expanded to include "conservation, sustainable management of forests and enhancement of

forest carbon stocks," [70] have often touted these policies as producing "win-win" scenarios. These are seen as having the potential to simultaneously reduce a major source of global emissions[1] and benefit forest protectors—those that reduce deforestation and degradation—perhaps especially indigenous peoples in the global South.[2] As example, the US-based Environmental Defense Fund has suggested that REDD+ "promotes development for indigenous communities by creating new sources of income to improve living standards while maintaining traditional ways of life" and that "indigenous peoples must not only play an active role in developing and implementing REDD+ programmes, but must also receive the majority of benefits from these initiatives" [79].

The very existence of this programme and the international funding it entails speaks to the strength of developing countries positions about differentiated responsibilities, as well as the demands of international indigenous movements to justice and benefit-sharing from international conservation and development. Despite possible opportunities and benefits, many indigenous peoples and indigenous organizations have questioned and critiqued the programme, especially the threats to land security that might result from its implementation. In many forested areas, indigenous peoples continue to struggle for formal recognition and title to customary lands, and a dominant concern of many indigenous organizations, such as the International Indigenous Peoples Forum on Climate Change, is that the monetary incentives from REDD might prompt powerful actors (including the state) to claim those lands or otherwise marginalize or negate indigenous land rights claims [80–86].

This section draws on national indigenous federation statements as well as ethnographic fieldwork in Peru and Ecuador to examine the ways in which indigenous leaders and organizations are anticipating and critiquing potential double-binds that might result from REDD and REDD+.[3] In South America and elsewhere, indigenous leaders have cautiously assessed and in some cases pursued pilot programs to benefit from REDD+ (as well as related, or precursor, initiatives regarding "avoided deforestation" and payment for ecosystem services). For example, the indigenous Paiter Suruí of the Brazilian Amazon were the first such peoples to not only seek out but receive REDD+ credits, with the Chief remarking

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[1] The Intergovernmental Panel on Climate Change (IPCC) estimated in 2007 that 17% of carbon dioxide emissions could be attributed to deforestation; recent studies have estimated that around 10% of global emissions are due to tropical deforestation [71].

[2] For discussion of "win-win" expectations associated with payment for ecosystem services (PES) programmes more broadly, see [72–78].

[3] The findings from this section draw primarily on 18 months of ethnographic fieldwork carried out in Peru and Ecuador in 2011 and 2012 by Lauren Baker, supported by the Inter-American Foundation Grassroots Development Fellowship.

that "REDD+ is a bridge between the indigenous world and the non-indigenous world;" "it creates a vehicle through which the capitalist system can recognize the value of standing forests, and indigenous people can be rewarded for preserving them" [87] (and see also [88,89]). Yet several years later, other Suruí leaders reportedly denounced the programme for creating divisionism and failing to produce promised benefits [90]. Similarly, in Peru and Ecuador, a number of indigenous leaders were initially drawn to the potential financial benefits promised by REDD+, but have adopted a more critical stance after learning more about the initiative, perceiving a number of embedded threats.

In Ecuador, the Confederation of Indigenous Nationalities of the Ecuadorian Amazon has strongly critiqued REDD and REDD+, and suggested that such policies will violate "our rights to lands, territories, and resources, steal our land, cause forced evictions, prevent access and threaten indigenous agricultural practices, destroy biodiversity and cultural diversity, and cause social conflicts" ([91], p. 57). The Ecuadorian NGO *Acción Ecológica* has also taken a highly critical stance toward REDD+, organizing gatherings and trainings for indigenous leaders and other interested parties about the dangers and immoralities of carbon markets. For example, in August 2011, *Acción Ecológica* organized a workshop on "green capitalism" in the national capital of Quito. This focused on the ethical and moral dimensions of creating markets for biodiversity, water, and ecosystems services, particularly carbon markets and REDD. A central conclusion of the workshop was that it was "immoral and antithetical" to "commercialize life" and for northern polluters to clean their conscience and continue to emit by paying those in the south to curtail their own activities.

NGO positions, such as this one, both informed and were informed by positions taken by individual indigenous communities and organizations. Ecuadorian indigenous leaders from the community of Sarayaku have, for example, critiqued Ecuador's pilot programme for REDD+, *Socio Bosque*, as explained in August 2011 meetings between these leaders and indigenous leaders visiting from Peru to discuss REDD+ and ecosystem services payments, more broadly. *Socio Bosque* was launched in 2008 to provide annual economic incentives (roughly $30 per hectare) directly to indigenous communities and other forest owners for protecting their forests [92,93]. According to the indigenous leaders from Sarayaku, communities that had participated in the initiative were outraged that limitations were placed on traditional activities like cutting wood and cutting palms and that permission was required to use their own resources. They also raised concerns that communities received money in an up-front lump sum but might be asked to return the full monies if they were deemed to have violated the seventeen clause contract, which could result either in indebtedness or loss of land. One leader also expressed discomfort at the issue of surveillance—that electronic monitors were placed in treetops to measure

carbon emissions and that people in New York could use programs like Google Earth to monitor their investments in Quichua forests.[4]

The Peruvian national indigenous federation, AIDESEP (the Inter-Ethnic Association for the Development of the Peruvian Rainforest) also took a critical stance on REDD+, suggesting that REDD+, as it currently exists, "is a danger to [indigenous] peoples and to humanity" ([94], p. 14) given that "contaminating companies . . . will continue contaminating" under its remit, while "the contracts will control the life of the community in relation to the forest . . . it will control the extraction of products, logging for subsistence [purposes], hunting, construction of new farms or homes, etc." ([94], pp. 13–14). To spread the word about these dangers, AIDESEP organized a series of workshops to analyze and critique REDD+. One such workshop was held outside the city of Iquitos in the region of Loreto in the northeast Peruvian Amazon; the April 2012 workshop was entitled "Territories, Forests, and Indigenous REDD+ in Loreto." This workshop emphasized the potential dangers of REDD+ given the incomplete and inadequate land titling processes in Peru (especially the Peruvian Amazon) and the dangers associated with "carbon cowboys", "pirates, scammers, and new contracts"—unscrupulous outsiders that entice indigenous communities to sign carbon-related contracts with the potential to undermine their land security or community interests in the long term (see, e.g., [95–98]). The workshop also reinforced their broader position in favor of what they called "Indigenous REDD+", a platform that emphasized the need to complete indigenous land titling before the country goes forward with consideration of initiatives like REDD+. The promotion of initiatives like "Indigenous REDD+" suggests that, reservations aside, indigenous peoples are not totally closed off from considering REDD+ as a means to benefit their communities, but would like to see substantive changes in the programme, national legislation, and international climate finance to ensure that REDD+ respects or promotes rights, rather than violates them [99,100].

These exchanges, materials, and trainings resonated strongly with indigenous leaders like Alfonso Lopez Tejada, the president of the Cocama Association for Development and Conservation San Pablo de Tipishca (ACODECOSPAT). Throughout much of 2011, Alfonso Lopez would have been first to acknowledge that although he may have heard of REDD, he did not know enough about the associated policies to take a position on its merits. In July 2011, Lopez noted in an informal conversation that he had thought of REDD as a potential source of income, which community members' desired to buy items like soap, medicine, shoes, or

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[4] The strict veracity of this claim is questionable, but the sentiment speaks to the acute discomfort at placing indigenous communities under increased scrutiny from wealthy Northerners if they choose to accept incentives for forest conservation.

educational materials. However, given that many of the Cocama communities in the area are situated within the national park, Pacaya Samiria, which is legally state owned, Lopez questioned whether money from REDD would go to the communities or instead the state. Moreover, after discussing the promises and shortcomings of REDD with other indigenous leaders and advisors, Lopez came to understand that REDD+ projects and monies would likely be accompanied by other drawbacks and thus adopted a more critical stance, communicating to others in ACODECOSPAT that REDD+ was to be viewed with extreme caution. In an August 2011 meeting with the leadership board of the federation, Lopez emphasized that "the carbon market is a threat for indigenous peoples" given the strict contracts to "not kill another tree" and the tendencies toward closely monitoring their activities. He asked: "if we defecate in the forest would they know? Do we want to be controlled? The tree is not in the air—it is in the land . . . This is the empowerment of those that have money to the forests."

In October 2011, Lopez presented a similarly critical stance at the annual congress of the federation, attended by representatives from 53 of the 57 communities comprising the federation. Here he suggested that if the communities accept money from REDD, then:

> large transnationals will not worry about stopping [their own] contamination . . . but nonetheless want to obligate us to stop doing what we know how to do and to take our forests and our territories . . . the activities that we carry out in these forests will be controlled . . . From the other side of the world they can control [us] and know what we are doing . . . we cannot permit this.

Lopez went on to note that:

> these concessions are for 40 years . . . this means if you sign a 40-year agreement now . . . that a child that is born now at 40 years old will not have access to this forest—will not have rights to access and use his resources as we know how to use them—in exchange for one-thousand soles [~USD $300]?![5]

Lopez's personal transition from initial interest in REDD and REDD+ as a form of potential income or social support to taking a strong anti-REDD stance was significant in shaping the position of the broader federation, which represents 57 Cocama indigenous communities in the northeast Peruvian Amazon. Moreover,

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[5] These quotations derive from transcripts made by Lauren Baker as part of her ethnographic research, 2011 and 2012.

the evolution of Lopez's thinking on REDD+ parallels the arcs in thinking and activism of a number of other indigenous leaders in the region.

The shifting indigenous positions on REDD+ demonstrate how an initiative designed with indigenous communities as one of the primary intended beneficiaries is being analyzed not only for its opportunities, but also the potential double-binds that may accompany financial incentives tied to forested lands and resources. Rather than accept the premise that REDD+ would bring money to communities, or even that development comes with money, indigenous debates and discussions yielded a plethora of practical, ethical, and structural concerns with the programme. Indigenous leaders have been particularly outspoken about the potential risks of losing land or curtailing resource use, including for local income or subsistence purposes, while simultaneously placing indigenous people under the gaze of northerners for extended contract durations. Indigenous critics have also denounced the programme for giving the primary "polluters" in the north a social license to continue to emit and to feel a degree of ownership over southern forests. This is doubly problematic in that it undermines the credibility of REDD+ in pursuing global emissions reductions while also giving a sense of superiority and control over indigenous peoples and other forest users.

In our final case study, drawing upon ongoing fieldwork and interviews in Bristol Bay, Alaska, we examine a diverse coalition of native and other interest groups opposed to a large scale mining development that threatens a renowned salmon fishery, both economically and culturally valued. In their opposition, this coalition has drawn on outside technical assistance from NGOs in the presentation of sophisticated counter-mapping to support their position, and here it is possible to posit an emergent double bind involving the risk of engendering a mapping "arms race" in competing directly with state actors and promoting dependence upon outside technical assistance from organizations whose own agendas and programmes may not always be fully congruent with the goals of the coalition. This is a salient observation given the above-discussed adversities associated with the multiple agendas of the REDD and REDD+ programmes, and the observations of scholars such as Brent Berlin and Elois Ann Berlin [101] who illustrate how NGOs may sometimes arguably co-opt the voice of indigenous peoples.

5. Pebble Mine, Alaska

The proposal to mine the largest known undeveloped copper ore body in the world (commonly termed "the Pebble Mine" prospect) in a watershed also home to the largest sockeye salmon run in the world has engendered heated debate over future natural resource utilization in Bristol Bay, southwest Alaska. The Pebble Mine prospect is located on state-owned lands in the headwaters of Bristol Bay, which hosts both a major commercial fishery, and extensive subsistence fishing by

residents of the rural region, most of whom identify as Alaska Native. The scale and scope of the proposed open-pit mine is such that, if built, it would be among the largest of its kind globally. This has galvanized opposition among an unlikely coalition of environmentalist, commercial and recreational fishing, and Alaska Native groups, with US Environmental Protection Agency (EPA) involvement and boycotts by transnational jewelry companies, placing the issue prominently on the national and international stages, also attracting attention from prominent environmentalists such as Robert Redford. At the center of the debate is the question of how the territory and its resources should be managed, hinging upon how the territory is defined. Is it an area of rich, needed mineral deposits, or a vital watershed that is one of the world's last "wild salmon strongholds" [102]?

Key to this has been the mapping of territory carried out by the Alaska Department of Natural Resources (DNR) in the 2005 "Bristol Bay Area Plan" (BBAP) and the counter-mapping by a collaborative group of non-governmental and native organizations. In the contest over legitimate environmental knowledge in Bristol Bay, mapping has thus emerged as a critical arena. The BBAP, serving as the master document in a regional planning system originating in 1984, employs maps to classify territory according to current uses and future best-use determinations. It concentrates on state-owned lands in Bristol Bay, including tidelands, encompassing a total 48 million acre area ([103], pp. 1–3). Since their publication, these best-use land determinations have taken on new significance in the intensifying debate over mineral development in the region. Scrutiny by local residents revealed changes to the BBAP that had been quietly introduced into the 2005 version, differentiating it from the original 1984 document. The resulting controversy was such that in 2009 a group of plaintiffs including six Bristol Bay tribes, a commercial fishing organization, and the environmental organization Trout Unlimited, sued the DNR, which settled out of court in 2012 and agreed to revise the BBAP based on a public process [104].

The primary point of contention was that the 2005 plan reclassified portions of land in Bristol Bay from reserved fish and wildlife habitat to other uses—and in the area of the Pebble claim, the land had been reclassified to mineral extraction as the primary use. In addition, the DNR was widely regarded as having allowed little to no input from important stakeholders, with the process of formulating the plan judged by local community members as decidedly less inclusive than the original 1984 plan. On being interviewed, a staff member from a region-wide Native organization outlined the differences seen in the 1984 and 2005 plans:

> The 1984 plan was very much a locally-based plan. A lot of community involvement went into drafting that plan and it seemed like it was developed without much controversy . . . In 2005 when the DNR revised the plan . . . people were not very actively recruited to be involved...It

was very much a DNR-administration-developed plan, not a people-, resource-, land-users-developed plan.

In 2005, a group comprising local tribes and national and international NGOs formulated "The Citizens' Alternative Bristol Bay Area Plan for State Lands" (henceforth "Alternative Plan") to address perceived flaws in the DNR plan [105]. The architects of this Alternative Plan intended it to rectify both procedural and content criticisms leveled at the DNR's plan. According to Trout Unlimited (one of the groups that co-funded the project), "the Citizens' Alternative relies on science and better mapping to designate primary [land] uses and improve public participation" [106]. The mapping for the Alternative Plan saw an increase in habitat and wildlife designated areas and placed subsistence as a primary land use category, restoring recognition of the relationships between people and land in planning documents that many believed were disrupted by the DNR's 2005 maps. In effect, the Alternative Plan made visible that which the DNR had made invisible (see Figure 1 for a spatial comparison). This was accomplished by a more participatory consultation process as well as extensive mapping of salmon-bearing streams, an inventory of resources in the area and their attached values.

By mapping a territory, it is made known, quantifiable and controllable in a way that reflects the interests, purposes and perceptions of the mappers [107]. Historically, Angele Smith ([8], p. 51) observes that "an interest in maps reflects a state of...uncertainty, turmoil, and contestation", in which mapping, often in colonial contexts, has been "a tool of the state for legal appropriation of land, for military security...and for economic purposes such as taxation and resource exploitation." Such a description remains apt in the era of digital mapping, and the Alternative Plan thus represents a notable instance in which the application of the "master's tools" [35] have been scrutinized by the subjects, and then applied effectively as a means of resistance against state actors more characteristically and historically endowed with the resources and claims to authority in mapping and defining the land.

Though these efforts have been clearly fruitful, several longer-term concerns emerge from this counter-mapping approach. Just as the DNR's plans and tactics have had unintended and unplanned consequences, so may the plans and tactics of those who initiated this counter-mapping, including those characteristic of a double bind, that may act to bolster the very conduct the Alternative Plan was created to resist. By using the metrology introduced by the DNR in the counter-mapping, those who carried it out have in part acted to reify rather than question this approach to rendering the territory legible. The maps that the Citizen's Alternative drafted, being based on the DNR's methodologies, carried with them an abstracted, enumerating, and classifying view of the area. The problems of abstracted planning were not lost on Bristol Bay locals, with one interviewee noting:

what is wrong with government planning is that they deal in abstraction and the human face of those abstractions is lost. They compare the cost of fuel in Dillingham to the cost of fuel in Anchorage and they don't see the old man walking just to get 2 gallons of stove oil—that old man's face is just lost in planning, lost in statistics.
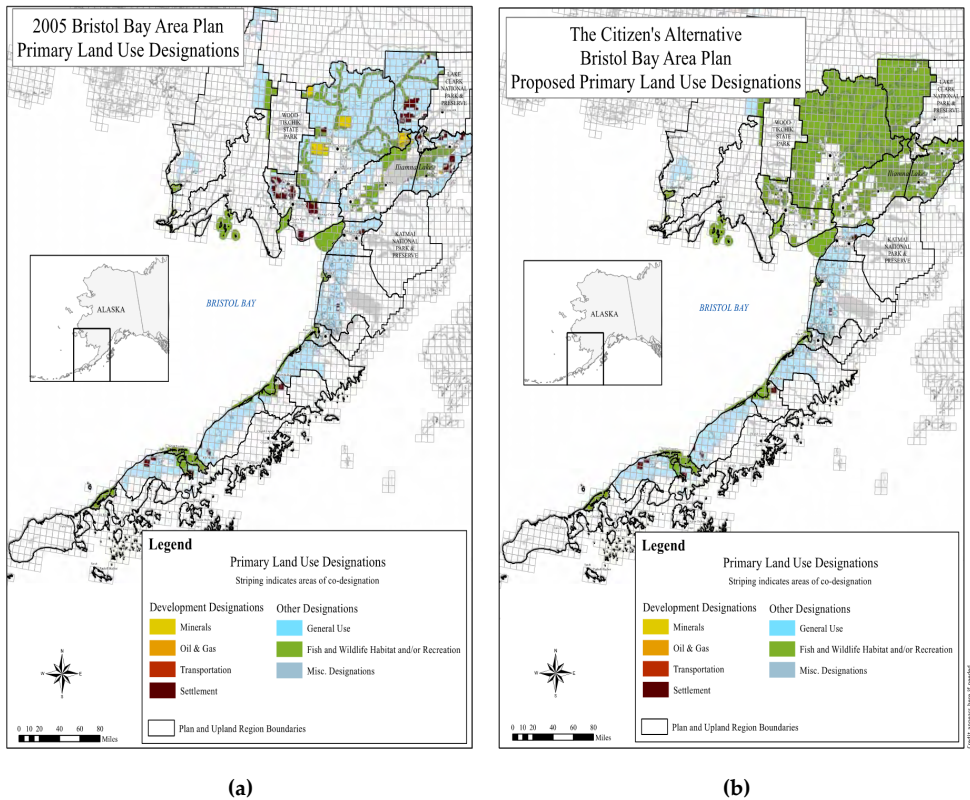
Figure 1. Land use designations in (**a**) 2005 BBAP and (**b**) Citizen's Alternative. Fish and wildlife habitat areas are shaded in green in both (from a PowerPoint presentation prepared by Wild Salmon Center, 2013, reproduced by permission from the Citizens' Alternative Bristol Bay Area Plan).

The creation of the Alternative Plan corresponded with increased NGO and charitable foundation activity in Bristol Bay due to the international attention attracted by the Pebble Mine prospect. The Alternative Plan was supported financially in large part by the Moore Foundation, which has an international programme focused on preserving salmon-bearing waterways. Producing a 200-page document and carrying out consultations in communities was a resource-intensive

undertaking, necessitating significant financial support as well as the expertise associated with the technical aspects of the exercise. Even though these efforts seem to have met success in resisting the DNR's plan, they raise questions about the ongoing ability of, for instance, southwest Alaskan subsistence fishermen to fund future counter-mapping initiatives that successful environmental claims-making has demanded in Bristol Bay. Further, while opposing the DNR's planning attempts, the Citizen's Alternative effort could ultimately serve to shore up DNR's claim to be the legitimate state body for planning and permitting. Other strategies of, for example, setting up multi-stakeholder planning oversight on the DNR's planning activities or even shifting the planning process to another state department have not been addressed. If the DNR's authority in this arena is not questioned, an "arms race" of cycles of mapping and counter-mapping may become the norm, perhaps leaving those in rural regions like Bristol Bay beholden in a double bind to major funders to establish the frames for risk and value that motivate the calculation and classification of natural resources.

6. Conclusions

Far from fixating on how to best fit the "tribal slot" [28] and its associated, expected behaviors, the indigenous actors reviewed in our case studies are taking greater ownership of strategies earlier used against them, chief among them outsiders' perceptions of indigeneity. This has required the continual evolution of strategies and tactics to address challenges that initial successes springing from the adoption of indigeneity as an identity has not solved (and may have in some cases contributed to, in unanticipated double binds), not least the inadequacies, subversion and other adverse outcomes of policy, legal and constitutional provisions nominally intended to recognize and protect indigenous rights and cultures (e.g., [108–112]).

For scholars of indigeneity, the imbrication of the indigenous in the theory of indigeneity has a number of implications. First, it problematizes the view of the global as post-local, post-indigenous. It argues for a theory, not of "indigeneity around the globe" but instead of "global indigeneity", as the title of this special issue suggests. Second, it problematizes and destabilizes persistent assumptions about the divide between academic theory and academic subjects. Finally, to return to Bateson, it imposes a "double bind" upon scholars of indigenous peoples: if we critique the idea of the indigenous, this may in turn harm indigenous peoples in ways not wished for or even anticipated. One of the paths that Bateson offered out of the double bind is meta-communication, or communication about communication–which in this context would consist of those who deploy the term indigenous, explicitly discussing how and why the concept is and is not deployed.

The need for such meta-communication is urgent, not least concerning the contribution it may make to the welfare of urbanized or peri-urban indigenous

peoples and communities who have particularly struggled to gain recognition from policy makers and state actors for whom the concept of indigeneity still cleaves (whether from inertia or convenience) to a traditional image of rurality. As Hannah Moeller ([111], p. 201) states in relation to the UN 2007 Declaration of Rights for Indigenous Peoples, "postulating the 'indigenous' evokes preservationist tactics, meriting value through classification and boundaries" in which "Textual and spatial definitions assert control . . . that may inhibit, not enrich, the conservation of indigenous cultural heritage". Of the Bolivian legislation introduced in response to the Declaration, she further notes its "distinctly rural spatial demarcations . . . " that "...avoids predominant indigenous populations living on the periphery of urban centers as a result of post-colonial migration" ([111], p. 201). Ryan Walker and Manuhuia Barcham ([113], p. 314) similarly note that struggles for autonomy and rights among urbanized indigenous peoples in Canada, New Zealand and Australia are impeded because "The place of authentic indigeneity in the public perception has remained outside of urban areas". That poverty among people who "qualify" as indigenous is often perceived as being different in character, more worthy or obligatory of remedial action, than poverty among other groups, such as indigenous people in urban contexts [114], signals both the continuing potency and problematics of the concept in its utility in indigenous struggles.

In these struggles, it is clear that indigenous peoples can if they choose continue to build upon the gains and opportunities brought by the popular, moral, legal and policy recognition of "indigeneity", but meta-communication is again merited to address new impediments to efforts by indigenous peoples to ensure they remain (in both their own and others' perceptions) actors rather than subjects or victims. Illustrative here is Bethany Haalboom and David Natcher's ([115], p. 319) examination of the increasing labelling of Arctic indigenous communities by scholars as "vulnerable" to climate change, a label that comes with adverse connotations, and "has the potential to shape how northern indigenous peoples come to see themselves as they construct their own identities [and]...ultimately hinder their efforts to gain greater autonomy over their own affairs". The self-conscious positioning of many indigenous peoples as overt actors, in which indigeneity-as-identity is not necessarily abandoned but reworked (as by indigenous scholars who argue against conceptions of indigenous cultures as unchanging and static [17]), appears crucial. It allows strategies of resistance to evolve and escape from double binds, as in our case studies, as well as other cases wherein indigenous peoples are now vying directly with state and transnational actors in the production, interpretation and representation of information and knowledge, and challenging through the courts the inadequacies of legal and constitutional changes enacted with rigid, skewed, partial or subverted understandings of indigeneity as an identity and of indigenous concepts such as sumak kawsay.

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China's Indigenous Peoples? How Global Environmentalism Unintentionally Smuggled the Notion of Indigeneity into China

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Abstract: This article explores how global environmental organizations unintentionally fostered the notion of indigenous people and rights in a country that officially opposed these concepts. In the 1990s, Beijing declared itself a supporter of indigenous rights elsewhere, but asserted that, unlike the Americas and Australia, China had no indigenous people. Instead, China described itself as a land of "ethnic minority" groups, not indigenous groups. In some sense, the state's declaration appeared effective, as none of these ethnic minority groups launched significant grassroots efforts to align themselves with the international indigenous rights movement. At the same time, as international environmental groups increased in number and strength in 1990s China, their policies were undergoing significant transformations to more explicitly support indigenous people. This article examines how this challenging situation arose, and discusses the unintended consequences after a major environmental organization, The Nature Conservancy (TNC), carried out a project using the language of indigeneity in China.

1. Introduction

This article explores several conundrums around the role of China in the global landscape of indigenous rights. How did it come to pass that environmental organizations, historically regarded as adversaries of indigenous peoples, tried to expand the indigenous possibilities for one group, especially in a country that officially and resolutely denies the existence of indigenous people? The article explores how environmental organizations began to incorporate indigenous concerns only after a long struggle, and shows how their efforts in China encountered unexpected challenges. In particular, it explores work by The Nature Conservancy (TNC), the world's wealthiest environmental organization, and how it negotiated a social landscape that would ultimately prove daunting. Chinese scientists expected that government officials would challenge TNC, but even their Chinese staff ended up questioning their employer's intentions.

China is an especially fruitful place for the study of indigenous rights for two reasons. First, there is little grassroots support and much official opposition to the category, which makes obvious that its emergence is often difficult and always political [1–4]. Second, although Tibetans in China are the one group that could most easily attain recognition as indigenous by international organizations, they are either largely unaware of the possibility or uninterested in this status [2,5]. Combined, such dynamics enhance our understandings of indigeneity because the vast bulk of studies are carried out in places, like Latin America, where the category has been largely naturalized. The case of Tibetans also brings into question common teleological assumptions about indigenous recognition, specifically that groups always want to be recognized and that this represents the most promising status toward which to aspire.

This article employs a notion of indigeneity that argues for its intrinsically political qualities and its international orientations [6,7]; thus, I do not take it as a natural category. In the course of my research over the last twenty years, I have been asked many times: are there indigenous people in China or not? My answer has always been that it depends. The term is almost always understood as a natural category and the expected answer is either affirmative or negative: do any groups in China meet the criteria commonly expected of indigenous peoples? I argue that indigenous status is a political category. Identifying with the category of indigenous is a political strategy as much as it is an identity.

Although authoritative organizations such as the United Nations (UN) often include Chinese groups in surveys of the world's indigenous peoples, few groups in China have attempted to position themselves as indigenous. Thus, while they may be included in this category by the UN, they do not necessarily self-identify in this way, nor even know that others view them as such.[1] Viewing indigenous people as a natural category does not account for all of the effort it takes to be recognized by national governments and international forums as indigenous, nor the complex identity-formation processes that happen (or do not) at the local level.[2] In many cases, nation-states refuse to recognize an indigenous status as it seems to imply that their sovereignty is superseded—or at least questioned.

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[1] The Global Environmental Fund indirectly acknowledges that the Chinese state does not recognize indigenous status but nonetheless affirms their status: "there are more than 370 million recognized indigenous people in 70 countries worldwide. Indigenous peoples are also recognized [as] ethnic minority in some countries. For example, the majority people in 60 per cent of land in China are ethnic minorities" [8].

[2] My approach should not be conflated with a social constructivist argument that sees the indigenous category as misrepresentative and dangerous, such as that argued by anthropologist Adam Kuper [9]. Rather, like the vast majority of anthropologists, I see the category of indigenous people as containing greater likelihood for generating social justice than for fostering social oppression, although I acknowledge instances where this is not the case (i.e., [8]).

A political approach explores the work of articulation of indigenous status with existing social and political ideas, laws, and institutions [7,10]. To become indigenous, as participants in a political category, groups must be "positioned" with solidarities, rights, and participation in a dynamic social movement [11]. As political scientist Courtney Jung argues, we must learn to rethink indigeneity in ways quite different than usual:

> Far from acting as a defensive retreat to the local and traditional in the face of external threat, indigenous identity constitutes an entitlement to participate in global political dialogue. Indigenous identity is a resource that allows millions of the world's poorest and most dispossessed to challenge the terms of their exclusion. Indigenous identity is a political achievement; it is not an accident of birth ([7], p. 11).

Thus to extend Jung's reference to Simone de Beauvoir ("a woman is made, not born"), Jung suggests that indigenous people, as political actors, are also made and not born. It takes conscious and consistent work to make such political achievements. Whereas a natural category approach treats indigeneity as timeless, a social approach tends to view such categorization as relatively recent. Looking at places other than where the concept of indigenous peoples was developed (such as the Americas) allows us to see the efforts of groups to articulate themselves within a global indigenous movement without assuming they were or were not indigenous in the first place.

The second main argument here is that the political notion of "indigenous people" is always transnational [12]. Jung's statement shows that instead, indigenous people have often been considered one of the world's *least* transnational actors. This is especially true when approached as a natural category, when it is assumed that part of what makes someone indigenous is their continued presence in their ancestral homeland. By taking a political approach, however, one can compare categories generated at national and global scales. National categories include the status of being "Indian" in places such as Peru or Canada, and "aboriginal" in Australia, which are shaped by a long history, sometimes centuries, of nationally specific laws, treaties, and negotiations. Such categories were often used by settler governments to limit native peoples' rights and possibilities. Globally oriented political categories, such as "indigenous people", on the other hand, are quite recent, only gaining serious support in the 1970s and 1980s as native groups from around the world met under the banner of indigenous peoples. The notion of indigenous people is not pushed by governments but generated by native groups and their allies. They work to argue for a sense of shared history, and they craft shared political aspirations, mainly working in spaces that explicitly address global concerns, such as the United Nations and the International Labor Organization (ILO). "Indigenous peoples" as a political category

is still being made through transnational connections, and people who work in its name continue to work at a global level. As a category it is potentially powerful, in part because it is connected to massive networks of people working creatively to enact social change.

Attaining political force is not automatic or easy: making indigenous people into a political category with social traction has required diverse and persistent efforts and continues to do so. The same could be argued for any political category.[3] In this particular case, it takes sustained effort to generate and cultivate the force of what I call an "indigenous space" a zone of re-thinking and re-making indigenous presence that is infused with questions of rights [13]. In China, Janet Sturgeon suggests that the term indigenous and its meanings are hotly debated, and are rarely used by rural groups themselves [1]. Making an indigenous space is often quite difficult; in many countries those arguing for indigenous status have often become impoverished and socially marginalized as the result of long histories of exclusion, dispossession, and ongoing violence [14].

The notion of indigenous space is used both literally and metaphorically. Literally, this concept is related to Renya Ramirez's notion of 'native hubs,' such as in California's Silicon Valley, where native peoples from across the country and even hemisphere meet at places like kitchen tables, political rallies, pow wows, and art shows to interact in convivial spaces and expand a sense of political possibility [15]. One can also apply her notion of hubs to understand how they are also created in places such as Geneva, where dozens of indigenous representatives meet and strategize plans for change internationally as well as in their home countries [16,17].

Metaphorically, enhancing an indigenous space refers to diverse efforts to improve the status of indigenous peoples at several levels: not just loud and highly visible forms such as protests and demonstrations, but also the quiet and often invisible work of rewriting legal regimes; programs to improve health, wealth (including but not only land claims), housing, and education; efforts to repatriate bones and burial objects from museums; and the expansion of a positive presence in public discourse, formal education, media, and other realms. This is challenging work, for in many cases, colonial legacies have been dire. Thus, enhancing an indigenous space is a massive and continually unfinished project with many setbacks and much opposition, but one that, especially in the last few decades, has seen continued and often surprising progress. On the other hand, whereas many scholars believed that all groups potentially able to articulate themselves as indigenous,

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[3] I spent 18 months of continual fieldwork in two rural NGO project sites and combined this with archival study, and a raft of interviews with Chinese and expatriate scientists and NGO staff. This expanded my knowledge gained in teaching at a university in Kunming in 1995 and 1996, which was also supplemented by four research trips between 2005–2013.

such as the Maasai and Tibetans, would continue to strive towards this recognition, this might not always be the case [2,11]. This is not to say that such groups have "given up" on efforts to enhance their social position, but that they may not or no longer strive toward indigenous status. They have considered the ramifications of indigenous status and may conceive of the particular set of expectations around this indigeneity as constraints to what they prefer to work toward.

This article mainly draws on my long-term anthropological fieldwork in Southwest China's Yunnan Province, considered the center of China's ethnic and biological diversity, and the site of a dense concentration of foreign NGO projects. The rest of the article has three sections: first, a brief introduction to how indigenous rights entered the sphere of environmental NGOs, despite such groups' reluctance to embrace such issues. Second, it shows how, by the late 1970s, China had newly become open to international involvement and, combined with a panda bear crisis, began what has been one of the most rapid expansions of protected areas in the history of the world. Third it explores the challenges that arose as The Nature Conservancy attempted to carry out projects that dealt with ethnic Tibetans and their neighbors, and how the question of the indigenous inflected these struggles.

2. How Environmental Groups Began to Support Indigenous Rights

In the 1970s, the nascent movements for indigenous rights and for environmental protection were often regarded as conflicting, but by the late 1990s, many people saw these groups as sharing a "natural alliance." How did this new relationship come about? Although one could use the term "smuggle" to describe the ways conservationist activities brought the notion of indigenous politics into China, it does not necessarily imply they were the first to do so, nor does it imply they did so intentionally. Staff in conservation groups did not necessarily want to promote indigenous rights writ large or regard them as desirable. Indeed, many conservation organizations, just as national governments, consider indigenous politics to be "inconvenient" [18]. Whereas now most conservationists view indigeneity as an obligatory dimension to their work that raises additional difficulties, such an obligation only started recently, after a long and contentious history between environmental and indigenous groups [19]. These interactions continue to be strained; the contemporary inclusion of indigenous rights within a conservation agenda has not just been due to the moral self-reflection of conservation groups, but largely due to the widespread and continuous efforts of indigenous peoples, the product of hard work in many venues [2]. When the World Wildlife Fund (WWF), TNC, and other organizations work in China (or in any other country), they also gradually import their notions of indigeneity. It was not that they have become indigenous rights advocates; rather it had become part of their overall structure.

In other words, rather than indigenous rights being a separate or parallel agenda, these were now "baked into the cake" of the organization.

When environmental organizations such as WWF were established in the early 1960s, the question of indigenous rights was far from the horizon: indeed, the term did not yet exist. Groups such as WWF first started to make nature conservation into a dynamic and truly global enterprise. They drew on an earlier imperial legacy, especially by the British and French, to protect large game species they were hunting with abandon in the late 1800s [20,21]. By 1900, delegates from Great Britain, France, Portugal, Spain, Belgium, Germany, and Italy agreed on animal conservation measures for Africa. Around the same time, the creation of national parks in Africa and North America led to the eviction of native groups such as the Lakota and San [22,23]. At the time, there was little outcry against these removals. Such conditions prevailed into the 1970s, when thousands of Maasai were evicted from a conservation area, with little public reaction [24].

By the 1970s, however, two social changes were starting to have a reverberating effect: the rise of civil rights activism (especially the Native American "Red Power" movement but also the Australian "Black Power" movement) and the rapid growth of a new form of grassroots environmentalism. Some groups began to challenge their status as "minorities" within a nation-state to insist on their status as "indigenous peoples" at an international level.[4] Greenpeace, which combined anti-nuclear and peace activism with global conservation, used the image of indigenous people to critique the morals and practices of industrial society; at the same time, however, they showed little regard for indigenous livelihoods [25,26]. Greenpeace drew on a well-established trope of the "noble savage" living in a state of natural harmony, which existed despite a long legacy of colonial dispossession by settlers and the Canadian and American governments. Even the US government drew on this image with its famous "crying Indian" anti-litter advertising campaign in the 1970s.

As these two issues arose in tandem in the 1980s, Latin America became an important global hotspot for both environmental issues and indigenous rights. Indigenous peoples, indigenous advocacy groups, and environmental organizations

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[4] The terminology is significant. The term "minorities" is an older, state-centered terminology, whereas indigenous peoples implies recognition beyond the state. Minorities are often trying to establish their own rights as equals within nations that grant them lower status. Indigenous peoples strive for different rights (often including special programs for education, health, land rights, and so forth) and forge alliances throughout the world. One can see the evolution, in creating the new category of indigenous as separate from "minorities." For example, the Minority Watch Group now issues a report "State of the World's Minorities and Indigenous Peoples." This group includes China in its report but describes people there (primarily Tibetans and Uyghurs) as minorities, not indigenous. At my university, one class uses the title "Comparative Studies of Minority Indigenous Peoples," a term assuming that indigenous groups are always numerical minorities, which is not true in places like Bolivia.

started to form the first strong, yet tenuous, alliances, often coming together to challenge projects funded by the World Bank [19,27,28]. Almost always indigenous peoples took the lead, and they received support and funding from many groups, especially as funds began to flow across national borders.

In turn, indigenous groups pressured the one organization, the International Labor Organization, which had created the only existing international guideline for indigenous rights: the Tribal and Indigenous Peoples Convention in 1957. This convention, which defined indigenous people as "a tribal population whose social and economic conditions are at a less advanced stage than other sections of the national community" aimed for social inclusion into the mainstream, but by the 1970s such aims were dismissed as assimilationist [29]. After more than a decade of hard work, the convention was revised in 1989 to include strong language about the rights of indigenous groups *vis-à-vis* state governments.

Soon after these victories, the World Bank created the Global Environmental Fund (GEF) in response to mounting NGO criticism that "the bank imposed vast dam and water projects on the Third World without regard to their effects on the environment or indigenous people" [30]. This accusation shows how "the environment and indigenous people" came to be seen as two critical global concerns that were connected, rather than separate. As indigenous and environmental groups began to perceive the state in more critical and adversarial ways and saw themselves as sharing some goals, they worked together in zones of "awkward engagement" [31].

In this changing context, indigenous groups were increasingly proactive and made greater demands for participation and rights, putting conservation organizations on the defensive. Unlike thirty years ago, when lower levels of funding meant that indigenous representatives could not afford to travel beyond national boundaries, they now frequently travel, organize, and participate in crafting major global conservation treaties or policies.

Such actions pushed the world's "big three" conservation organizations (WWF, TNC, and Conservation International [CI]) and major donors, such as the GEF and USAID, to take indigenous concerns seriously by the mid-1990s ([32], p. 599). In 1996, WWF and other major conservation NGOs adopted a set of resolutions on indigenous people and established units in each organization to oversee projects specifically for indigenous groups [32]. By this point, NGO activities were being more closely watched and in 2003, participants at a World Parks Congress were surprised by 120 indigenous delegates who challenged mainstream conservation and advocated for indigenous rights [33], including pushing TNC and CI to come up with a written plan addressing the rights of indigenous peoples. The following year, an article in the widely read *World Watch* magazine (published by a leading environmental organization) strongly critiqued the "big three" for "a disturbing neglect of the indigenous peoples whose land they are in the business [of protecting]" ([34], p. 17).

The article, written by anthropologist Mac Chapin, was only one critique out of many launched by indigenous watchdog groups. After reacting defensively in print, WWF undertook a major review in 2007 to investigate its ongoing projects and craft policy that was more responsive to indigenous rights and livelihoods. TNC was not as active as WWF in evaluating its indigenous policies, but was increasingly under pressure to work with, rather than against, indigenous peoples in its environmental projects.

3. How China Became "Environmental" and a Place of Ethnic Diversity

By the time TNC began its work in China in 1998, China had already undergone a substantial shift in the previous two decades from a country opposed to international environmental legislation to becoming a world leader in conservation efforts. At an international conference in 1972, Chinese representatives argued that because pollution resulted from fundamental contradictions in capitalist economies, socialist countries should not be concerned. They regarded such legislation as a way for First World countries to keep developing countries such as China undeveloped [35]. That year, China had finally succeeded, after decades of struggle, to be recognized as the UN representative of China, replacing the Republic of China (Taiwan) and increasing its international presence.

By 1976, however, the PRC's leader for 27 years, Mao Zedong, died and as a result major social changes were able to be enacted. The aspirations of socialist utopianism were quickly tempered, and the notion of "natural limits," previously tainted by association with Malthus and "bourgeois science" was becoming possible to discuss in public. Whereas Mao advocated increased population numbers ("more hands to build communism"), after his death leaders quickly began implementing birth restrictions eventually resulting in China's famous "one child policy." Problems with soil erosion, water and air pollution, and so on were more widely discussed. China moved away from a fairly strict notion of socialism to embrace more market-driven experiments. At the same time, the US dropped its trade embargo, creating new openings for China's international trade and relations.

In 1979, two events happened that opened possibilities for China's negotiations with international environmental organizations. Deng Xiaoping became leader and began a campaign for China to "open up" to the world. In this same year, panda bears faced a horrible famine after a massive area of their sole food source (bamboo) began to flower and die. Especially in the previous decade, panda bears had become a major part of China's international relations strategy, what some called "panda bear diplomacy" [36]. China had a monopoly on pandas: they were highly desirable, the original example of "charismatic megafauna" [37].

The World Wildlife Fund, which also used the panda as its mascot, moved quickly to take advantage of this new situation. WWF had been trying to get involved in panda conservation since the 1960s and was eager to develop projects in China, an

"unknown frontier" for international environmental NGOs. Positive engagements between indigenous advocacy groups and environmental groups had barely started, so such concerns were not necessarily on the horizon for WWF's staff in China.

Although China denied it had indigenous people, it proclaimed itself a land of ethnic diversity. Thus, this was quite a different place than, for example, Bolivia (where leaders declared there were no Indians, only peasants) and Japan (where leaders proclaimed it was ethnically homogenous until the late 1990s, when they finally acknowledged groups like the Ainu and Okinawans). The Chinese government did not proclaim that all rural people were equally peasants or uniformly Chinese, but its form of "communist multiculturalism" declared that it was a land of 56 ethnic groups: about 90 percent ethnic Han and fifty-five "ethnic minority" (*shaoshu minzu*) groups make up the remainder [38].

Despite such ostensible diversity, WWF and other groups encountered a land of strong Han dominance. In the 1980s, almost all of the scientists that they worked with were Han. Conversations with these people and reading Han-generated texts steered the ways expatriates understood China. In China, almost no texts were available that described ethnic minorities in indigenous terms, documented indigenous knowledge, or argued that any of these groups deserved indigenous rights. Instead, ethnic minorities were distinguished from the Han majority, not in neutral terms, but as almost thoroughly negative or condescendingly, as poor, less educated, and superstitious and incapable of understanding science. Although many government programs aimed to improve minzu livelihoods, many Han saw the socially marginalized condition of minzu as the result of intrinsic qualities; poverty, for example, was often said to stem from their inability and refusal to participate in the market economy. These dynamics are quite familiar around the world in terms of majority understandings of minority populations, but China had several distinctions.

Chinese schools taught that the Han were the most advanced group, and described some ethnic minority groups as still in the "primitive stage" of living in communal groups and practicing "group marriage" [39]. These notions of social evolution drew on a mixture of Soviet models of social change as well as older Chinese ideas of social difference [40–42]. Unlike Rousseau's romanticization of the noble savage, the Chinese public did not see any favorable qualities in earlier stages of human development but instead saw a linear model of improvement. Over time, such evolutionary rankings have tended to give way to a more general sense that some groups are more or less "backward" [43].

Expatriate conservationists, such as those working for WWF, TNC, or other groups were often confused by how China classified minzu groups, expecting to use the division, common in the Americas, between Indians and settlers. Thus, for them, they were surprised that "ethnic minority" meant non-Han, as it is a broad category ranging from groups that have lived in present-day China for many thousands

of years to fairly recent immigrants (such as Koreans). They tended to be largely unaware of the level of ethnic diversity in China, knowing little about any group with the one exception of a general familiarity with Tibetans. Of any group in China, Tibetans met many globally circulating expectations of indigenous peoples: poor but also wise; unique in their clothing; and actively but nonviolently engaged in challenging state rule, particularly for the right to practice their own culture. Some knew about Tibetan history, how they were a powerful imperial polity with their own bureaucracy, diplomats, and army [44–46]. Yet, this was not a singular case in the history of the region: other groups now classified as "ethnic minorities", such as the Manchu and the Mongols, had been rulers of China, but few international organizations regard them as indigenous peoples, as they fit less with international expectations for indigeneity than Tibetans.[5]

To make matters even more complicated, these same NGO staff knew that Tibetan issues were politically charged, and for almost two decades environmental groups working in China largely avoided involvement with them. During the 1990s, however, the "big three" (WWF, TNC, and CI) began to work with Tibetans during a period called the "gold rush" of support for conservation efforts. They, and other groups, were pouring millions of dollars into the regional economy but were also humbled in several ways. Although international NGOs working in places such as the Congo could easily outspend and outstaff government offices, NGOs working in China realized that they were relatively insignificant in comparison to the massive government bureaucracy. Additionally, NGO staff were leery because China was known to eject foreigners, including entire organizations, with little warning or pretext, and in general the state was nervous about foreign NGOs [49]. It is also important to remember that the government itself was not passive during this "green wave" but busily investing vast sums of money and time to create one of the world's fastest and farthest reaching campaigns to create national parks and other nature conservation sites.

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[5]   The notion of "fit" is slippery, and deliberately so. One of the recent changes in the international arena (such as the UN's International Working Group on Indigenous Affairs), is that indigeneity is self-defined, rather than state-defined or defined based on a standardized set of criteria [47]. Important organizations such as the World Bank, where there are serious consequences for determining if a group is indigenous or not, have not come up with a single statement on which groups in China are indigenous. One recent example states this, without offering examples: "The term "minority" is not synonymous with the term "indigenous": in China some subgroups of the majority population meet international definitions of indigenous peoples, while some ethnic minority populations do not" ([48], p. 1).

4. The Story of TNC and Indigeneity

TNC started its project in 1998, at the same time when its identity and purpose in China was undergoing a shift; for the first time TNC staff had to consider questions of "culture" in addition to their long-standing interest in protecting land and species. Unlike Greenpeace, TNC was not a radical organization challenging corporate responsibility but a group with substantial corporate funding that used private land ownership to protect habitats. Since its beginnings in 1951, TNC typically bought uninhabited land and managed it or arranged for others to keep it free from development. As TNC started working abroad in 1980, however, many parcels of land they wanted had been inhabited by communities for generations. In 2001, I met a staffer from the main office in Arlington, Virginia in TNC's Yunnan office. She was there to interview the staff about their perspectives on and experiences with working with "local communities". She reflected on her position, stating: "Oh yes, I was just in Latin America, where we started our first international programs. Some of the heads there have been working for decades. Real cowboy-like guys—older white men who think they can just do what they want, and I started telling them they can't anymore." As a young woman of color, who was also a committed environmentalist, she was hired by TNC headquarters to foster a shift. She enjoyed the challenge, and knew she had headquarters' blessings. In Latin America, she said, TNC staff mainly worked with non-indigenous government officials and the regional elite, but the project areas were often in places home to Indians. "We (TNC) started in the US, where we could buy empty land, you know, such as buy a ranch from a rancher. When we started going international, we started to find that people were living on these properties, the boundaries weren't always so clear." Thus, TNC was now having to confront the morals of dealing with local people living on land they were trying to protect, and faced greater challenges if these local people were also seen as indigenous.

Similar changes away from the "cowboy" model were also apparent at TNC-China. One big change was creating a bipartite leadership, one American and Chinese. The American leader was Edward Norton, a high profile Washington DC lawyer. The Chinese leader was an ethnic minority woman, Rose Niu, who was enticed back to Yunnan from New Zealand after having emigrated there with her family. Many Chinese staff and observers thought that Niu, an ethnic Naxi, would steer TNC projects almost exclusively toward the Naxi people. Indeed, TNC's first sub-office was opened in the center of the main Naxi city of Lijiang, and many of its first projects were steered toward Naxi concerns. For several years, TNC funded the expansion of a center to reinvigorate what had become one of the Naxi's main markers of cultural identity, the dongba, priest-like figures who were fluent in the Naxi pictographic language. During the Mao era, dongba were vilified, seen as superstitious, and often punished by groups such as the Red Guards and state

officials, but in the 1990s they were "rectified," a term used in China, mainly to describe the restoration of status after the end of a political campaign [43]. With support from TNC, the Ford Foundation, and Chinese donors, a new Dongba Center was built, and great efforts were made to translate surviving dongba texts and train young Naxi in a body of knowledge and ritual.

None of TNC's dongba activities were framed within the broader category of indigeneity. TNC did not advocate for Naxi entitlement for expanded rights to land and resources. Rather, projects fit within the state framework of documenting a unique cultural heritage. Thus, these activities were not seen as antagonistic toward the state, but had the state's blessing. In the beginning, it seemed as if TNC was capitulating to Chinese demands. For instance, TNC not only shared leadership but also agreed that all contracts made by TNC would use the Chinese version as the legal one, not the English version. Also at this time, there was talk about a dam being built in the area, and Chinese scientists said that TNC would not oppose it, as they did not want to challenge government projects. They were correct: TNC staff said little on the public record.

By the early 2000s, however, TNC began a project that was politically contentious from the start and only got more so as it expanded involvement with Tibetans and began to employ a language of indigeneity—a surprising turn for a heretofore quiet ally of state-led conservation projects, a group that would not publicly challenge dams or other development projects. Some knew that other organizations, such as the World Bank's Global Environmental Fund, a powerful multilateral organization with far more leverage and funding than TNC, was quite apprehensive about working with Tibetans, in part because they were worried that such actions might bring public criticism from groups known as "Tibet watchers." These groups, such as Amnesty International, Tibetan Environmental News, Bridge Fund, Human Rights Watch, Free Tibet, and the International Campaign for Tibet not only study Tibetan relations with the state, but also with international organizations.[6] The watchers both encourage international support and yet are wary about the tendency for international NGOs to either collude with state interests or be ejected. The Global Environmental Fund's concern is, somewhat surprisingly, candidly revealed in an online report:

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[6] In turn, such organizations are buoyed by a huge array of grassroots Tibetan support groups, and most contain few if any Tibetan peoples themselves. In the province of British Columbia, there are five Tibet support groups and fourteen in New York. In contrast, it is difficult to find any support group for other minzu in China. There are rights-based organizations run by Uyghurs in the US and Germany, but there is little evidence they attract outsider support. It is also difficult to find support groups that connect different minzu, with one exception being a Tibetan and Uyghur Solidarity group that mainly consists of a handful of expatriate Tibetans and Uyghurs in Europe.

Feedback from international NGOs, Bridge Fund, and KhamAid working in China thus far has indicated that the Bank/GEF should not avoid working in Tibetan areas. Local consultations undertaken as part of the Social Assessment confirmed interest and willingness on the part of Tibetan communities and their leaders to participate in the project. Further assessment of this issue will be undertaken as part of the disclosure of and consultations on the draft Environmental Assessment, as well as during Project Appraisal [50].

In all of the many dealings of international conservation groups in Yunnan, there is no record of this high level of delicacy and caution being exerted on behalf of any other ethnic group in Yunnan. Such reports evidence some of the ways in which Tibetans have far more international clout and support than any other ethnic group in China.

TNC's project was based on what they called "sacred landscapes", and the areas they selected were ones primarily occupied by Tibetans. TNC described the sacred landscapes as places where humans were excluded. This interpretation paralleled TNC's earlier pattern of land management tactics, which largely excluded humans, and selected the group that seemed most "indigenous" from a Westerner's perspective: Tibetans. TNC's efforts to map these lands engaged with an existing audience and a growing interest in indigenous peoples' "sacred lands" by researchers and activists around the world, including work carried out in China by a famous scholar, Pei Shengji. Outside of China, NGOs actively collaborated with indigenous groups to create maps of culturally important lands, often described as "sacred." These maps, sometimes described as "counter-maps" to state-created maps, had varying objectives but were often aimed at promoting more community control over lands. In this case, however, it was unclear if and how community control—a challenging goal in China—related to TNC's aims.

As this project unfolded, it generated a mixture of excitement and concern from a number of quarters, some of which were more or less expected, all inflected by the fact that the project was focused on Tibetan peoples. It should be noted that these Tibetans lived among a number of other minzu and that had TNC focused on one of these groups, such as the Lisu (numbering about 700,000 in China, more than twice the number of Navajo, one of the largest groups of Native Americans in the US), the outcomes would have been very different. The Lisu, virtually unknown in the West, and even in China for that matter, would have likely gained little attention and generated little tension as they do not have any organized domestic or international groups that support their cause. On the other hand, because Tibetans are well known and valorized, TNC was able to gain much Western support and media attention. Below, this article explores (1) established patterns of representing Tibetans

in foreign and Chinese media; (2) how Tibet-watchers influenced these interactions; and (3) concern by some of TNC's Chinese staff.

Projects with Tibetans are bound to attract a lot of attention by people both inside and outside of China. Within China many officials are quite leery of foreign support: they know that their treatment of Tibet is a major issue of international contention. They argue strongly that Tibet is part of China, and that the Party had led to improved living conditions for Tibetans, such as increased income and education. Outside of China, the same upper middle class audiences that support TNC and WWF are also likely to support Tibetan causes, although few know much about their religion or history. TNC relied almost exclusively on Western funding and found an audience eager for stories about Tibetan sacred landscapes. TNC's particular approach, using GIS-based mapping, deeply appealed to the genre of combining "Western technology" with "sacred wisdom". Western audiences did not need to be convinced that "sacred landscapes" existed for Tibetans, for they had long been regarded as a people with a deep spiritual connection to the land [51–53], what Emily Yeh calls the image of the "Green Tibetan" [54]. Westerners' great interest in and romance around Tibetan Buddhism is buttressed by a highly visible and charismatic spokesperson, the Dalai Lama. Although not a united front, there are many Tibetan advocacy groups, a powerful diasporic community with strong Western support, and an entire Tibetan government in exile in India. Nothing of the sort exists for other minzu in China.

As well, TNC's activities were quite well reported by the international media. This stands in dramatic contrast with the almost extreme lack of coverage for WWF's earlier environmental project in Yunnan, where there was no newspaper, radio, or television coverage, and only about six pages in the secondary literature (i.e., [55]). TNC's projects gained a substantial following, with coverage by National Public Radio, *New York Times*, and other venues. TNC was also able to attract the US Ambassador to Yunnan, the first time this happened in China's history, as Yunnan was often seen as relatively backward, poor, and unimportant. TNC's projects, using scientists and GIS software, seemed to promise a now familiar trope whereby foreign advocates help an indigenous group support their culture, often against outside forces such as the World Bank, globalization, or their national government.[7]

In these projects, TNC never took an overtly political position that Tibetans were indigenous people who should have more rights over decisions about their land,

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7   Similar kinds of projects are seen elsewhere. Stephen J. Lansing's work to document indigenous irrigation technologies in Bali (to demonstrate their sophistication and save them from being dismantled by a World Bank project) and Mark Plotkin's work with Conservation International in the Amazon, for example, to partner with "medicine men" to document and test their plants and train the next generation [56,57].

education, and so on. Evidently TNC staff did not want to make these claims, and their organization would have likely been kicked out. Although they did not use the language of indigenous rights, they did use what might be called a language of "environmental indigeneity", which represented a strong contrast with many of the Chinese-run development projects for Tibetans and other minzu groups, which used a language of "environmental peasanthood". TNC described Tibetans' understanding of their surroundings as a form of sophisticated indigenous knowledge. TNC staff documented the positive ramifications of Tibetan legacies of conservation (including the otherwise rare plant or animal species protected by monasteries). TNC staff created maps that showed Tibetans' "sacred landscapes" and tried to get these officially recognized by state agencies [58]. In this frame, indigenous knowledge is rich, largely undocumented, and threatened by cultural erosion. From this perspective, each indigenous group makes its own unique contribution to environmental sustainability—deep forms of knowledge cultivated through millennia of intimate engagement with plants, animals, and a particular landscape and embedded in language and practice.

Thus, by and large, TNC's project represented a substantial break from the language of environmental peasanthood, the standard frame for Chinese development since the 1980s. In this frame, peasants act irrationally in ways that are environmentally damaging, thereby requiring expert-led intervention and reform, often through science and technology. Thus, most other projects would castigate peasants' backward levels of sanitation and production, as well as encourage their greater participation in markets and use of pesticides, fertilizers, and hybrid vegetable varieties [59]. All of these techniques were part of the language and practice of "poverty alleviation," a virtually hegemonic model of development in China. As much as Ford staff tried to promote development models acknowledging villagers' own insights and understandings of the land, and much as they tried to increase their participation and access to natural resources (such as social forestry projects) [60,61], deeply rutted conceptual frames cast peasants as unscientific and unskilled, where their poverty was caused by a lack of initiative and ability (often seen as linked to their ethnic identity), which could be overcome by scientific assistance and outside support.

TNC's project also represented a break from its own past of understanding its projects as "science-based" and therefore as not political. In most previous projects, staff used a fixed framework (called "conservation by design") and carried out biological surveys, and created a system of prioritization. This project, however, was different: first based primarily on oral testimonies from Tibetan elders, not Chinese or expatriate scientists. Here, scientists were called in not 'before the fact' to assess different places and rank priorities, but 'after the fact' to document the effectiveness of sacred lands as a means of conservation.

This was not the first time such an approach was used in China; TNC's engagement with concepts related to indigeneity was one of the first times to directly advocate for particular changes in land use, but they borrowed from already circulating concepts. China's most famous ethnobotanist, Pei Shengji, began in the 1980s to describe minzu using an indigenous discourse [62,63]. Pei, then based in southern Yunnan's tropical region, began to publish in English just when the genre of "sacred lands" was beginning to gain traction around the world. Like TNC, he did not attempt to use this concept as a legal frame to argue for indigenous rights *per se*. Pei was, however, one of the earliest and most persistent agents in opening up an "indigenous space" in China, where ethnic minorities were seen as possessing valuable knowledge and effective techniques to address environmental problems, such as the maintenance of biodiversity or sustainable development [2,14]. Pei did not invent categories such as the "sacred forests" but his work on the "Holy Hills" of certain minzu resonated with these new openings. Pei's prolific Chinese publications helped stimulate a new generation of national scholars to investigate indigenous knowledge, especially in Yunnan. Pei's many English publications began to place China on the map of "conservation and indigenous people" and attracted many international researchers to China, particularly to Yunnan. The overall impact of Pei and his colleagues was to inject millions of dollars into Yunnan's economy of nature conservation. He and his students were critical networkers that fostered international connections with a region long regarded as on the margins of empire.

Although efforts by TNC and Pei represent actions that facilitated an indigenous space in China, neither he nor TNC tried to position any particular group as being recognized as indigenous peoples with rights. Neither TNC nor Pei acted like indigenous advocates in places like Latin America: advocating on behalf of indigenous peoples at international forums; sponsoring representatives to attend these forums; challenging the World Bank or other major funders, or testifying in human rights arenas about the poor treatment of indigenous peoples. Like almost all experts working in China they largely avoided a critique of state practices and instead worked to develop alternatives to seeing rural peoples as ignorant and environmentally destructive peasants, by instead to documenting indigenous knowledge and showing how their actions could produce favorable environmental outcomes.

4.1. Ironies of Legibility

TNC borrowed from the language of indigenous peoples and indigenous knowledge in its project on Tibetan's "sacred landscapes." The hope was that these places, which were often avoided by medicinal plant collectors and hunters, might preserve some of the plants and animals that TNC was trying to protect. As Robert Moseley, one of TNC's primary project managers, argued: "Traditional

resource management in northwestern Yunnan appears to be more sustainable than previously thought. Managers need to document indigenous ecological knowledge and incorporate it into conservation programs as a complement to modern scientific knowledge" ([64], p. 219). As TNC began mapping these places, translating them into state-recognizable terms created new tensions and questions.

For example, even when TNC saw itself as supporting the recognition of Tibetan sacred sites, these efforts were not without ironies. After one meeting, TNC sought central government support for declaring Mt. Khawa Karpa (Chinese: *Meili Xueshan*) as an inviolate site. This request was approved, and subsequently a Tibetan mountain climbing team's trip on Khawa Karpa was canceled [65]. During the time that TNC advocated for this status TNC staff reported that Tibetans seemed to support this designation, but after approved by law, it became clear that there were different views.

The process of working toward state-legible laws and official conservation efforts also raised questions, even for those working closely with TNC such as Jan Salick, an ethnobotanist at the Missouri Botanical Garden. Salick stated:

> Tibetans keep reminding me that sacred sites are much greater than just conservation sites... For them, it's a connection with the ethereal, with eternity, with the universe. So we don't have to... set aside lands and disrupt traditional practices—we can use traditional practices for conservation purposes [66].

Thus, while TNC worked to create official conservation sites (such as a place often heralded as "China's first National Park"), some of their collaborators worried about the ramifications such acts would have, such as "disrupt[ing] traditional practices".

4.2. Growing Internal Tensions

Tensions also began to rise among some of TNC's Chinese staff. Typically, such tensions are kept under wraps, as NGOs work hard to manage the impression they made on the outside world. Some TNC staff joked that their organization was even more secretive about documents than the Chinese government, which formerly classified almost all texts as *neibu*, only for internal circulation. Yet, Chinese and expatriate staff have provided an almost unprecedented situation: they have reflected on these development projects in several public forums.

First, in 2002, TNC's biodiversity coordinator for the Great Rivers Project, Dr. Ou Xiaokun, wrote an English language article that described this tension. Ou wrote:

> Since the Yunnan Great River Project represents the first time for TNC to work in China, it is perhaps not surprising that the purpose and operation style of TNC is not very clear to some of TNC's Chinese

counterparts. Many Chinese participants and observers would like to ask the same questions, namely, what is the purpose of TNC to invest in such a remote area of China and what is the benefit to TNC to undertake such a project? Northwest Yunnan is one of the most politically sensitive areas in China, for it is very close to the borders of Burma and Tibet. Moreover, most people living in this region are Tibetan or other minority peoples. Therefore, the Chinese government is very attentive and cautious regarding the affairs in this area. The political sensitivity in this area is one of the barriers for some of the Chinese officials, researchers, and community groups to understand fully TNC's motivation ([67], p. 74).

Although some critiques of TNC's actions were already published in Chinese by the provincial government, Dr. Ou's paper was the first in English to ask critical questions about TNC's China program.[8] Ou's statement reflects a number of Yunnanese social and natural scientists who expressed their growing suspicions about the intent of TNC and foreign NGOs in general. Even though a handful of more activist-minded Chinese researchers wanted TNC to advocate more aggressively for Tibetans and the Naxi, others — regardless of their own feelings about TNC's work —were fearful. If TNC ran afoul of the central government and was kicked out of China, as other NGOs had been in the past, TNC's Chinese staff could also be accused of wrongdoing.

4.3. Tibetans and Indigenous Status

One of the ironies of Tibetans is that, while they are the most likely candidate in all of China for inclusion within the global community of indigenous peoples, they have by and large eschewed this aspiration. Such a refusal was not expressed by rural Tibetans in Yunnan, who with the exception of intellectuals, were mainly unaware of the importance of the frame of indigenous peoples, but by activists in the Tibetan diaspora, who have been actively engaged with international organizations for decades.[9] Their influence at these organizations is disproportionate to their actual numbers, and they have been quite successful in building and drawing support

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[8] Somewhat surprisingly, Ou's article was published in *China Environmental News* by the Woodrow Wilson Center in Washington, DC. The center tends to be quite critical of the Chinese state and openly advocates for democratic reform, often promoting American NGOs in China with the assumption that they contribute toward expanding civil society.

[9] There are three main possibilities to describe different relationships to the issue of indigenous status, including those who: (a) don't know that the category of "indigenous people" exist; (b) know it exists but don't think it's politically possible to attain; or (c) want to strive for a position with greater possibilities than that of indigenous people. In terms of Tibetans within China, the main sentiment among the rural inhabitants is likely a, and among some urban intellectuals is mainly b. In terms of the Tibetan diaspora, the main sentiment seems to be (c).

for their culture from a wide range of peoples and institutions. Although Tibetans around the world are not necessarily striving for indigenous recognition, neither do they actively oppose their inclusion in this category. They are almost always included within the purview of dozens of organizations that either focus on indigenous peoples or include them within a special category. Considered as indigenous, Tibetans' situation gains even more attention than they already generate on their own terms.

At the very least, such lack of interest should initiate questions about the kinds of potentials but also limitations of indigenous identity, how it is not necessarily a natural category but a political one. Tibetan activists suggest that they are striving for *more* than what indigeneity would achieve. Thus, rather than assume that gaining recognition of indigenous status by the state is their ultimate goal, these activists suggest that mainstream understandings of indigeneity may actually reduce their potential to negotiate more on their own terms within international settings, which may be more than that of an indigenous group within a nation-state. These may include new forms of governance, not just the succession model forming their own independent nation-state (such as what happened in the former Soviet Union), but something different that remains to be imagined and created. In the future, perhaps, some of the expectations around indigeneity will expand, so this may become a category of interest. As some scholars of indigeneity argue, just as notions of "nature" began to expand in the 1990s, the notion of "indigenous people" might also be opened up and pushed beyond its legacy of European understandings that hew to narrowly defined notions of authenticity [68,69].

5. Conclusions

Whereas in the 1980s and 1990s the question of whether China had indigenous peoples was mainly asked by a handful of international environmental NGOs, it is now coming from many different sources, including the World Bank, Asian Development Bank, International Fund for Agriculture, and elsewhere. Activities by TNC, WWF, and CI, building on existing efforts within China, inadvertently helped pave the way to discover and document an indigenous presence there, rather than assume it was, as Beijing says, irrelevant to China.

China's engagement with indigeneity is overall likely to increase over time, as more international projects and funds are earmarked for indigenous people, and as some Chinese institutions, both Chinese NGOs and state agencies, actively seek out international linkages on their own without necessarily going through the bottleneck of Beijing, which might discourage such connections. Yet, such international organizations have typically regarded indigenous status as a natural and not a political category. Very rarely do any of the international groups working in China have much understanding of the difficult politics of indigeneity there, in part because only a very select few scholars research this topic [2,5]. Outside organizations

supporting indigenous rights often simply substitute the term "indigenous" for the Chinese term *shaoshu minzu*. In most cases, these statements are without teeth, mere semantic substitutions rather than fundamental challenges to the status quo. The actual work of creating an indigenous space, of trying to shift the dynamics of language and activities, is challenging.

Overall, what has occurred is a notable shift in which the category of indigenous people has now gained traction around the world, even in China, one of the few countries that actively protests its applicability in United Nations forums, even in the face of its repeated affirmation by many working there. Indeed, the notion of the global applicability of indigeneity was so widespread that many of the staff in these international organizations were not necessarily aware that the Chinese state denied an indigenous presence: state officials did not make this claim widely, but mainly within United Nations venues attended by relatively few. By the early 2000s, it was not a question of whether there were indigenous groups in China, but which groups were and were not indigenous.

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Indigenous ExtrACTIVISM in Boreal Canada: Colonial Legacies, Contemporary Struggles and Sovereign Futures

Anna J. Willow

Abstract: This article approaches contemporary extractivism as an environmentally and socially destructive extension of an enduring colonial societal structure. Manifested in massive hydroelectric developments, clearcut logging, mining, and unconventional oil and gas production, extractivism removes natural resources from their points of origin and dislocates the emplaced benefits they provide. Because externally imposed resource extraction threatens Indigenous peoples' land-based self-determination, industrial sites often become contested, politicized landscapes. Consequently, I also illuminate the struggles of those who strive to turn dreams for sovereign futures into reality through extrACTIVIST resistance to extractivist schemes. Presenting four case synopses—from across Canada's boreal forest and spanning a broad range of extractive undertakings—that highlight both sides of the extractivism/ACTIVISM formulation, this article exposes the political roots of resource-related conflicts and contributes to an emerging comparative political ecology of settler colonialism. While extractivism's environmental effects are immediate and arresting, these physical transformations have significant cultural consequences that are underlain by profound political inequities. I ultimately suggest that because extractivism is colonial in its causal logic, effective opposition cannot emerge from environmentalism alone, but will instead arise from movements that pose systemic challenges to conjoined processes of social, economic, and environmental injustice.

1. Introduction

Glimpses of black bears, wolves, and lynx punctuate my transect. Foxes, otters, beavers, and snowshoe hares are here, at home, along with smaller amphibious and invertebrate inhabitants and 300 species of summer birds [1]. My flyover reveals a carpet of conifers, poplars, and willows; a sea of green sporadically broken by muskegs, fish-rich lakes, First Nations settlements, and extractive industrial megadevelopments. I am envisioning Canada's boreal forest—more than two million square miles concurrently claimed as a biological treasure, Indigenous homeland, and extractivist frontier (Figure 1).

Extractivism removes resources from their points of origin, dislocating the emplaced benefits they provide. Massive hydroelectric dams, clearcut logging, mining, and unconventional oil and gas production represent extractivism in action.[1] Because capturing resources on such an enormous scale requires the physical rearrangement of landscapes and/or complex chemical processes, undesirable environmental effects often ensue. Economically, extractivism is associated with a reliance on primary commodities, an export market orientation, and (as its critics point out) high poverty levels and inequitable wealth concentrations [2]. Politically, it has been tied over time and space to imperialist states that pave the way for extractive industries' success—a political formation international development sociologists Henry Veltmeyer and James Petras call "extractive imperialism" [3]. With interwoven systems of ecological and social destruction, extractivist production leads to local dispossession. Sites of ongoing extractivism almost always become contested, politicized landscapes [4–8].
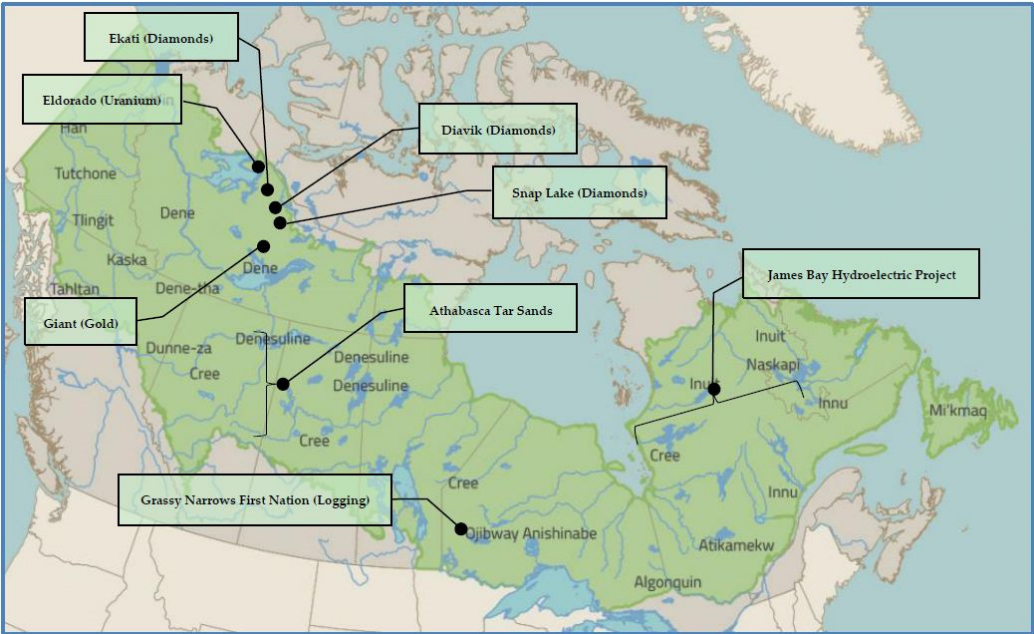

Figure 1. The approximate extent of Canada's boreal forest, the main subarctic Indigenous groups, and the major extraction sites noted in the text [9].

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[1] The term *unconventional* refers to recent technological innovations used to extract oil and natural gas from shale formations, sands, and coal seams.

Extractivism does not simply mean the *use* of natural resources, which is something humans—in the boreal forest and elsewhere—have been doing all along. Unlike extraction, extracti*vism* is both principle and practice. As activist author Naomi Klein sees it, extractivism is rooted in "the central fiction on which our economic model is based: that nature is limitless, that we will always be able to find more of what we need, and that if something runs out it can be seamlessly replaced by another resource that we can endlessly extract" [10]. Relentless in its quest to obtain far more than needed to meet basic subsistence needs, extractivism values natural resources not primarily in and of themselves, but for the profits they can yield. Under extractivism, natural resources become vehicles for increasing personal wealth without regard for potential costs to others. Simply stated, extractivism transforms "nature" into a tool for the promotion of social injustice. More than just a way of using the land, extractivism is also a way of thinking. It is a way of being in the world; a way of positioning ourselves in a relationship to the natural worlds we occupy. Extractivism is thus a political as well as an environmental project, both a social and an ecological problem.

While its most deliberated consequences may be environmental, therefore, Canadian extractivism can also be contemplated as a contemporary manifestation of settler colonialism—one that is situated in a boreal forest that sustains hundreds of First Nations communities and is configured in its current incarnation by a global capitalist political economy. Likewise, while Indigenous objectors to extractivist projects call consistently and vehemently for environmental protection, they struggle simultaneously for social justice and political empowerment. Far from personifying romanticized "ecological Indians", today's Indigenous activists are engaged in an enduring political battle to defend their ability to live in their own way, on their own land [11,12].

This article illuminates social and political dimensions of intensive natural resource extraction in Canada's boreal forest, thereby revealing contemporary extractivism's historical colonial foundations and contributing to a comparative political ecology of settler colonialism and its legacies [13].[2] At the same time, it sheds light on the struggles of those working to turn dreams for sovereign futures into reality through activist engagement. Selected for their salience, the four case synopses presented here—from across the boreal and spanning multiple extractive

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[2] Taiaiake Alfred (Kahnawake Mohawk) and Jeff Corntassel (Cherokee) reflect on the meaning of settler colonialism today, stating that "contemporary Settlers follow the mandate provided for them by their imperial forefathers' colonial legacy, not by attempting to eradicate the physical signs of Indigenous peoples as human bodies, but by trying to eradicate their existence as peoples through the erasure of the histories and geographies that provide the foundation for Indigenous cultural identities and sense of self . . . [Indigenous peoples] remain, as in earlier colonial eras, occupied peoples who have been dispossessed and disempowered in their own homelands" ([14], p. 598).

undertakings—highlight both sides of the extractivism/ACTIVISM formulation in order to expose the political roots of resource-related conflict.[3]

2. Origins

As Ecuadorian economist Alberto Acosta argues, extractivism's guises have varied according to period and place, but its long history is closely intertwined with colonialism. Launched on a massive scale 500 years ago, Acosta explains, the extractivist world economy was structured by the European conquest and colonization of the Americas, Africa, and Asia [2]. There is nothing new about extractivism, Veltmeyer and Petras similarly suggest, for it has always demanded "the plunder and looting of a society's wealth and natural resources, and the transfer of this wealth to the center of the system to the benefit of capital and empire" ([3], p. 222). Global trade and communication networks have intensified the speed and scale of resource removal, and combinations of perceived scarcity and new extractive techniques have brought industrial operations to areas with resources previously deemed inaccessible or uneconomical. Still, contemporary extractivism reproduces the resource colonialism of old, with symbolic and material benefits continuing to flow into already empowered (and usually distant) hands and local peoples continuing to bear disproportionate environmental and social burdens.[4]

While the early colonization of Latin America revolved around the physical removal of riches destined for return to Europe, Indigenous North Americans—especially and initially in the fertile east—were dispossessed of their lands by settler colonists seeking permanent access to territory [18]. After the industrial revolution, North American colonial processes "increasingly focused on the elimination of Indian peoples in order to gain access to their territory for the purpose of *resource extraction*" ([19], p. 222, emphasis in original). Across the continent, Native lands became "national sacrifice areas" as regions containing resources deemed necessary for the greater good of economic expansion (joined sometimes by calls for national security) were degraded by inadequately regulated industrial expansion [20].

Catalyzed by a renewed economic emphasis on natural resources and related technological innovations, Canada has recently taken its extractivism to new heights. Against a backdrop of multiple extractive industries, oil and gas sit at the center of Canada's contemporary economy, with Prime Minister Stephen Harper declaring

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[3] While a description of research ethics and reciprocity falls outside the scope of this brief article, readers interested in learning more about my stance should consult my earlier work [15]. In addition, Devon Mihesuah (Choctaw) and Luke Eric Lassiter have both published valuable guides on conducting research in Indigenous communities [16,17].

[4] These costs are typically (and conveniently) left out of industrial accounting. The term *externality* refers to impacts of commercial or industrial activities experienced by third parties and therefore not reflected in the pricing of produce goods or services.

Canada an "energy superpower" in 2008 and critical analysts now using the term "petrostate" to describe Canadian economic and environmental policy [21,22].[5] As long as the federal government continues to subsidize resource-extractive operations in the boreal forest and justify its position by claiming industrial extraction as the only possible path to a strong northern economy, the risks to First Nations communities and cultures remain profound [23].[6]

3. Challenges

Extractivism and ACTIVISM are two complex and non-exclusive sides in an ongoing global debate concerning how resources should be used and who should be empowered to decide. While Indigenous communities fight for the right to develop their own resources, they also struggle—sometimes simultaneously—to stop extractive schemes imposed by non-indigenous (and often multinational) corporations. As we will see, externally imposed industrial extraction threatens Indigenous peoples' *land-based self-determination*; it undermines their ability to make independent choices regarding customary landbases and thereby determine the trajectory of land-based livelihoods, cultural beliefs and practices, and the array of opportunities available to future generations [24].[7] Extractivism disrupts contemporary-traditional subsistence cultures, hinders communities' capacity to function as effective independent entities, and occasions an affront to affirmative Indigenous identities. Because of the challenge extractivist projects pose to land-based self-determination, they are often perceived as attacks and are, accordingly, often met with defensive resistance. With emplaced Indigenous populations determined to protect their lands and lives from corporate entities equally determined to profit from resource removal, conflicts have been frequent and fierce.

Since the late 1980s, non-governmental organization affiliates, journalists, and academics have documented numerous high-profile natural resource disputes involving Indigenous groups. In 1987, for instance, the Penan of Bornean Malaysia commenced civil disobedience against the intensive logging that was ravaging their homeland [25]. Two years later, Kayapó and their supporters protested the construction of hydroelectric dams in the Brazilian state of Pará, causing the World

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[5]   In a 2013 editorial, for example, environmental political scientist Thomas Homer-Dixon wrote that oil and gas extraction "is relentlessly turning our society into something we don't like. Canada is beginning to exhibit the economic and political characteristics of a petro-state" [21].

[6]   In October 2015, Canadian citizens elected Justin Trudeau of the Liberal Party as Prime Minister. While the implications of this leadership change for extractive industry are still uncertain, Trudeau campaigned on promises of more stringent environmental regulation and fuller participation in the fight against global climate change.

[7]   I have elsewhere presented a detailed treatment of the land-based self-determination concept as it relates to contemporary Indigenous counter-mapping practices [24].

Bank to suspend the project's funding [26,27]. In the Colombian cloud forest, the U'wa staged local blockades throughout the 1990s and conducted international demonstrations in 2000 to demand an end to oil exploration in their territory [5]. In May 2000, protestors shut down Freeport Mining's Indonesian offices in response to environmental and human rights abuses at the company's West Papua Grasberg mine [5]. More recently, Indigenous communities have united against the Belo Monte Dam (in Brazil) and the Keystone XL Pipeline (in North America) [28,29]. These prominent incidents, like the Canadian cases described below, display extrACTIVISM—efforts to counter extractivist projects and processes—in action.

Many North Americans and Europeans who learn of Indigenous opposition to resource-extractive ventures in the world's remote corners view it as a novel sensation and a unique byproduct of irresponsible production practices in the developing world. It is neither. Around the world, challenges to industrial encroachment maintain Indigenous citizens' commitment to a multifaceted and multigenerational struggle for survival. While extrACTIVIST resistance is tied to contemporary global systems and dynamic historical progressions, its timing and techniques are culturally appropriate and situationally relevant, with contexts of resistance shifting over time and space so that physical confrontation and direct action are complemented by legal challenges, multiscalar alliances, international media drives, and corporate campaigns. As Tom Hall and James Fenelon point out, Indigenous peoples who resist industrial incursions are "doing what they have been doing for millennia: adapting, adjusting, and adopting to changing circumstances to maintain their autonomy" ([30], p. 146).

4. Cases

In the pages that follow, I describe multiple manifestations of extractivism—hydroelectric power generation, clearcut logging, mining, and oil and gas production—in Canada's boreal forest. I consider the consequences of extractivist thought and action for First Nations' residents of targeted regions and survey a range of responses. Examining how the global extractivism/ACTIVISM phenomenon plays out in one settler colonial context (and one vast but defined ecoregion) (see Figure 1), these case synopses reveal the colonial legacies that complicate extractivist encounters and underscore the multidimensional challenge to entangled injustices that Indigenous resistance represents.

4.1. As Long As the Rivers Run?

Treaties in Canada regularly promised Indigenous signatories that their guarantees would hold "as long as the rivers run," yet hydroelectric dams now prevent

the natural flow of numerous northern rivers [31].[8] On the unceded lands of northern Quebec, Labrador, and northern British Columbia, too, some rivers no longer run. While billed as a non-polluting, renewable energy source, hydroelectric development has caused extensive and irrevocable destruction of territory. As it destroys land, it also destroys peoples' relationships to land. In so doing, it jeopardizes culturally distractive land-based beliefs and practices.

Because non-indigenous Canadians have long regarded water as an unlimited resource to make available to the public through technical solutions, hydroelectricity's negative environmental and social consequences have been largely ignored [35]. Massive projects have reconfigured boreal landscapes and devastated once-productive ecosystems. Claiming water as a resource to harness, proponents of hydroelectricity have proceeded under the assumption that Canada's north is an uninhabited wasteland. It is not. With 59 percent of Canada's electricity supplied by the energy of moving water, dozens of Indigenous communities have been impacted by the nation's nearly 600 large hydroelectric dams [36,37]. While water itself is not appropriated during the power generation process, the energy released by its movement is extracted and exported. The asymmetry of extractivism is typified as distant benefits yield local disruption and far away decision makers determine the fate of Indigenous lands and all that they sustain.

Beginning in 1971, this resource-colonial philosophy underwrote Hydro-Quebec's James Bay Project, a regional megaproject expected to cost $6 billion, erect dozens of dams, produce 28,000 megawatts of electricity, and disrupt a watershed the size of France [38]. While not the only Indigenous group to experience a colonial mentality in a material way, nowhere is the story of hydroelectric extractivism/ACTIVISM more emblematic than among the Cree of eastern James Bay. Cree communities were never consulted about the proposal and its projected impacts. According to Matthew Coon Come, then a university student in Hull, Quebec, his people were unaware of Hydro-Quebec's plans until he learned from a newspaper article that their landbase was about to be submerged [39].[9] Cree groups united in opposition, winning a temporary injunction to suspend the project in 1973. With construction already underway, the injunction was quickly overturned, but the need to resolve this and future disputes in a context of unceded Indigenous territory became clear.

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[8] The majority of Canada's boreal region is overlain by 11 "numbered treaties" signed between 1871 and 1921 [32]. Although articulated in various manners, these treaties generally promise that Indigenous signatories would retain the right to engage in land-based subsistence throughout ceded tracts of land. Readers interested in learning more about Canada's treaties and their relationship to contemporary questions of Aboriginal rights can consult books on the topic by J. R. Miller and Michael Asch [33,34].

[9] Coon Come later led the Grand Council of the Crees and went on to become National Chief of the Assembly of First Nations.

Hoping to get something rather than nothing out of a project they had no part in planning but were unable to stop, the Cree came to the negotiating table.

With lands and rivers being destroyed daily, Cree negotiators faced extreme pressure to quickly settle title to a 215,000-square-mile traditional territory that had since time immemorial been a source of physical sustenance, cultural identity, and social/spiritual reciprocal relationships between human and non-human inhabitants. The first "modern" treaty in Canada—the James Bay and Northern Quebec Agreement (JBNQA) of 1975—was the result [38,40]. In the end, the Cree retained exclusive title to 2158 square miles and secured funding for a subsidy program to support the continuance of land-based subsistence and culture, but Hydro-Quebec proceeded as planned [38]. Reflecting on the political asymmetry of the James Bay Project and the negotiations it impelled, Coon Come later observed, "I believe that the governments knew what they were doing: depriving the Cree people of our own means of subsistence in violation of our fundamental human rights" ([39], p. 157).

By the time James Bay Phase I was completed in 1986, ancestral gravesites were submerged, game populations had declined, unnatural water flows caused difficult travel on both the open water of summer and the winter ice, and high mercury concentrations caused by the decay of submerged vegetation meant that eating fish was now hazardous [38]. Cree citizens experienced these physical changes in intensely social and emotional ways. As emplaced memories were obliterated, intense feelings of loss accompanied the inundation of familiar landscapes [40]. As hunting and fishing sites were degraded and rendered unreachable, traditional ecological knowledge and cultural values were undermined. Instead of steady employment and full integration into the southern economy, hydroelectric development led to dependence on non-indigenous institutions and a generation of young people "out of touch with traditional values" ([41], p. 518).

By 1989, when work began on James Bay Phase II, Cree leaders were both more savvy and more vehemently opposed. A major complex slated for construction on the Great Whale River was met with a dynamic resistance campaign. Cree extrACTIVISTS launched legal challenges on points they believed were winnable, passed community referenda and resolutions to communicate their position, produced a film called *The Land of Our Children,* and took their case to the International Water Tribunal. Making use of media and public sentiment, they partnered with Inuit neighbors who also opposed the project to stage a highly publicized protest event in New York City on 22 April 1990. A vessel called an *odeyak* (a linguistic and physical amalgamation of Cree and Inuit features) was constructed on the coast of Hudson Bay and paddled to Manhattan Island to draw attention to the impending environmental and human rights disaster. New Yorkers listened. With the northeastern US market for Great Whale power on the wane, the project was suspended in 1992 [42].

Demonstrating the pattern of sociopolitical inequity that characterizes all extractivist endeavors, the power—and money—generated by the James Bay project was exported to the cities of southern Canada and beyond. Environmental, social, and cultural damage lingered in its wake. Until recently, few outside observers questioned this quintessentially colonial power structure. Fewer still believed boreal Indigenous communities would someday have the political clout to suspend hydroelectric development or eventually partner in determining its direction. However, in the early 1990s, Indigenous northerners fought for—and won—the ability to determine their homeland's future. With the passage of another decade and high hopes for a fairer future, the Grand Council of the Crees and the province of Quebec signed the landmark *Paix des Braves* Agreement in 2002. The agreement allows extractive industry to proceed but requires Indigenous consent and revenue sharing for all hydroelectric and other development on Cree lands.[10] Although anxieties about further impacts remain, the Cree majority voted to accept the agreement in anticipation that economic benefits will now be evenly distributed and that more equitable political relationships will augment the land-based self-determination that still sits at the center of their agenda [42,44]. The long-term ramifications of this agreement continue to unfold.

4.2. Every Available Log

In the fall of 2004, a visiting television director asked J. B. Fobister of Grassy Narrows First Nation what he thought the logging companies then wreaking havoc on portions of his northwestern Ontario homeland really wanted. What they want, Fobister replied, is "every available log in our territory."[11] In its industrial incarnation, logging enacts the extractivist outlook by encouraging the economically efficient removal of as much timber as possible. In the boreal forest, this has usually meant clearcutting. In order to expedite a lucrative timber harvest, clearcutting requires "harvesting all the trees in one area at one time" [45]. Its ecological corollaries include biodiversity loss, habitat fragmentation and reduction, soil compaction and declining fertility, erosion and hydrological disruption, and carbon releases that contribute to global climate change [46]. With almost one-third of Canada's boreal region allocated to industry and 90 percent of boreal forestry employing clearcutting practices, the expanse of forest cleared and the number of trees transformed into lumber and paper are both staggering and steadily increasing [47].

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10 Signed on 7 February 2002, this agreement is formally known as the "Agreement Respecting a New Relationship between the Cree Nation and the Government of Quebec" [43].
11 From the author's fieldnotes dated 9 October 2004.

For Indigenous people who depend on the forest for physical, economic, and spiritual sustenance, these environmental consequences are experienced culturally and interpreted politically. While the bulk of clearcutting occurs on public lands formally managed at the provincial/territorial level, these forests are concurrently claimed at ground level by industrial license holders' intent on profiting from their removal and Indigenous citizens reliant on ecologically viable traditional territories to sustain land-based lifeways. As a result of clearcutting, Indigenous communities across Canada have lost productive hunting and trapping grounds, local game populations have declined, sacred sites and emplaced memories have been wiped out, and the sanctity of forest life has been shattered. As logs are stripped from the land without First Nations' consent, the sense of emplaced autonomy and control that lies at the center of communities' land-based self-determination is destabilized. Not surprisingly, intense conflicts have ensued.

The story of Grassy Narrow First Nation—the site of the longest standing anti-logging blockade in Canadian history—is instructive for understanding both the consequences of clearcutting and the extrACTIVISM undertaken to challenge it. Grassy Narrows is a semi-remote Anishinaabe community located north of Kenora, Ontario. Although commercial logging in the region began in the 1920s, it was only in the 1960s that the area surrounding Grassy Narrows became accessible by road and only in the 1990s that large-scale clearcutting close to the community became a serious concern.[12] As multiple traplines were carelessly razed and customary hunting, fishing, and gathering sites became unusable or inaccessible, community leaders came to view the ongoing clearcutting as a local instantiation of a global environmental crisis, a potential health hazard, a threat to Indigenous rights and land-based subsistence culture, and a manifestation of systemic injustice ([49], p. 77). Starting in the late 1990s, concerned residents wrote letters to corporate and government officials, conducted peaceful protests in Kenora, and publicized their plight through press releases. In addition to fearing for the future of Anishinaabe beliefs and practices, community activists argued that as signatories to Treaty Three of 1873 Grassy Narrows, First Nation members possess a guaranteed right to continue making a living—and simply living—in the manner enjoyed by previous generations. Because clearcutting destroys the forest that makes land-based subsistence practicable, they are now unable to exercise these rights to the full extent.[13]

Frustrated after years of unheeded objections, Grassy Narrows activists initiated a blockade on 3 December 2002 to prevent the movement of logging trucks and

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[12] Annual logging rates in Canada's boreal forests increased from 1.6 million acres in 1970 to 2.5 million in 2001 [48]. Northwestern Ontario was no exception to this trend.

[13] Treaty Three clearly states that signatory Indians would "have right to pursue their avocations of hunting and fishing throughout the tract surrendered" [50].

equipment through their 2500-square-mile homeland—an area which has today come to signify the physical and cultural continuance of an Anishinaabe way of life. Maintained around the clock until the fall of 2003 (and intermittently ever since), the blockade succeeded in its immediate goal of stopping the passage of logging trucks, but timber continued to flow from the northern and eastern portions of Grassy's territory. In response, Anishinaabe activists allied with non-Indigenous environmentalists and human rights advocates to launch an international media campaign targeting corporate purchasers of wood from their land [51]. In May 2008, Grassy Narrows First Nation and the Ontario Ministry of Natural Resources entered into a memorandum of understanding to negotiate a resolution to the ongoing dispute. With negotiations expected to take several years, the company that was authorized to log in the area relinquished its license, representing a significant (if impermanent) victory for Grassy Narrows and its allies. Logging in Grassy's traditional territory has now been on hiatus for several years, but recently approved forest management plans leave open the possibility that clearcutting will recommence [52].

As it has historically happened, clearcutting is a form of extractivism that ships trees to distant mills for processing and profit. In the boreal, regeneration is always slow and never complete. While Grassy Narrows' citizens have refused to accept industrial logging on their land, however, some Indigenous communities have chosen instead to become forest management partners and beneficiaries. The Little Red River Cree First Nation of northern Alberta, for example, allows cutting in selected portions of its traditional territory, but works to ensure the integrity of subsistence and cultural sites and demands payments from producing entities [53]. Meanwhile, far to the east, the Innu Nation has played a lead role in the development of a comprehensive, sustainable, and culturally appropriate forestry plan for the Labrador district [54]. When it proceeds without the full and meaningful consent of emplaced Indigenous populations—when it attempts to erase the enduring existence of land-based lives, cultural practices, and political rights in order to appropriate forests for financial gain—clearcutting is an unjust act. Because this pattern only prevails when political inequity makes it possible, both resistance (which aims to stop extraction in its tracks) and equal participation (which challenges external imposition and control) defy extractivism's colonial logic.

4.3. Mining the North

Dene in Canada's Northwest Territories remember how gold mining came to their land in the 1930s. According to Joe Martin, an elder from Łutsëlk'é First Nation, an old Dene woman had a rock on her windowsill. When prospectors saw it, they promised three pipes for her woodstove if she revealed where she had gotten it. "Since that day, they have been taking gold out of the mine, out of the land," Martin

said, "It is like that old lady has given millions and millions of dollars away for just three stovepipes" ([55], p. 153). Mining is a quintessentially extractivist endeavor. It shamelessly seeks riches underlying homelands that are often distant from centers of corporate power and mobilizes massive earth moving equipment to extract the minerals that are found. While the wealth generated by the global mining industry is immense, it has typically been mining's waste and scars (in a literal geophysical sense as well as a figurative sociocultural one) rather than its money that have stayed in the north.

The mining of the north began with the Klondike gold rush, which brought thousands of placer miners to the Yukon Territory between 1896 and 1898. Indigenous Hän residents were removed to a reserve to make way for the prospectors, resulting in deadly epidemics and severe sociocultural disruption [56]. To the east, gold was discovered (with the elderly Dene woman's assistance) near Yellowknife in 1933, prompting the construction of Giant Mine near what became the territorial capital. With open pit techniques and constant arsenic consumption, the contamination of Great Slave Lake and the area's Indigenous inhabitants soon followed [57]. To the northwest, the Eldorado Mine—located on the shore of Great Bear Lake at Port Radium—was also established in the 1930s, representing one node in a network of communities besieged by what Indigenous scholars Ward Churchill and Winona LaDuke call "nuclear colonialism" [58]. Until 1962, Sahtu Dene workers from Délįne handled dusty burlap sacks of uranium with no protective gear, and radioactive tailings were dumped directly into the lake and onto the land. Exacerbating the collective trauma caused by the presence of outsiders and the transition to wage employment, soaring cancer rates among miners led locals to designate Délįne "a community of widows" ([55], p. 38).

Diamonds have driven the most recent northern resource boom. Mines opened at Ekati in 1998, Diavik in 2002, and Snap Lake in 2008, with several additional operations in various stages of planning and development [55]. Diamond mining has catalyzed a new wave of economic growth in the Yellowknife region, providing employment for some Indigenous individuals and contributing to Canada's national economy.[14] While its economic benefits are undeniable, however, so are its adverse ecological impacts. Most strikingly, northern diamond mining entails "dewatering" multiple lakes—a notion incomprehensible to many Dene elders ([55], p. 73). These lakes and the rich fisheries they formerly supported have been permanently erased from the landscape. Areas once hunted routinely have become unreachable and game habitat and migrations have been disrupted, hindering Indigenous residents'

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[14] The third largest source of diamonds in world, Canada's diamond industry constitutes roughly 3 percent of the gross domestic project [55].

land-based subsistence cultures and ecological relationships. Social disturbances caused by rapid shifts in employment and family life have also accompanied the industry's interactions with northern Indigenous inhabitants [57,59].

With the long-term ecological and health effects of diamond mining still unknown, Indigenous communities face a thorny mix of benefits and costs. Unlike the blatant dispossession associated with mining in the past, agreements between local Indigenous communities and extractive corporations now promise employment opportunities and other economic benefits. While jobs and revenue sharing are usually viewed favorably, mining's interrelated environmental and sociocultural repercussions have sparked trepidation about the decline of land-based knowledge, traditional values, and community integrity ([55], p. 240). Political asymmetry also remains a serious concern.

Ellen Bielawski, employed as a researcher and negotiator for Łutsëlk'é First Nation in the 1990s, describes the unbalanced process that permitted the mining of diamonds on Dene land in detail. As Indigenous leaders struggled to secure the best possible deal for their people, they believed they neither understood the full implications of the impending extraction nor had a true say in determining its trajectory. With the mining company setting both the negotiation agenda and its timeline, the sense that mines were inevitable produced pressure to concede to the less-than-ideal terms of their 1996 agreement. In a complicated context of unsettled land claims, the new era of mining carries the industry's colonial legacy into the present. "To allow diamond mining on the Barren Lands, Canada has continued what it started with Treaty 8 in 1899," Bielawski argues, "In 1899, 1900 and 1920, Canada drew arbitrary lines on paper maps and signed up aboriginal peoples as if sorting the cattle it promised in return for land. To this day, Canada adheres to those lines" ([55], p. 211). Diamond mining is merely the most recent activity to carry centuries-old conflicts between the government of Canada and northern First Nations surrounding control of Indigenous lands and lives to the surface.

In the past, Indigenous opinions and territorial rights were intentionally ignored as mining corporations staked claims and developed sites. Indigenous citizens received no compensation for lost hunting, trapping, and fishing resources, nor for the adverse personal consequences they and their families suffered. While planning for diamond mines has gathered Indigenous leaders and multinational mining representatives around negotiating tables to debate impacts and benefits, critics claim that these negotiations retain the asymmetrical structure of colonial extractivism: with no option to refuse mining altogether and dominant decision makers valuing economic gain above all else, political scientist Rebecca Hall argues that northern mining represents a capitalist "continuity of internal colonization" ([60], p. 385). Canadian diamond companies work hard to brand their products as socially responsible and conflict-free, yet this characterization ignores ongoing

environmental degradation and sociocultural upheaval and is valid only relative to the horrors of historical northern gold and uranium mining. While today's economic benefits are experienced and valued by many Indigenous northerners, communities confronted with inevitable extraction are forced once again to choose between getting something and getting nothing in return.

4.4. The Most Destructive Project on Earth

The tar sands have been called "the most destructive project on Earth" [61]. This label was earned by the daily production of 400-million gallons of toxic sludge and tailings ponds visible from space [22]. With more than 230 square miles strip-mined to expose bitumen-laden sand, pollutants constantly conveyed down the Athabasca and Mackenzie Rivers toward the Arctic, and exorbitant greenhouse gas emissions, the tar sands exemplify extractivism on an unprecedented scale [62]. The existence of oil in northern Alberta has been known for hundreds of years. In the 1890s, the prospect of hydrocarbon extraction in the north motivated Canada to secure Treaty 8 of 1899, which covers a vast area extending from what is now northeastern British Columbia in the west to western Saskatchewan in the east and north to Great Slave Lake [19]. According to a report filed by the treaty's commissioners, Indigenous leaders refused to sign until promised that they would be "as free to hunt and fish after the treaty as they would be if they never entered into it" ([63], pp. 87–88). For a time, they were.

Extensive exploitation of the tar sands resource commenced in the 1990s. It was bolstered then, as now, by appeals to the energy security afforded by a vast North American petroleum source [62]. Proponents of unconventional extraction want their product to appear abundant, accessible, and clean. They use the term oil sands to promote these connotations [22]. In reality, "tar" is a more appropriate description for the substance stripped from the Alberta earth. As Jennifer Huseman and Damien Short explain in their analysis of the tar sands' human rights implications, "useable oil must be *extracted* from the sticky, heavy, viscous base material (bitumen) through industrial processes which have huge environmental and human costs" ([19], p. 221, emphasis in original). This intensive form of extraction requires strip or *in situ* mining to release bitumen from sand, which is subsequently transported by train and/or pipeline for processing into synthetic oil. Contemplating the immense quantities of natural gas burned in the production process, the poor return of oil produced per unit of energy expended, and the billions of barrels of fresh water withdrawn from the Athabasca River system, investigative journalist Andrew Nikiforuk concludes

that "bitumen is what a desperate civilization mines after it's depleted its cheap oil" ([22], p. 16).[15]

As befits an extractive endeavor with a reputation for destruction, the tar sands have had severely deleterious effects on wildlife and ecosystems. Migratory waterfowl that (despite visual and auditory deterrents) mistake tailings ponds for safe landing sites become coated with toxic waste, resulting in recurrent mass killings ([22], p. 81). Numerous deformed fish have been found in Lake Athabasca near Fort Chipewyan, convincing local Dënesųłiné, Mikisew Cree, and Métis people that the water has become unsafe [19]. As regular consumers of fish and wild game and with their main drinking water source downstream from tar sands operations, Indigenous and Métis citizens have not been spared the physical effects of industrial extraction. Leukemia and lymphoma, lupus, reproductive cancers, and (most strikingly) a rare form of bile duct cancer occur in the region at rates much higher than in the general population [19,64].

As elsewhere in the boreal forest, physical transformations associated with natural resource extraction have had significant cultural consequences that are underlain by profound political inequities. While many Indigenous Albertans continue to hunt and fish, these practices (and, inevitably, the cultural values that accompany them) are declining dramatically because of widespread environmental degradation, the vast expanse of territory rendered inaccessible by industrial activities, and the all-too-real conviction that once sustaining wild foods have become carriers of contamination. As a result of tar sands' extraction, Treaty 8 descendants are no longer "as free to hunt and fish" as past generations; controverting the treaty's guarantees, the tar sands industry has forced them to choose between ceasing traditional subsistence practices and diets out of fear or taking enormous risks to keep these relationships alive [19].

Like the diamonds removed from Northwest Territory mines, oil produced from tar sands bitumen is far from conflict free. It imprints an extractivist mindset on a physical landscape and puts colonialism's disregard for those who reside in the path of coveted lands and resources on open display. As Jen Preston (a scholar of social theory and decolonization) argues, "the rapid and massive proliferation of pipelines, refineries, mining and in situ excavation of bitumen, the sheer amount of clean water used in the process, the oil spills and the billions of dollars made by oil companies working in the Athabasca tar sands have all been made possible by the outright dismissal of Indigenous treaty rights, self-determination and sovereignty" ([65], p. 47).

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[15] Because it is so costly to produce, profitable tar sands production requires high oil prices and is therefore tied to the vagaries of the global market.

The communities now experiencing the detrimental byproducts of bitumen extraction did not ask for this development. Furthermore, although a portion of industry jobs have gone to Indigenous individuals, the real economic benefits are enjoyed by settlers in Calgary and beyond. According to anthropologist Clinton Westman, the future envisioned by many Indigenous residents of northern Alberta (the ability to keep living on and with the land) and the future envisioned by the oil industry (Canada as energy superpower) are not compatible. With impact assessment structures and permitting processes valorizing energy extraction and economic profit, Westman observes, the tar sands' trajectory of environmental degradation and social injustice is poised to continue [66].

Yet the Indigenous peoples of the tar sands region refuse to go away quietly. Downstream groups have been at the forefront of opposition to the industry's destructive practices; Fort Chipewyan residents have voiced concerns about the tar sands' environmental and health effects for many years and are now working in concert with non-indigenous allies to research and publicize these problems (at the provincial level), lobby the government to regulate the industry more rigorously (at the national level), and target corporations and investment firms who do business in the tar sands (at the international level) [62,67]. At a 2007 rally, Mikisew Cree chief Roxanna Marcel declared, "our message to both levels of government, to Albertans, to Canadians and to the world that may depend on oil sands for their energy solutions, is that *we can no longer be sacrificed*" ([65], p. 44, emphasis added). Contained within her statement is a fundamental challenge not only to tar sands production but to all extractive endeavors that occur on Indigenous lands. A challenge to the asymmetrical power structure that originated with colonialism and continues today. A challenge to the extractivist mindset that prioritizes profit over environmental sustainability, human health, and cultural continuity.

5. Conclusions

I bring these stories together neither because they have never been told nor because they are the sole examples of extractivism/ACTIVISM to emerge from Canada's boreal forest, but because they illustrate the range of industrial processes and challenges occurring in this important area of the world and because their juxtaposition exposes the political asymmetry on which all extractivism is based. This article has approached contemporary extractivism as an environmentally and socially destructive extension of an enduring colonial societal structure. While hydroelectric power generation, clearcutting, mining, and unconventional hydrocarbon extraction differ in immediate aims, appearances, and technical operations, they share extractivism's definitive ultimate goal: the large-scale removal of resources for profit. In the Canadian boreal, they also share a common dependence upon the active ignorance of Indigenous claims to lands and resources in order to perpetuate

extractivist goals and gains, thus continuing the colonial erasure of Indigenous peoples to produce a perpetual *terra nullius*. According to Anishinaabe writer, scholar, and activist Leanne Betasamosake Simpson,

> Extraction and assimilation go together. Colonialism and capitalism are based on extracting and assimilating...The act of extraction removes all of the relationships that give whatever is being extracted meaning. Extracting is taking. Actually, extracting is stealing—it is taking without consent, without thought, care or even knowledge of the impacts that extraction has on the other living things in that environment. That's always been a part of colonialism and conquest. Colonialism has always extracted the indigenous—extraction of indigenous knowledge, indigenous women, indigenous peoples [68].

Drawn in the past into the mapped dominions of colonial entities, it is today the creation and conservation of international wealth that motivates local Indigenous dispossession. In boreal Canada, extractivism is colonialism's new guise.

Writing from a Nepalese perspective, Pramod Parajuli argues that "whenever and wherever there are violations of human rights, environmental justice is violated, and where we see the violation of environmental justice, human rights are also neglected" ([69], p. 241). The cases presented here substantiate Parajuli's bold claim. Manifesting in multiple manners (but always underlain by political asymmetry), extractivism had been challenged in many (equally political) ways. With Indigenous lands and resources claimed by means ranging from outright annexation to formal negotiation, responses have likewise ranged from the vehement resistance of direct action to the strategic accommodation of negotiation and industry participation [12]. Non-indigenous supporters and allies who expect ecological nobility to guide Indigenous responses to industrial extractivism are likely to be quickly disillusioned, for such resistance is not primarily or inherently "environmental." Far from demanding the cessation of all extractive operations (although this aim is sometimes incorporated), the fundamental core of Indigenous extrACTIVISM is the quest for survival through land-based self-determination.

While extractivism's environmental consequences are immediate and arresting, technical responses alone will not generate lasting solutions to the far-reaching problems it produces. Far more than a simple conundrum of resource management or environmental regulation, moving beyond extractivism is among the grand societal challenges of our era. Extractivism is colonial in its causal logic. Because it requires and reproduces conditions of political inequity, effective extrACTIVIST opposition cannot emerge from environmentalism alone, but will instead arise from movements that pose systemic challenges to conjoined processes of social, economic, and environmental injustice. While this may be especially pertinent in

Indigenous communities—where sovereignty is emplaced and cultural survival is tied to territory—extractivism everywhere thrives through the manipulation and continual (re)creation of political inequality. ExtrACTIVISM seeks to subvert exploitative thinking that conceives of homelands as wastelands in order to justify the appropriation and exportation of resources. It calls for refusing a sociopolitical structure that allows distant outsiders to profit from local citizens' suffering, and demands that all people be empowered to decide the future of their own lands and determine their own destinies.

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The Movement, the Mine and the Lake: New Forms of Maya Activism in Neoliberal Guatemala

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Abstract: This article explores the social, economic, cultural and political issues bound up in two matters relating to the environment in the Sololá and Lake Atitlán region of the Guatemalan Mayan highlands in 2004–2005: the violent breakup of an anti-mine protest and the various reactions to a tropical storm that threatened the lake ecosystem. It views these events as part of a historical conjuncture and centers them in a larger discussion of Maya political activism, environmentalism and neoliberal development in Guatemala from the 1990s–mid-2010s. It begins with the transition from war to peace in the 1990s, charting how Maya participation in municipal politics soared even as the official Mayan movement waned as the state turned to neoliberalism. Zooming in on municipal development and politics in Sololá in the early 2000s, it then traces at the ground level how a decentralizing, "multicultural" state promoted political participation while at the same time undermining the possibility for that participation to bring about substantive change. The center of the article delves deeper into the conjuncture of the first decade of the new millennium. By mapping events in Sololá against development, agrarian transformation and rural urbanization, it argues that resilient Maya community structures, although unable to stop the exploitative tide, continued to provide local cohesion and advocacy. Activists and everyday citizens became more globally attuned in the 2000s. The article's final section analyzes municipal plans made between 2007 and 2012, arguing that creating and controlling community structures became increasingly important to the state in a time when Guatemala's "outward" global turn was accompanied by an "inward" turn as people confronted spiraling violence in their communities. Critics called young people apolitical, but in 2015, massive demonstrations led to the imprisonment of the nation's president and vice-president, showing that there is a chapter of Guatemala's history of activism yet to be written.

From the end of 2004 to the beginning of 2006, two very different environmental issues impacted life in the Lake Atitlán region of the Sololá department in the Guatemalan Mayan highlands. In solidarity with a greater Mayan and environmental movement, local activists blocked a highway in December 2004. Worried about cyanide in their groundwater, they stopped a truck from carrying a concrete cylinder

to a Canadian gold mine in the department of San Marcos. They held it at a standstill for weeks. By 11 January 2005, the government was fed up. The army and police arrived, and after the ensuing confrontation, one protester lay dead. The cylinder moved on to the Marlin Mine, where open-air gold mining would proceed apace, even as protests intensified[1].

In October 2005, tropical storm Stan battered the highlands. Stan devastated vast regions, but none more so than the Lake Atitlán basin. Stunningly beautiful, Lake Atitlán is ecologically and culturally unique. Flanked by three volcanoes and ringed by towns and villages, it is home to speakers of two of the nation's twenty-one Mayan languages, Kaqchikel and Tz'utujil. Stan's landslides buried one hamlet, Panabaj, alive. Towns below the departmental capital of Sololá, around the lakeshore, were cut off from the outside world for weeks. The damage, however, had only just begun. The storm knocked out the already inadequate sewage treatment systems in place around this precious and irreplaceable environment. By 2008, toxic cyanobacteria blooms fed by human waste and nitrogen-rich agricultural runoff were beginning to spread thick green scum over the waters that since pre-Columbian times had been integral to local Maya lifeways.

Just as no amount of protest was able to stop the gold mine in the years that followed, none was enough to rally the state to launch a full-force effort to save the lake. Paradoxically, at the same time, Maya politicians were emerging as powerful local leaders; ordinary Maya citizens were asserting their presence in the public sphere in ways never before seen; and Maya activists were making ever greater connections with hemispheric and global advocacy and protest movements. This contradictory dynamic of strengths and weaknesses reveals the slippages in neoliberal development as it has played out in Guatemala through years of war and peace.

Genocidal violence committed by the state in the Mayan highlands in the early 1980s was the most brutal phase of a civil war that lasted from 1960–1996. Over the last two decades of that war, a vibrant pan-Mayan Movement emerged that, generally speaking, worked in dialogue with the guerrilla left. From the mid-1990s onward, both the *movimiento Maya* and the anti-capitalist left fragmented. Over the same period, the increasingly neoliberal state embraced "multiculturalism" as an ideology, and NGOs and scores of other institutions expanded through society in complex webs ([2], pp. 225–30). The anthropologist Santiago Bastos attributes the Mayan Movement's decline precisely to this mix of multiculturalism and "NGO-ification," factors that among others spurred the movement's leaders

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[1]   Footage of the confrontation may be seen in a documentary film produced by Caracol Producciones on the mine conflict [1].

to embrace "a strategy of not confronting power and constructing various cultural contents of 'being Maya' that in the end distanced them from the daily lives of the Maya *de a pie*." ([3], pp. 4, 18–19; [4–6]).

The phrase "*de a pie*," translated as "on foot," means ordinary. As a historian who studies the "*de a pie*", everyday working people who are Maya, *ladino* (non-indigenous) and somewhere in-between, I agree with Bastos's analysis of the Mayan Movement[2]. Looking not at the movement, but at the "*de a pie*" population, however, reveals that the Mayan Movement and the left, despite their decline and diffusion, and despite the deadening effects of neoliberal development, have been successful in unexpected ways.

This article views the mine confrontation and the storm in Sololá and Lake Atitlán in the mid-2000s as part of a historical conjuncture and centers them in a larger discussion of Maya political activism, environmentalism and neoliberal development in Guatemala from the 1990s–mid-2010s. It begins with the transition from war to peace in the 1990s, charting how Maya participation in municipal politics soared even as the official Mayan movement waned as the state turned to neoliberalism. Zooming in on municipal development and politics in Sololá in the early 2000s, it then traces at the ground level how a decentralizing, "multicultural" state promoted political participation, while at the same time undermining the possibility for that participation to bring about substantive change. The center of the article delves deeper into the conjuncture of the middle years of the first decade of the century. By mapping events in Sololá against development, agrarian transformation and rural urbanization, it argues that resilient Maya community structures, although unable to stop the exploitative tide, continued to provide local cohesion and advocacy. The article's final section is built around a close reading of municipal plans made between 2007 and 2012. It argues that creating and controlling community structures became increasingly important to the Guatemalan state in an age when a paradoxical "outward/inward" dynamic characterized society: political and popular culture became more globally attuned and cosmopolitan, even as communities turned inward, confronting spiraling violence that ultimately prompted a shift from a left-wing to a right-wing head of state. Many commentators and critics bemoaned the nation's right-wing turn and what they saw as a generation more interested in consumer culture than in progressive politics. In 2015, however, as this article

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[2]   A full explication of the term "*ladino*" to refer to non-indigenous Guatemalans is beyond the scope of this work, but it should be noted that the word is used to reference both a light-skinned upper class and a much larger group of *mestizos* (people of mixed European and Native American ancestry) that in general tends to be less economically advantaged. Identities are relational, contingent and shifting, and the *ladino/indígena* divide is in many cases a false binary. See Diane Nelson's trilogy of books on a wide range of such slippages and ambiguities in contemporary Guatemala.

was in production, massive demonstrations led to the imprisonment of the nation's president and vice-president, reminding us that there is a chapter of the history of Guatemalan activism yet to be written.

1. Transitions in the 1990s: From the Mayan Movement and Municipal Maya Ascendancy to Neoliberalism and a Changing Political Economy

The process of transformation that would coalesce in Sololá's conjuncture in the mid-2000s began in the first half of the 1990s, when the guerrillas and the government were negotiating peace. The Mayan Movement, later to fragment, worked with the still-active guerrillas to give them leverage in the peace talks, as well as with local Maya politicians who were staging historic takeovers of municipal government. Over the same period, Guatemala filled up with NGOs, even as the state began privatizing infrastructure and opened the floodgates to transnational extractive industries. The left won victories in the peace process, but fragmented in its aftermath.

Historically, the Mayan Movement had never been unified. Betsy Konefal traces the movement's roots to the grassroots Catholic left of the 1950s, when the nation was reeling from the U.S.-planned overthrow of its democratic 1944–1954 revolution. As guerrilla warfare broke out in the 1960s and came to the highlands in the 1970s, Maya activism broadly divided into overlapping, yet distinct spheres: *clasistas* worked with *ladino* groups on issues of class, while *culturalistas* focused on Maya identity [7,8]. Into the genocidal 1980s, a few Maya formed indigenous separatist organizations that the state and the *ladino* left alike rejected[3]. Many more participated in Catholic-left groups, such as the Committee of Campesino Unity (CUC; renowned for its spokesperson, 1992 Nobel Peace prize-winner Rigoberta Menchú). Others joined the guerrillas, whose Guatemalan National Revolutionary Unity (URNG) remained active in the Lake Atitlán basin and elsewhere until the signing of the Peace Accords in 1996[4]. Although the military and its U.S. allies viewed the guerrillas as having been effectively defeated in the early 1980s [16], the URNG's continuing actions, along with pressure from the Mayan Movement [17], molded key peace agreements. The 1995 Accord on the Identity and Rights of the Indigenous Peoples characterized Guatemala as "multiethnic, pluricultural, and multilingual" and guaranteed respect for indigenous peoples' "political, economic, social and

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[3] These included the Movimiento Revolucionario del Pueblo Ixim and the Movimiento Indio Tojil, which gave rise to MAYAS, the Movimiento de Acción y Ayuda Solidaria, which called for an independent Maya republic [9]. See also ([10], pp. 71–75; [11], pp. 100–4).

[4] Reports on guerrilla actions appear regularly in [12,13] throughout the early 1990s. On ORPA (Revolutionary Organization of the People in Arms) URNG guerrillas, see [14]. On the cultural complexities of the early 1990s, see [15].

cultural rights [18]". The Accord on Socio-Economic Aspects and the Agrarian Situation, signed a year later, was in part built on suggestions from *campesino* groups. It called for the incorporation of the rural population in all aspects of development [19].

As peace approached, Maya around Guatemala rose in municipal government. First, they took over the "official" city hall (*municipalidad* or *alcaldía*), a bastion of *ladino* power. Second, they revitalized an *alcadía indigena* (indigenous municipal government/"Maya city hall"). Third, they revalidated centuries-old communal leadership positions and local duties (cargos).

The *alcaldía indígena*, a product of early colonial rule and itself built on pre-Columbian structures, had survived waves of attempts to eliminate it over the centuries. A marbled, mixed system of new and traditional governance matured in the 1960s and 1970s and came under attack in the violent 1980s ([20], p. 6; [21,22]). In the 1990s, the "official" municipality, historically *ladino*, became in effect a "*municipalidad mixta*" (that is, mixed between *ladinos* and Maya), while the "*alcaldía indígena*", unrecognized by the state, worked alongside the official city hall and with leaders in the communal cargo system. In 1996, this rich and complex mix of polities, with officials both elected and appointed, created the Guatemalan Association of Indigenous Mayors and Authorities (AGAAI) ([21], pp. 219–28, 362–70; [23,24]).

All of these trends could be seen in Sololá. In the early 1990s, its unofficial *alcaldía indígena*, linked with left-wing groups, such as the CUC, fought against the presence of army commissioners and secret police, military conscription and forced civilian self-defense patrols (PACs). It won these battles by 1995, in the context of ongoing peace talks and guerrilla actions. In that same year, it made good on plans to elect an indigenous mayor. Maya candidates triumphed in the 1995 elections for both the *alcaldía indígena* and the official *alcaldía*. Pedro Iboy Chiroy, Sololá's first Maya official mayor, like his counterpart in the indigenous muni (municipal office), had been promoted by a civic committee called SUD (Sololatecans United for Development). Nearly one hundred other Maya won mayoralties in 1995, as well ([22], pp. 19–20; [24], p. 9, footnote 11, pp. 84–86)[5].

The rise of local indigenous politicians took place during fundamental changes in Guatemala's political economy. Beginning roughly in 1993 and peaking during the presidency of Álvaro Arzú (1996–2000), the state took a sharp turn toward neoliberal policies, notably privatizing key industries, including energy and telecommunications. At the same time, NGOs and international institutions, such as the United Nations, poured in. Awash with funds and often blind to local complexities (see [27]), they at once bolstered and protected advocacy groups even

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[5] Civic committees, an alternative to political parties, allowed neighborhoods to promote candidates through grassroots democracy [25]. Revitalized cargos were also seen around the region ([26], p. 3).

as they encouraged both these groups and the state to forge consensus based on "multicultural" principles, contributing to the split between "official Maya" and "Maya *de a pie*" that Santiago Bastos notes. The URNG guerrillas soon became a political party, and the Mayan Movement lost its cohesiveness.

By the end of the decade, the left had little political clout. Validated by two "truth commission" reports at the end of the 1990s that documented the state's culpability for mass killings during the war, activists organized to pass a 1999 referendum to amend the constitution to include key Peace Accord provisions, many of which addressed ethnic relations. They met resounding defeat in the polls ([2], pp. 49–51; [10], pp. 82–86; [28–31]; [32], p. 55). A fragmented, defeated and hard-to-locate-and-define constellation of Maya advocacy groups would be left to confront the issues of the new millennium, among them the effects of gold mining and the pollution of Lake Atitlán that so preoccupied the inhabitants of the highlands in general and of Sololá specifically.

In 1996, even as peace was being finalized, Glamis Corporation, of Canada, won a license to explore for gold in Guatemala, portending the changes to come. Glamis pioneered the Marlin Mine that became the center of activism in the highlands nearly a decade later. According to Michael Dougherty, Glamis was one of a growing number of "junior firms" that did little or no excavation, but that tackled the high-risk task of opening up terrain for investment capital, which over the course of the 1990s was fleeing more moneyed countries in hopes of greater profits in the underdeveloped world. Mining in Latin America grew by 300 percent over the decade, and by 2015, the region as a whole had taken first place in global mineral extraction [33].

Guatemala, barely healed from war, its countryside still militarized and its development infrastructure fully permeated by counterinsurgency tactics (see [34]), would take part in this bonanza. The journalist and economist Luis Solano writes of a spree of new projects that scarred the landscape from 1996–the 2010s. These included not just "mountaintop-removal mining" ([35], p. 124) and oil drilling, but also giant hydroelectric projects, African palm and sugar cultivation, "megaroad" construction, free trade zones and corporate-controlled tourism [35,36].

As these changes were remaking the economy and the ecosystem, the first term of Maya mayors was underway around the nation. In Sololá, the two SUD administrations marked many firsts. Together, they achieved the closure of the local military base, which later became a university campus. For its part, the SUD official muni under Pedro Iboy (1996–2000) made great strides in improving infrastructure, aiding cooperatives and in promoting the Kaqchikel language. SUD officials also worked to make *ladinos* (who were beginning to accept power-sharing with the Maya majority) feel represented. The Mayan Movement as a whole, to be sure, was waning. Its attempt to pass the 1999 referendum

went down in defeat. In 2000, the Coordination of Organizations of Mayan Peoples (COPMAGUA) collapsed. COPMAGUA had represented more than one hundred groups and helped to influence the Peace Accords; its demise would be hailed both as the end of the guerrilla-indigenous alliance and as a sign of the turn to neoliberal multiculturalism and the neutering of the movement. Given their vibrant participation in municipal politics, however, as Timothy Smith notes, the Maya of Sololá felt anything but defeated as the new millennium dawned. Soon, though, changes in the national political landscape, especially in the breakdown of the alliance between the Mayan Movement and the guerrilla left, would bring conflict to the muni ([21], pp. 375–77; [24], pp. 95, 107–9; [37], pp. 16–18).

2. Dreaming in Kaqchikel: SWOT[6] and the Body Politic in the Early 2000s

Sololá's conflicts in the early 2000s speak to the lived reality of NGO-ification, neoliberal transformation and the challenge of forging consensus in an ever-more fragmented political environment. As the 1999 National Referendum on Indigenous Rights was losing in the polls, Sololá celebrated acrimonious municipal elections that many decried as fraudulent. In the previous year, the government had allowed the inscription of the URNG, the guerrillas' umbrella group, as a political party. Named URNG-Maíz, it peeled ex-guerrillas and some other leftist constituencies away from the SUD coalition. As these groups vied for control of the muni, they broke down loosely along urban-rural lines, with the URNG representing *campesinos* and SUD drawing most of its support from more citified areas. The local, national and transnational came together in this bitter contest. SUD accused the URNG of being too allied with the "neocolonial" Spanish international cooperation agency, AECID (Agencia Española para la Cooperación Internacional para el Desarrollo, or Spanish Agency for International Cooperation for Development); SUD supporters shot back that the URNG was in the pocket of the United Nations, whose permanent mission to oversee the peace process had still not fully withdrawn from the nation. The URNG-Maíz coalition won, installing Pedro Saloj as official mayor from 2000–2004 ([24], pp. 107–9; [37], pp. 21–25).

During Saloj's administration, Sololá participated in a vast experiment in municipal development planning that was going on around the nation. Over the first half of 2001, community development experts from AECID were working with a team from Sololá's city hall. The goal of the project was to foment broad-based popular participation in creating and implementing a community development plan.

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[6] SWOT is a commonly used technique in business to assess "strengths, weaknesses, opportunities and threats."

Its analysis of local problems was also meant to serve the municipality, governmental organizations and NGOs in long-term planning ([20], p. 2).

A newly-created team of municipal planning experts, officially the Municipal Technical Planning Unit (UTMP), worked with six pairs of locally-selected development promoters to study the urban center's four neighborhoods, as well as the municipality's sixty-five rural communities. After promoting their project on television, radio and with flyers, they convoked neighborhood assemblies. Using brainstorming techniques, such as FODA (Spanish for SWOT, "strengths, weaknesses, opportunities and threats", a technique seen in many future projects), these assemblies addressed economic development, health and housing, education, urbanism and infrastructure, community organization and the environment. Once neighborhood assemblies catalogued local concerns and made plans to address them, they helped to prioritize and implement them. While AECID found its original goal of creating a set of sixty-five rural plans too ambitious, it did produce a voluminous set of community development plans (PCDs) in 2002.

Neoliberal multiculturalism had resulted in an alphabet soup of agencies that at once promoted and, by their very complexity, undermined meaningful political participation at the local level. Even as citizens encountered an ever-growing number of institutions in which they could participate or to which they could petition, the institutions they encountered were part of a greater political and economic landscape that rendered the wishes of citizens, many of whom were engaged with politics in ways never or rarely before seen in their communities, increasingly irrelevant, as evidenced by local residents' inability to stop the mine or save the lake. Consider for a moment the sheer complexity of the institutional landscape. The PCD for central Sololá listed twenty-three governmental organizations active in the city, including peacekeeping, planning, community development and human rights offices, as well as those of various government ministries (judicial and criminal justice organizations were listed separately). It also counted twenty-three active NGOs (certainly an underestimate), ranging from MINUGUA, the Mission of the United Nations in Guatemala, to smaller organizations formed at the municipal and even canton (district) levels, as well as seventeen active neighborhood associations just in the urban center. Not included in these tallies were the *alcaldía indígena*, which the report said worked in a "circular, not vertical, manner", or traditional organizations, such as the "council of elders, the council of *cofrades* (lay confraternities), the Coordination of Maya Organizations of Sololá (COMS), and auxiliary mayors ([20], pp. 26–27)".

It is not surprising that in a postwar environment, the proliferation of institutions and the resultant division of people into vying constituencies exacerbated conflict, a trend unabated despite consensus-building techniques, such as FODA (SWOT). This is especially true given the context of the nation's changing politics, as seen

in the case of the 1999 Sololá municipal elections. The 2001 elections to choose the *alcalde indígena* for the 2002–2004 two-year term, meanwhile, turned violent. Alberto Orozco of SUD was elected in early December. The URNG alleged fraud, and in new elections a fortnight later, its candidate, Manuel Tuy, came out on top. SUD refused to turn over the *municipalidad indígena*. After several attempts to dislodge them, URNG supporters demonstrated and threated to burn sixteen people alive, including the SUD mayor-elect. In the wake of these events, the *alcaldía indígena* closed for over a month. When it reopened, the URNG-Maíz candidate was in charge. The party held the seat well into the next decade ([22], pp. 26–28; [24], pp. 107–9)[7].

As these events illustrate, the political landscape around Guatemala was fractured, fragile and fractious in the years following the Peace Accords. It was in this context that in 2002, Guatemala enacted legislation that "decentralized" government [38–40]. While local authorities would have much more sway in issues that affected their constituents' lives, controlling, for example, the local schools through newly-empowered municipal branches of the Ministry of Education, they would also have much more responsibility for solving the kinds of problems identified in the 2001 surveys. The state backed up its commitment to local governance with funding. Budgets not only included funds for municipalities, but also for new, interlocked sets of regional development councils (called COCODES, COMUDES, and CODEDES, at the community, municipal and departmental levels, respectively) [38]. Meanwhile, municipalities formed regional alliances, called *mancomunidades*, or commonwealths, to better organize and coordinate their efforts, even as the number of governmental organizations and NGOs continued to multiply into the middle of the decade. This profusion unfolded as the first huge wave of a baby boom dating to roughly the early- to mid-1980s was coming of age. For many of that new generation around Lake Atitlán, the anti-mine protest and the storm of 2005 would be the first experience with politics on a national and global scale.

3. The Movement, the Mine and the Lake: The Violent Conjuncture of 2004–2005

The conjuncture seen in Sololá in 2004–2005 shows how protests against mining, free trade zones and other neoliberal projects intersected with NGO-ification in an age of social change and social perseverance. On the one hand, agrarian transformation and rural urbanization were creating new cities through the Mayan highlands. On the other, despite all of the social problems born of urbanization in a postwar environment, Maya community structures proved resilient. Although they were

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[7] SUD retook the official municipality during 2004–2008, followed by URNG-Maíz again in 2008–2012; SUD won the 2015 elections and has held the mayoralty since 2012.

unable to stop the tide of neoliberal development, the Maya continued to advocate for their rights and fight for their communities.

The fight got harder beginning in 2004. Four years of relatively populist government (2000–2004) under Alfonso Portillo of the right-wing FRG (Guatemalan Republican Front) party had slowed the tide of neoliberal policies and irritated the elite. In 2004, a pro-business candidate, Oscar Berger (2004–2008), took office, marking, among other things, a resurgence of licenses for extractive industries. As new exploration in other areas in gold, copper, nickel and petroleum moved forward, Glamis Gold, the pioneer of open-air mining in Guatemala and a symbol of 1990s global "cowboy capitalism," went through a series of buyouts and mergers. The Marlin Mine that Glamis opened in 2004 has been owned since 2006, the year it started producing, by the Canadian firm Goldcorp.

At the time of the 2004–2005 anti-mine protest in Sololá, a second URNG-Maíz administration was in control of the *alcaldía indígena*. It had made history in a patriarchal society with the election of Dominga Vasquez (2004–2005), the first woman ever to lead it. She bore the brunt of the elites' blame for the anti-mine confrontation; they even accused her of terrorism. In retaliation for the activism, writes Rigoberto Ajcalón Choy, a Kaqchikel scholar who grew up in Sololá, Berger's government slashed municipal funding for Sololá's development committee by 50 percent, distributing the funds to more complaisant populations around the lake. By January 2006, Dominga Vasquez was *alcaldesa* no longer. She had not run for reelection in 2005, and she had received so many death threats that she was surrounded by a human shield provided by Peace Brigades International ([24], pp. 112–15; [41], p. 10).

By 2006, anti-mine protests had included not only the cylinder-blocking events in Sololá, but numerous protests in Huehuetenango, as well [42]. Most spectacularly, a series of "*consultas comunitarias*" began in May 2005 in San Marcos, in which community after community voted, unanimously or nearly so, to reject the mine. These local movements, horrified by the threat of cyanide in their groundwater, were also anti-globalization. In Guatemala, issues included opposition to CAFTA (ultimately passed as CAFTA-DR, the Dominican Republic and Central American Free Trade Agreement) and the Free Trade Area of the Americas, the rising price of now-privatized electricity and a vaunted transnational superhighway program called Plan Puebla-Panamá ([34], pp. 188–91; [43–45])[8].

Despite all of the activism in the mid-2000s and beyond, the mine and CAFTA-DR have gone ahead, and superhighway plans continue under other names.

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8   Two documentary films have been released on anti-mining activism, one in 2005 and the other in 2011 [1,45].

Activists' failure to turn the tide on these projects can be mostly attributed to the sheer power of transnational capital. Too, NGO-ification has played a role. In general (although there are of course exceptions), NGOs are not interested in funding activism that might generate serious structural change. Thus, issues that are important culturally, but less so economically (such as Maya cosmovision, for example), come to be profitable in a way that, say, pushing for progressive taxation or for unionization are not. However, other factors have been important in dulling activism's edge. Evangelical conversion, a topic beyond the scope of this work, but one that has affected roughly half the population in recent decades, has arguably contributed to a more conservative electorate. At the same time, even as neoliberal policies have contributed to the expansion of a pauperized underclass, they have also help to give rise to a growing middle class in an urbanizing and diversifying agrarian landscape. Born of transitions in agriculture in the late twentieth century, this new highland middle class is also not necessarily interested in anti-capitalist activism.

It is impossible to understand highland Guatemala without considering its sea change in agricultural production. Beginning in the 1970s, non-traditional agro-exports (NTAs) began to take root, in part complementing and in part replacing traditional highland corn and bean (*milpa*) cultivation. Broccoli, snow peas, macadamia nuts, cardamom, flowers and other crops transformed the highlands in the following decades. Over time, NTAs came to eclipse coffee, the nation's main agro-export since the 1870s, in their profitability ([34], pp. 124–53; [46,47]).

The labor demand created by the new crops was one of a number of key factors that contributed to astonishing rates of rural urbanization, especially from 1996 to the present, giving rise to what I have dubbed a new "agro-urban" landscape (this, together with an analysis of popular youth culture and popular alternative nationalism, is the subject of my forthcoming book [48]). Many large, but once-remote villages have become bustling towns, while provincial towns are now small cities. Rural urbanization, Carlota McAllister points out, has been paradoxically accompanied by "ruralization," since the high cost of living forces people to rely increasingly on subsistence agriculture [49]. Fueled as well by remittances from migrants in the U.S., agro-urbanization has occurred in tandem with, and in part because of, the baby boom that has made Guatemala's population one of the youngest on Earth. As NTAs helped to spur rural urbanization and an associated spike in smallholdings, many of them Maya-owned, less and less of the exponentially-growing and very young economically-active population worked in agriculture [50].

Given the sea changes underway, a national rural development policy was desperately needed. The Peace Accords had mandated incorporating the rural population into the development process, and during the Portillo administration (2000–2004), a national, multi-sector roundtable had deadlocked in its goal to reach

consensus on an Integrated Rural Development Law. When Berger took office in January 2004, at least seventeen rural development proposals were in circulation. Berger created a new roundtable to reach consensus even as his administration's actions, including issuing far more mineral exploration and exploitation licenses than had Portillo, infuriated *campesino* groups. In particular, the administration began forcibly evicting settlers from rural land invasions around the country, provoking *campesinos* to call a national strike on 8 June 2004. In the same month, the government convoked its roundtable ([50], pp. 14–15, 112–13, 119–31)[9]. Agribusiness's intransigence and complex politics ultimately caused negotiations to fail. Efforts were still underway, however, in the months surrounding the government's breakup of the Sololá 2004–2005 anti-mine demonstration, an act that among others spurred the *alcaldes indígenas* of Huehuetenango, El Quiché, San Marcos, Quetzaltenango, Totonicapán and Sololá to create an advocacy group, the Regional Council of Indigenous Peoples ([44], p. 46; [51]). As levels of conflict reached the boiling point in the first half of 2005, representatives from the state, civil society and the political parties kept working on a development plan. Among their tools was FODA (SWOT), a technique that evidenced the NGO-ification of the body politic from bottom to top.

NGO-ification, agrarian conflict and agro-urbanization formed the backdrop of the 2005 anti-mining confrontation in the Sololá department, as well as of the threats to the lake in the years ahead. These factors also help to explain why the lake was so damaged in the first place, why efforts to save it have gone so unnoticed while anti-mine activism has captured the world's attention and why the lake in 2015 continues to die and mining proceeds unabated.

Agricultural runoff, as well as sewage overloads and riverside garbage dumps born of population growth had already stressed the Lake Atitlán environment when tropical storm Stan hit on 4 October 2005. The region's urbanizing towns had all grown rapidly over the past decade or so, while farmers diversified their crops, hoping to participate in the changing agro-export market (see [52], for example). Besides polluting the lake, population growth also exacerbated the trend of creating settlements in unstable areas. No example is more poignant than the Tz'utujil town of Panabaj, where a landslide buried more than 1200 people alive. Like Panabaj, many of the newer impoverished "suburban" hamlets in the area were located on land known to be at grave risk, bespeaking the area's rapidly growing population. On the other hand, on the Kaqchikel-speaking side of the lake, in towns such as Panajachel, for example, swollen rivers washed scores of poor, self-constructed neighborhoods into the lake.

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[9] The Berger administration's roundtable was called the MDPDRI, Mesa de Diálogo y Participación sobre el Desarrollo Rural Integral (Roundtable of Dialogue and Participation on Integrated Rural Development).

The government had no emergency plan. What little help that did come did not arrive for days. In Panajachel, where I was living at the time, neighbors organized relief themselves, creating a shelter in the town gymnasium. My job was to open and sort locally-donated aid packages, many of which were being carried down the mountain from Sololá by Maya using tumplines. On 5 and 6 October, robbers began to loot abandoned properties; community patrols put a stop to it. Townspeople also informally, but effectively prohibited price gouging and arranged the rationing of gasoline and other essential goods.

Campesino organizations around the highlands were so angered by the state's weak response to the disaster that they derailed the national agrarian development roundtable and ultimately forced through agreements to increase relief funding and develop better emergency plans ([50], pp. 152–53). Politics and activism may be atomized in this small nation. Crime and folk justice may indicate a shattered body politic, and new class divisions may be arising in an urbanizing society. Guatemalans responding to Stan, however, proved that their tightly-woven, if conflictive, community structures have survived war and neoliberal assault alike.

4. Green Lake, Green Movement: Plans, Peril and the Pink Tide's Failure in Agro-Urban Guatemala, 2006–2015

From the mid-2000s–the mid-2010s, creating, bolstering and controlling community structures became ever more important to the Guatemalan state. This was the result of a paradoxical "outward/inward" dynamic. On the one hand, activists were looking outward, expanding their links with an evolving global anti-neoliberal movement, even as an increasingly cosmopolitan and networked population became ever more aware of the outside world. This "outward" dynamic showed up not only in spreading consumer culture, but also in increased bitter awareness of Guatemala's shortcomings in providing for its citizens. At the same time, spiraling violence and insecurity underpinned an "inward" turn that threatened to tear communities apart and ultimately prompted the election of a right-winger who promised to battle crime. Both outward activism and inward community-based violence threatened the state. A new spate of consensus-based planning was one attempt to reign in, channel and control these forces.

Particularly alarming to the elite was the possible resurgence of the left. During the second half of the first decade of the new millennium, community-based actors participated in hemispheric and global efforts to fight for indigenous rights, the environment and social justice, as well as to oppose neoliberal globalization. Guatemala had a short-lived moment of hope that it would join the "pink tide" that was signaling the return of the left in South and Central America. In the 2007 elections, the Maya left failed miserably to elect Rigoberta Menchú to the presidency. The country did, however, choose Álvaro Colom (2008–2012), the most

left-leaning *ladino* head of state since the 1950s. In the same period, Maya activists hosted the third Continental Summit of the Indigenous Peoples and Nationalities of Abya Yala, spoke of indigenous "*Buen Vivir*" and drew inspiration from leaders, such as Bolivia's Evo Morales [53,54][10]. Although Colom introduced conditional cash transfer programs loosely modeled on those seen in Brazil, his administration in general was not regarded from below as a success, nor did it threaten big business.

By this time, the baby boomers of the 1980s had begun having children of their own, the first of whom were in their teens by 2015. Trends that had begun in the 1990s accelerated. These included outmigration to the United States, widespread evangelical conversion, rural urbanization and Internet-inflected transnational cultural expressions. Most of all, they included exploding crime and insecurity, helping to explain why Guatemalans elected the right-wing law and order ("*mano dura*," or iron fist) candidate, Otto Pérez Molina (2012–2015), in 2011.

The violence was alarming. As in other towns around the lake and the nation, crime spurred increasing vigilante lynchings in Sololá from the middle of the 2000s to the middle of the 2010s. Spectacular examples include the public burning in 2009 of two men and a woman who had assaulted a bus, killing the driver and a passenger. In 2012, just months after local indigenous authorities had ordered the public whipping of two people accused of robbery and fraud, SUD mayor Andrés Iboy and other local leaders just barely managed to save an accused criminal from the flames. Throughout the entire period, kidnapping rings were periodically active in the lake basin, leading to several lynchings and close calls[11].

Efforts to address the changing landscape continued at a breakneck pace. A new spate of "strategic plans," built on the consensus models and using techniques, such as FODA (SWOT), emerged in the second half of the 2000s and into the 2010s to address the issues the new generation was confronting. Among others, these plans included a PDM (Municipal Development Plan with Territorial Focus) and PET (Strategic Territorial Plan) from all of the nation's municipalities (for example, see [56,57]). These were tied to the central government through SINPET, the National System of Strategic Territorial Planning (see [58]).

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[10] On social movements, environmental activism and reparations (as well as many other postwar "calculations"), see the brilliant analysis in Diane Nelson's works; thorough information on social movements may also be found in FLACSO's *Cuadernos de debate No. 6, 7, 8, y 9*, ed. Simona Yagenova, all published in July 2008, the first of which covers links with the World Social Forum. FLACSO is the Facultad Latinoamericana de Ciencia Sociales (Latin American Faculty of Social Sciences).

[11] I was in the Sololá area during kidnapping incidents and the 2009 lynching. For a sample of the incidents to which I refer, see postings on the Facebook page of *Noticias Sololá (NS)* [55], including: "*Aplican castigo comunitario a dos personas acusados de robo*," posted 28 February 2012, and "*Disturbios en Sololá*," posted 5 May 2012.

In 2011, Sololá published a PDM with a special focus on gender and cultural belonging [59]. The unpublished PCDs, or Community Development Plans, that underpinned this document all evidenced a desire to belong, socially, economically and politically. Residents stressed the high number of young people in their communities, areas that they universally reported were growing. They planned for better inclusion for their culturally-threatened children and hoped to link to wider economies. Furthermore, the local community members who participated in writing the PCDs demonstrated a keen awareness of environmental problems and evidenced a desire to save the lake, in urbanized, urbanizing and still-rural areas alike.

In the city neighborhood of Barrio El Calvario, residents expressed their adherence to *paq' uch*, "an ancestral value and originary form of solidarity among the *pueblo* Maya." Their planning process had included not just officials from the NGOs, governmental agencies, COCODES and the "official muni", but also Maya elders, *principales*, "*ajq'ijab*" spiritual guides, midwives and the *alcaldía indígena*. Together, these groups reached consensus that technologies, such as television, radio and the Internet, were causing the loss of values in an age when poverty was forcing people to migrate. Gangs, alcoholism, drug addiction and organized crime rings were proliferating, neighbors said, as they planned for sports facilities to keep young people occupied. As in other neighborhoods, they noted that the lack of drainage, sewer systems and a sewage treatment plan polluted both their immediate environment and Lake Atitlán. Pollution had been barely mitigated by the central government's agency to save the lake, which worked with the local municipal commonwealths and a collection of relatively ineffective homegrown environmental organizations (see [60], pp. 1, 6–13, 35)[12].

The urban Barrios El Carmen and San Bartolo had concerns similar to those of El Calvario. They noted that "activities against human values and integrity" ([63], p. 8) were going on in unlit parks, where antisocial groups and delinquency were proliferating. They added that people were losing the Kaqchikel language [63,64]. Rural *caseríos* (hamlets) also spoke of infrastructure and the environment. They decried the utter lack of a social safety net, clamored for better access to education and training programs and complained of pollution caused by the lack of a garbage collection system and by chemical fertilizers. As is typical in the area, they were supplementing corn and bean cultivation with NTAs, but they were selling these largely in local markets and wanted access to agro-export markets for

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[12] The government agency is AMSCLAE (Autoridad para el Manejo Sustentable de la Cuenca del Lago de Atitlán y su Entorno); its history may be found in [61,62]. A second storm, Agatha, damaged the region in May 2010 and exacerbated the lake's problems. Besides suffering repeated cyanobacteria blooms, the lake's waters also rose, swallowing beaches and shoreline homes. Residents in mid-2015 hoped that the recent piecemeal opening of sewage treatment plants might help.

their crops. Like the urban neighborhoods of the municipality, they reported young and growing populations. Not surprisingly, they noted less delinquency and loss of culture among their children than their urban neighbors had, but they worried about the effects of migration on their communities and families [52,65].[13]

5. Conclusions: Youth, Insecurity and Citizenship in the Age of the Internet

Young people growing up in this atmosphere of violence and insecurity began to organize their own associations during this period. Many of these, to be sure, were born of a craze of association making led by the multicultural state. Others, however, were linked to Maya advocacy groups, many of them openly anti-capitalist, as well as to a global indigenous movement and anti-globalization movements, such as the World Social Forum (see [66–68], the last of which is the Facebook page of the Council of Indigenous Youth). Some associations, however, were different kinds of groups: sports teams, garage bands, rave collectives and other clusters of youths interested in rapping, break dancing, painting (see [69]) and blogging. The confluence of historical forces seen in Sololá in the middle of the first decade of the first millennium had unfolded in a globalizing, yet still intensely local (see [70]) agro-urban Guatemala. The youngsters who populate these areas are the subject of great national concern. Some critics fret that they are apolitical. Others point out, with reason, that "Maya" is not necessarily an identity to which many of these young people hew, especially the everyday, *de a pie* folk who make up a significant percentage of the population and whose main interests do not include politics. Whatever their politics and whatever their evolving and diverse senses of identity may be, however, agro-urban youngsters participated in the national protests of 2015 that ultimately drove the vice-president and president out of power and into jail for corruption.

While the obstacles they and their society face are significant and while class-based and even culturally-based politics of the older Mayan Movement may, like the movement itself, be in decline, these two astonishing postwar generations, showing as they do the fractured, but still very real legacy of the Mayan Movement and the organized left, give everyone plenty of reason to hope; so too does their parents' history. In the 1990s, a time of intense conflict and neoliberal transition, local Maya activists took over city hall and reactivated community cargos that had survived the centuries. Paradoxically, this process itself was in part fostered by NGOs and government policies of multiculturalism and decentralization in the new millennium. The children of these postwar politics, just coming or still to come of

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[13] In 2011, Sololá *campesinos* received a certification that they hoped would lead to a deal to sell their crops to Wal-Mart, a national newspaper reported ([12], "*Red de agricultores obtiene certificación*," 27 November 2011.

age, cast these processes and paradoxes into sharp relief. Perhaps they will be the complaisant consumer-citizens envisioned by neoliberalism's best laid plans. More likely, they will not.

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"Indigenizing" Food Sovereignty. Revitalizing Indigenous Food Practices and Ecological Knowledges in Canada and the United States

Charlotte Coté

Abstract: The food sovereignty movement initiated in 1996 by a transnational organization of peasants, La Via Campesina, representing 148 organizations from 69 countries, became central to self-determination and decolonial mobilization embodied by Indigenous peoples throughout the world. Utilizing the framework of decolonization and sustainable self-determination, this article analyzes the concept of food sovereignty to articulate an understanding of its potential for action in revitalizing Indigenous food practices and ecological knowledge in the United States and Canada. The food sovereignty movement challenged the hegemony of the globalized, neoliberal, industrial, capital-intensive, corporate-led model of agriculture that created destructive economic policies that marginalized small-scale farmers, removed them from their land, and forced them into the global market economy as wage laborers. Framed within a larger rights discourse, the food sovereignty movement called for the right of all peoples to healthy and culturally appropriate food and the right to define their own food and agricultural systems. "Indigenizing" food sovereignty moves beyond a rights based discourse by emphasizing the cultural responsibilities and relationships Indigenous peoples have with their environment and the efforts being made by Indigenous communities to restore these relationships through the revitalization of Indigenous foods and ecological knowledge systems as they assert control over their own foods and practices.

> Children, language, lands; almost everything was stripped away, stolen when you weren't looking because you were trying to stay alive. In the face of such loss, one thing our people could not surrender was the meaning of land. In the settler mind, land was property, real estate, capital, or natural resources. But to our people, it was everything: identity, the connection to our ancestors, the home of our nonhuman kinfolk, our pharmacy, our library, the source of all that sustained us. Our lands were where our responsibility to the world was enacted, sacred ground.

It belonged to itself; it was a gift, not a commodity, so it could never be bought or sold ([1], p. 17).

In *Braiding Sweetgrass*, Indigenous botanist Robin Kimmerer summons readers to imagine a different relationship with the land, water, plants, and animals; to rebuild a sustainable relationship where people and the land are good medicine for each other; to open minds and hearts to the gifts they provide, which will be returned in a circle of reciprocity. She writes,

In the indigenous worldview, a healthy landscape is understood to be whole and generous enough to be able to sustain its partners. It engages land not as a machine but as a community of respected non-human persons to whom we humans have a responsibility...reconnecting people and the landscape is as essential as reestablishing proper hydrology or cleaning up contaminants. It is medicine for the earth ([1], p. 338).

Indigenous peoples globally are actively shaping, nurturing and fostering healthy and sustainable communities through their self-determination efforts and decolonization strategies. The decolonial praxis entails decreasing dependence on the globalized food system and revitalizing Indigenous foods systems and practices through the reaffirmation of spiritual, emotional and physical relationships to the lands, waters, plants, and all living things that have sustained Indigenous communities and cultures.

The food sovereignty movement initiated in 1996 by a transnational organization of peasants, La Via Campesina, representing 148 organizations from 69 countries, called for the right of all peoples to healthy and culturally appropriate food and the right to define their own food and agricultural systems. Framing its position within a larger "rights" based discourse, the movement challenged the hegemony of the globalized, neoliberal, industrial, capital-intensive, corporate-led model of agriculture that created destructive economic policies that marginalized small-scale farmers, removed them from their land, and forced them into the global market economy as wage laborers [2–8]. The movement quickly became central to self-determination and decolonial mobilization embodied by Indigenous peoples throughout the world.

"Indigenizing" the food sovereignty movement means moving it beyond the rights based discourse to emphasize cultural responsibilities and relationships that Indigenous peoples have with their environment. It also requires examining the efforts being made by Indigenous communities to restore these relationships through the revitalization of their Indigenous foods and ecological knowledge systems as they assert control over their own wellbeing. Utilizing the framework of decolonization and sustainable self-determination, this article first discusses the impacts of colonialism and historical trauma on Indigenous peoples and cultures and

then identifies recent Indigenous mobilization and resurgence, which includes efforts to revitalize traditional food systems and practices. The concept of food sovereignty is then explored in an attempt to articulate an understanding of its potential for action in revitalizing Indigenous food practices and ecological knowledge in the United States and Canada. I end with a discussion on the Nuu-chah-nulth in Canada who have taken responsibility of revitalizing and restoring their sacred relationship with their ancestral homelands by creating environmental and food policies grounded in traditional principles.

1. Colonialism and Historical Trauma

Indigenous peoples and communities globally have experienced a series of traumatic invasions that have had long-lasting and disastrous outcomes. Massacres, genocidal policies, disease pandemics, forced removal and relocation, Indian boarding school assimilation policies, and prohibition of spiritual and cultural practices have produced a history of ethnic and cultural genocide. In "Historical Trauma in American Indian/Native Alaska Communities", Indigenous scholar Teresa Evans-Campbell characterizes the effects of U.S. colonialism on Native Americans as cumulative intergenerational trauma, whereby they suffer from the highest rates of interpersonal violence, child abuse and neglect, poor health, negative stereotypes and microaggressions that denigrate and destabilize their societies and identity and adversely affect individual and community physical, social, psychological, emotional and spiritual health and wellbeing ([9], p. 316).

Many of the health issues and inequalities Indigenous peoples face today can be directly linked to colonization, the brutal dispossession of homelands, globalization, migration, and culture and language loss. U.S. and Canadian policies legalized this cultural assault that was further intensified by socioeconomic and political marginalization along with racial prejudice, which, too, was often institutionalized ([10], p. 66).

In analyzing colonialism and historical trauma, readers cannot overlook the disturbing legacy of the federal Indian boarding school policy and the horrific impact it had on Indigenous identity and culture. By the late 1800s, both Canada and the United States had adopted an educational system of boarding schools (also called residential schools in Canada) whereby Indigenous youth between the ages of five and 15 were taken from their families and communities and placed in these institutions designed specifically and intentionally to eradicate their spiritual traditions, political and economic systems, languages, and cultures.

Richard Henry Pratt, the founder of the first off-reservation boarding school in the U.S., the Carlisle Indian School, which opened 1 November 1879, created an educational system built on the rapid and absolute assimilation of Indigenous children into Euro-American society, which required complete rejection of their own

cultural and spiritual beliefs. Pratt's philosophy for creating these schools was clearly evident in his statement that became the motto for the U.S. boarding school system: "Kill the Indian...Save the Man" ([11], p. 52). Duncan Campbell Scott, Canadian superintendent general for Indian Affairs, made it quite clear the intent of a 1920 law that made it compulsory for all Indigenous children in Canada to attend boarding (residential) schools: "Our object is not to quit until there is not one Indian left that has not been absorbed into the body politic" ([12], p. 51).

Under this U.S and Canadian policy framework of forced cultural assimilation and within a Euro-American/Canadian value system that encouraged individualism, competition, and a belief in Christian faith, Indigenous children were severed from their families, their communities, their homelands, and their traditional foods. Indigenous identity to a large extent is a collective identity, and the experiences of the generations of children who attended these schools resulted in collective trauma framed within a context of loss—loss of family, community, language, culture, and innocence through the rampant physical, psychological, emotional, and sexual abuse these children suffered in these institutions ([13], pp. 76–78).

Many scholars have written about the unspeakable abuses that Indigenous children suffered in these schools, and in the last 20 years, Indigenous peoples have shared stories of trauma as a way to heal the pain and reconcile with the past [11,14–17]. On 2 June 2008, Canada established the Truth and Reconciliation Commission to address the appalling legacy of Canada's boarding (residential) school system and to provide a forum for former boarding school "survivors" and families to come together in dialogue, support and healing [18]. On June 11 of the same year, Canada's Prime Minister Stephen Harper publically apologized for the government's administration of these schools calling it "a sad chapter in our history" and emphasizing how "this policy has had a lasting and damaging impact on Aboriginal culture, heritage and language" through "the emotional, physical and sexual abuse and neglect of helpless children, and their separation from powerless families and communities" [19].

In these schools, Indigenous children were forced to eat foods that many had never eaten before, foods such as domesticated meats, cheese, wheat flour, and sugar, and were estranged from their own traditional and healthy diets. Nuu-chah-nulth elder Trudy Frank sees a direct correlation to the major health issues facing members of her community and the foods they were forced to eat in boarding school. Frank's narrative elucidates the racism the young Indigenous students faced when they attempted to eat their traditional foods. She writes,

> When we got to residential school we were supposed to eat what was put in front of us. And it was none of our type of food. They'd make fun of us if we wanted to have some boiled fish heads or something like that. They used to call us savages because we ate all this...natural foods. If

we were hungry [for traditional foods] they used to say, "Oh, the savage in you is coming out." You know, we learned to eat processed food, we learned to eat sweetened food. So, we had no choice in what we had to eat ([12], p. 194).

While boarding school narratives have elucidated the horrors of these schools and how Indigenous children were fed inadequate and unhealthy diets, it was not until 2013 that the extent of nutrition deficiency was revealed. In May 2013, Canadian food scholar Ian Mosby exposed more of the horrors of the Canadian Indian Residential School system, revealing how secret nutritional experiments had been conducted on malnourished Indigenous children in boarding schools, thus illuminating the exploitation and neglect by the Canadian government of the Indigenous population.

These experiments arose from other studies being conducted on Indigenous peoples at the same time to analyze and provide a solution to why these communities were experiencing extreme social and health problems that were to a much higher degree than the larger Canadian population. The commonly held misconception at this time, which arose out of racially stereotyped views of Indigenous peoples, was that the social dysfunction, poverty, high mortality rates, and serious health issues Indigenous communities were experiencing stemmed from inherited traits in their flawed cultures. A 1946 study, published in the *Canadian Medical Association Journal*, moved the focus away from these inferior culture arguments and linked these social and health problems to inadequate and unhealthy food. The report revealed:

It is not unlikely that many characteristics, such as shiftlessness, indolence, improvidence and inertia, so long regarded as inherent or hereditary traits in the Indian race may, at the root, be really the manifestations of malnutrition. Furthermore, it is highly probable that their great susceptibility to many diseases, paramount amongst which is tuberculosis, may be directly attributable to their high degree of malnutrition arising from the lack of proper foods ([20], p. 146).

These kinds of reports led to a series of intensive multi-year studies of Indigenous communities throughout Canada by leading nutritionists such as Dr. Frederick Tisdall, the co-inventor of the infant food Pablum, in cooperation with the Department of Indian Affairs and the Indian Health Services Branch of the Department of National Health and Welfare. In fall 1948, the researchers turned their attention to Canada's Indian Residential Schools, conducting tests over a five-year period at six residential schools across the nation with close to 1000 Indigenous children selected for the experiments. These research investigations were conducted by trained dietitians working for either the Red Cross or the federal Nutrition Division led by director Lionel Pett ([20], pp. 146, 161).

One of the schools included in this study was the Alberni Indian Residential School in British Columbia, opened in 1890 and run by the Presbyterian Church until it burned down in 1917. The Canadian government reopened it in 1920 and in 1925 handed over administration to the United Church, which operated the school until it shut down in 1973. The Alberni Indian Residential School was built in the middle of my community on lands that were removed from the federal lands that were set aside for my people following colonization. By the 1950s Indigenous children throughout Canada were being phased into the public school system and many of the children who attended this school were brought here from rural Indigenous communities. The school loomed like a dark haunting beast on top of a hill, and I remember as a young girl staring through the chain link fence watching all the young Indigenous boys and girls, wondering why they were locked up in this dark and dismal place.

Investigations of the Alberni Residential School found run-down, inadequate kitchen facilities and, as was the case with the other schools included in the study, poor and inadequate diets given to the students. As part of the study, some of the children's diets were enhanced with Western food products such as milk and fruit, along with vitamin supplements, while other children in the study were given nothing or placebos ([20], pp. 161–62).

The studies identified a major dietary issue in Indigenous communities, that the levels of malnutrition were directly linked to increasing dependence on "store foods," which were highly processed foods mainly consisting of white flour, lard, and sugar and making up 85 percent of their diet while they were forced away from their more nutritious traditional foods consisting of fish, wild game, and berries. However, rather than develop policies that would support the revitalization of Indigenous food systems or provide them with healthy traditional foods, the dietitians conducting the studies sought to address these problems by promoting what they saw as more nutritious Western foods like milk, cheese, and fruit ([20], p. 155).

Never was it revealed that in order to conduct these studies, most of these children were continually fed nutritionally inadequate diets, sometimes up to five years, knowingly keeping them underfed and denying them healthy foods as well as certain types of dental care. Mosby argues that these experiments exposed "the systematic neglect and mistreatment of students in these schools," making these institutions into ideal scientific test centers "providing access to a population of chronically malnourished and vulnerable children who, as wards of the state, had little say in whether or not they participated in the study" ([20], pp. 162, 165). What Mosby found even more disturbing was that these food experiments were being conducted without the children's knowledge and without their parent's consent.

Nuu-chah-nulth elder Benson Nookemus attended the Alberni Indian Residential School from 1942 to 1947. While he does not know if he was one of the children who were unwittingly part of the food experiments, his narrative

illustrates the constant state of starvation these children were experiencing while the studies were being conducted. Before being taken from his home and placed in the Alberni Residential School, Nookemus's daily diet consisted of traditional foods such as salmon and shellfish, foods he never received at the school. His memories of attending the school are narratives of hunger and sickness. He writes how the children would get one bowl of porridge in the morning and one piece of stale bread in the afternoon. The school had a vegetable garden that the children cultivated, but they were not allowed to eat these foods, which went to the people who worked there. Nookemus says, "We'd get so hungry, we'd steal potatoes and eat them raw...it seemed like some of us were always sick" [21]. On discovering that he attended a school that was part of these food experiments and that he could have been one of the children purposely starved for this study, Nookemus says, "I feel angry" [21]. After leaving the school, Nookemus' dental health began to deteriorate and he eventually lost all of his teeth [21].

While the postwar world was becoming more socially conscious of using humans to conduct biomedical experiments and in the wake of the establishment of the Nuremberg Code of experimental research ethics, in Canada, Mosby argues, Indigenous bodies were being used as "experimental materials," and the residential schools and Indigenous communities became "laboratories" that those conducting the experiments could use to pursue their own political and professional agendas ([20], p. 148).

While the tragic legacy of the boarding system had a disastrous impact on Indigenous peoples dietary as well as emotional and spiritual wellbeing, socioeconomic status also plays a major role in Indigenous health disparities along with the loss or dislocation from their traditional lands and communities (more than 50 percent of Indigenous peoples in Canada and the U.S. live in urban centers) and the inability to access their traditional foods as a result of forced migration, urbanization and environmental contamination. A growing epidemic of lifestyle disease is occurring among Indigenous peoples such as type 2 diabetes mellitus, cardiovascular disease, hypertension, autoimmune disease, and obesity. While these diseases are increasing in the larger U.S, and Canadian populations, they have become more prevalent in Indigenous populations. For example, recent studies have shown that Indigenous adults are four times more likely to suffer from type 2 diabetes than the non-Indigenous population ([22,23]; [10], p. 70; [13], p. 72).

Type 2 diabetes leads to other illnesses and health concerns, such as cardiovascular disease, kidney failure, blindness, lower-extremity amputation, disability, and a decreased quality of life. The risk of developing type-2 diabetes increases with obesity and physical inactivity, which is not only a concern for adults but children as well, with recent studies revealing serious youth obesity problems in Indigenous

communities leading to major health issues such as type 2 diabetes and heart disease as they age ([23]; [24], p. 1487; [12], pp. 193–97).

For Indigenous peoples, the colonial narrative has resulted in social, cultural, and economic marginalization and is reflected in the health disparities with non-Indigenous peoples in the larger Canadian and U.S. populations. Diseases such as type-2 diabetes, hypertension, and obesity are at epidemic levels, making autonomy over Indigenous lands and food systems crucial to their very survival as people.

2. Indigenous Resistance and Resurgence

The approximately 350 million Indigenous peoples worldwide share a collective experience of colonization that is still being felt in their communities today. The very definition of "Indigenousness", Taiaiake Alfred and Jeff Corntassel assert, "is an identity constructed, shaped and lived in the politicized context of contemporary colonialism" ([25], pp. 597–98).

> The challenge of "being Indigenous", in a psychic and cultural sense, forms the crucial question facing Indigenous peoples today in the era of contemporary colonialism—a form of post-modern imperialism in which domination is still the Settler imperative...Contemporary Settlers follow the mandate provided for them by their imperial forefathers' colonial legacy, not by attempting to eradicate the physical signs of Indigenous peoples as human *bodies*, but by trying to eradicate their existence as *peoples* through the erasure of the histories and geographies that provide the foundation for indigenous cultural identities and sense of self ([25], p. 598).

Using Franz Fanon's notion of unity in Indigenous resistance, Alfred and Corntassel describe how colonial powers actively and aggressively attempt to disrupt and erase the Indigenous sense of place and community and replace these with "doctrines of individualism and predatory capitalism," sometimes successfully. They cite the contemporary treaty process in British Columbia, Canada, and tribal gaming in the United States as examples of co-optation and forced federalism ([25], p. 608; [26]). Indigenous peoples, Alfred and Corntassel maintain, need to create physical and psychological spaces that are resistant to the negative grip and influences of imperialism and globalization in what Feliciano Sanchez Chan defines as "zones of refuge" ([25], p. 605).

Decolonization is central to "unraveling the long history of colonization" ([27], p. 71). As Indigenous scholar Angela Cavender Wilson asserts, it entails a reaffirmation of Indigenous epistemological and ontological foundations that colonial forces have worked to silence in what Maori scholar Linda Tuhiwai Smith describes as "the

struggle for decolonization" ([28], p. 201). "[D]ecolonization offers a strategy for empowerment", says Cree scholar Winona Wheeler and through auto-criticism and self-reflection Indigenous peoples can develop a critical consciousness about how colonization has impacted their lives and then move beyond this oppression by restoring health to their communities through re-engagement of their traditions ([27], p. 71).

Recent mobilization seen in the 1994 Zapatista uprising in Chiapas Mexico, the signing of the United Nations Declaration on Indigenous Rights (UNDRIP) in 2007, and the emergence of the Canadian Idle No More Movement in 2012, builds on ongoing Indigenous resistance to colonialism, neoliberalism, and globalization and the disastrous impacts these systems continue to have on ancestral homelands. Fundamental to these recent struggles are the goal of self-determination and the commitment to protecting Indigenous lands from exploitation and development. The UNDRIP, adopted by the United Nations in 2007, enshrined global Indigenous collective rights that constituted the minimum standards for their survival, dignity, and well-being. Among the rights recognized were the right to self-determination, the right to self-government, and the right to lands and resources that Indigenous peoples traditionally owned or occupied [29]. While the UNDRIP is an aspirational, nonbinding document, some countries such as the Philippines and Bolivia have adopted the document's provisions as law, and Indigenous groups globally have begun testing the enforcement of these provisions ([30], p. 156).

Kristin Moe asserts that the Zapatista's, more than any other Indigenous movement, have successfully linked "local issues of cultural marginalization, racism, and inequality" to global threats of neoliberal economic policies exemplified by the North American Free Trade Agreement (NAFTA) and the World Trade Organization (WTO), and to the growing danger of human-induced climate change ([31], pp. 31–32). Both the Zapatista Movement and the Idle No More Movement in Canada effectively utilized social media to bring awareness to Indigenous land rights and environmental issues. Idle No More was founded in December 2012 by three Indigenous women and one non-Indigenous woman mainly in response to the passing of Canada's Bill C-45 which eliminated many of the state's environmental laws and opened up Indigenous lands to development.

Idle No More's core vision centers on a call of unity to bring Indigenous and non-Indigenous peoples together in a "peaceful revolution" that honors Indigenous sovereignty and works to protect the land and water [32]. It quickly spread to include opposition to Canada's Tar Sands oil energy project and the expansion of oil pipelines across Canada and the United States. The movement is rooted in ancestral knowledge and the understanding that it is our moral duty to protect the water and land for the future generations. As Terry Wotherspoon and John Hansen assert, Idle No More marked "the re-awakening of an Indigenous tradition and culture grounded in

respect for the environment, fostering resistance to the kinds of exploitation of land and water conveyed through many of the terms of Bill C-45" ([33], p. 23).

3. Globalization and Neoliberal Food Production

The last 30 years have seen an increase in the globalization of food systems through neo-liberal state policies that placed decision-making authority over food production and distribution in the hands of national states, and supranational and transnational organizations, promoting agricultural and food practices that did little to alleviate world hunger. The over-commodification of food after World War Two resulted in concentrating the decision-making power over food, land, and seeds in the hands of only a few, and developing policies that regulated food to meet the demands of the agribusiness industry. This neo-colonial process impoverished millions of peasants and Indigenous peoples by displacing them from the land, resulting in many of them being forced into wage labor to serve the global food economy [2–7].

Indigenous peoples have recognized the dangers of a worldview that commodifies and de-sanctifies the earth. Harnessed by colonial policies that restricted Indigenous response, their ancestors watched the destruction and rape of their lands and cultures unfold. Dependence on the global food economy threatened Indigenous food systems and practices and as Indigenous scholar Waziyatawin asserts, "this disconnect was key to the process of colonization" and "[c]olonial governments worked systematically to break our ancestors' connections to our homelands" ([34], p. 72). It is for these reasons, Waziyatawin asserts, that it is imperative that Indigenous people must vigorously defend and restore their sacred relationships to their homelands through what she defines as a feedback loop.

> A feedback loop is also embedded here; the more we learn to restore local food practices, the more likely we are to defend those practices, and the stronger our cultural ties to our homeland become. If we choose this course of action, we can simultaneously engage both the resurgence and resistance elements of a decolonization movement. Our survival will depend on it ([34], p. 74).

In 1993, small-scale farmer's organizations formed La Via Campesina, and, since then, this global agrarian movement has become the strongest voice in radical opposition to the globalized, neoliberal model of agricultural food production. In a conference held in 1996 in Tlaxcala, Mexico, La Via Campesina criticized the state led food security movement to end global hunger, which focused on access for all people to sufficient, safe and nutritious foods to meet their dietary needs. This food security program, La Via Campesina asserted, did little to address the real issue: control over food production and distribution. They also emphasized that the current regime

continued to promote agricultural practices that benefitted transnational corporations while undermining small-scale farmers [2–7]. The Tlaxcala Conference introduced a new food regime concept, food sovereignty, and established 11 principles that were integrated into La Via Campesina's Position on Food Sovereignty, presented at the World Food Summit in Rome in November 1996.

The World Food Summit brought together representatives from 185 countries and the European Community with close to 10,000 participants who debated one of the most important issues facing the global community—the imperative of eradicating hunger. In the NGO Response to the Rome Declaration on World Food Security, they presented a six-point plan framed within a rights based discourse that challenged transnational capitalist control over the globalized food market and proposed a new framework for ending global hunger.

> We propose a new model for achieving food security that calls into question many of the existing assumptions, policies and practices. This model, based on decentralization, challenges the current model, based on a concentration of wealth and power, which now threatens global food security, cultural diversity, and the very ecosystems that sustain life on the planet...Each nation must have the right to food sovereignty to achieve the level of food sufficiency and nutritional quality it considers appropriate without suffering retaliation of any kind [35].

The definition of food sovereignty was further developed in various forums and meetings. The Nyéléni International Forum for Food Sovereignty held in Sélingué, Mali, in 2007 brought together 500 delegates from various organizations in 80 countries who addressed the need for an international plan for resistance that would support political autonomy, and privilege the rights and interests of local producers, distributors and consumers to establish a decision-making process to alleviate hunger and food insecurity. The Nyéléni Declaration articulates the most often cited definition of food sovereignty.

> Food sovereignty is the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agricultural systems. It puts the aspirations and needs of those who produce, distribute and consume food at the heart of food systems and policies rather than the demands of markets and corporations [36].

The concept of food sovereignty was framed within a larger rights discourse and the ability for all people freely and independently to produce their own foods in a political framework that recognized territorial autonomy. Food sovereignty, the delegates stressed, could only operate in in a world where political sovereignty of

all peoples was recognized (5], p. 7). This emerging food sovereignty movement challenged the hegemony of transnational capital in the food system, articulating the need to stop viewing food as a "commodity", and demanding that the political rights to produce and distribute food be returned to the producers and consumers [2–7].

This notion of food sovereignty became a uniting call to small-scale farmers and Indigenous peoples throughout the world. While this movement developed in an agrarian-based, Latin American context ([5], p. 1), Indigenous peoples with fishing, hunting, and gathering traditions were able to connect to its underlying philosophy that all nations, including Indigenous nations, have the right to define strategies and policies and develop food systems and practices that reflected their own cultural values around producing, consuming, and distributing food.

Utilizing the term "sovereignty" to apply to this non-state defined food regime seems at odds with Indigenous mobilization as—insofar as sovereignty implies state authority and control—diametrically opposite to Indigenous philosophies that foster relationships with plants, animals, and land based on respect and reciprocity. Some Indigenous scholars have thus contested using the term "sovereignty" for defining the political rights and autonomy Indigenous peoples are seeking.

In *Sovereignty Matters*, a collection of chapters written by Indigenous scholars who explore notions of sovereignty, cultural self-determination, personal autonomy, and decolonization, Joanne Barker (Lenape) and Taiaiake Alfred (Mohawk) argue that problems arise when Indigenous people use non-Indigenous terms to define their movements, their theories, and their lives ([37], pp. 172–74). In the Western legal sense, sovereignty implies values and objectives that, in many ways, seem to contradict the values and objectives found in most traditional Indigenous philosophies. For example, Indigenous philosophies are grounded in the understanding that humans and the environment are bound in a relationship of reciprocity, respect, and obligations—not coercion and domination ([1], p. 115). Barker contends that, "translating indigenous epistemologies about law, governance, and culture through the discursive rubric of sovereignty was and is problematic. Sovereignty as a discourse is unable to capture fully the indigenous meanings, perspectives, and identities, about law, governance, and culture, and thus over time it impacts how these epistemologies and perspectives are represented and understood" ([38], p. 19). Alfred writes, "Western conceptions, with their own philosophical distance from the natural world, have more often reflected kinds of structures of coercion and social power...Indigenous philosophies are premised on the belief that the human relationship to the earth is primarily one of partnership" ([39], p. 45).

Barber and Alfred challenge Indigenous peoples to think about how they understand and relate to the world within a colonial reality and to question the words and terms used to define their actions and existence. For Indigenous people, sovereignty *does* matter, but it needs to break away from a definition derived

from Western political and legal thought and be redefined through and within Indigenous people's own historical and cultural experiences. To indigenize the term sovereignty thus means reframing it within Indigenous people's struggles for autonomy, self-sufficiency, and self-determination rather than within assertions of domination, control, and authority over ancestral homelands.

Indigenous peoples in Canada and the U.S. are exploring ways that Food Sovereignty can be both defined and employed as a concept in creating dialogue and action around the revitalization of Indigenous food practices and ecological knowledges. The Working Group on Indigenous Food Sovereignty (WGIFS), created in 1996, was one of the first Indigenous groups to explore the new concept of Food Sovereignty. Through participation with the British Columbia Food Systems (BCFSN) network, the WGIFS began to articulate ways the concept could be defined and applied to address a wide range of concerns facing regional Indigenous communities as they responded to their own health needs ([40], pp. 101–2).

Coming together in meetings, conferences, and discussion groups, Indigenous elders, traditional harvesters, and community members developed four main principles of Indigenous food sovereignty that frame and guide this new Indigenous Foods Sovereignty movement : (1) Sacred sovereignty: food is a sacred gift from the Creator; (2) Participatory: is a call to action, that people have a responsibility to uphold and nurture healthy and interdependent relationships with the eco-system that provides the land, water, plants, and animals as food; (3) Self-determination: it needs to be placed within a context of Indigenous self-determination with the freedom and ability to respond to community needs around food; (4) Policy: provides a restorative framework for reconciling Indigenous food and cultural values with colonial laws and policies ([40], pp. 100–1; [41]).[1]

Indigenous cultures are shaped by deep and meaningful relationships to the land, water, plants, and animals that have sustained them which, as WGIF director Dawn Morrison asserts, is antithetical to the relationship that Western society has with the environment. While Indigenous communities are distinct, making it impossible to define food sovereignty in a way that reflects all of their realities, Morrison says they are united by eco-philosophical principles that have guided their interactions with the environment and the non-human world that has informed their food systems. She writes,

> The Indigenous eco-philosophy that underlies the ability of Indigenous peoples to maintain dignified relationships to the land and food system is in sharp contrast to the Eurocentric belief, inherent in the worldview

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[1] Also see the Indigenous Food Systems Network website, which grew out of the forums held by the WGIFS [41].

proposed by European philosopher Rene Descartes, that humans are to dominate and control nature, and therefore seek to "manage" the land that provides us with our food. Indigenous eco-philosophy reinforces belief that humans do not manage land, but instead can only manage our behaviours in relation to it ([40], p. 99).

Indigenous food sovereignty weaves together the theoretical and analytical strands that many Indigenous scholars such as Alfred, Corntassel, Kimmerer and others have explicated regarding Indigenous peoples' relationship to the natural world that was weakened by colonialism, neoliberalism, displacement and capitalism. Thus, Indigenous food sovereignty is defined within a restorative context that works to nurture individual and community health by repairing and fostering these healthy relationships.

Placed within a context of self-determination, Indigenous food sovereignty as a concept aligns with principles developed by Cherokee scholar Jeff Corntassel in his notion of "sustainable self-determination". Corntassel positions responsibilities and relationships at the core of Indigenous self-determination. In order to decolonize, he contends, Indigenous peoples need to direct change from within and through action, change, strategies, and policies working toward becoming "sustainable" self-determining nations. Corntassel maintains that "the existing rights discourse can only take indigenous peoples so far" through its emphasis on Settler state political and legal recognition of Indigenous rights, which ignores the cultural responsibilities and relationships -Indigenous peoples have with the land, water, plants, and animals that have sustained their cultures ([42], pp. 105–9).

Within a sustainable self-determination framework, emphasis is placed on decolonization and restoration that connects political autonomy, governance, the environment, and community health. For Indigenous people, Corntassel writes, "sustainability is intrinsically linked to the transmission of traditional knowledge and cultural practices to future generations. Without the ability of community members to continuously renew their relationships with the natural world (*i.e.*, gathering medicines, hunting and fishing, basket-making, *etc.*), indigenous languages, traditional teachings, family structures, and livelihoods of that community are all jeopardized ([42], p. 118).

Corntassel's notion of sustainable self-determination and the WGIF's definition of Indigenous food sovereignty emphasize responsibility, mutuality, kinship, and relationships. Humans and non-humans, Kimmerer writes, are bound to each other "in a reciprocal relationship" that creates duties and responsibilities for both in what she defines as "cultures of reciprocity." "Just as all beings have a duty to me, I have a duty to them", Kimmerer writes. "If an animal gives its life to feed me, I am in turn bound to support its life. If I receive a stream's gift of pure water, then I am responsible for returning a gift in kind. An integral part of a human's education is to

know those duties and how to perform them" ([1], p. 115). The human–ecosystem relationship is characterized as one of reciprocity and respect where humans do not control nature but live in harmony with it. Restoring the health of Indigenous communities means restoring the health of the land. Or, as Kimmerer so aptly states, "We restore the land and the land restores us" ([1], p. 336).

In *Eating the Landscape*, Indigenous ethnobotanist Enrique Salmón weaves his historical and cultural knowledge into a tapestry of understanding Indigenous environmental stewardship and the ancestral relationship Indigenous peoples have with the world around them. Salmón's identity was grounded in what he calls "an encoded library of cultural and ecological knowledge" that united his relatives through the foods they ate and the recipes they shared, binding them to the landscape in a familial relationship of respect:

> The knowledge I learned from my family was one aspect of a trove of culturally accumulated ecological knowledge. When they introduced me to individual plants, they also introduced my kinship to the plants and to the land from where they and we emerged. They were introducing me to my relatives. Through this way of knowing, especially with regard to kinship, I realized a comfort and a sense of security that I was bound to everything around me in a reciprocal relationship ([43], p. 2).

The Inuit in northern Alaska have a saying, "I am what I am because of what I eat" ([12], p. 199). Studies of the Indigenous whaling nations in the Arctic demonstrate how traditional foods, especially whales, have social, cultural, spiritual, and psychological significance. While a high value is placed on whales as a healthy food source, the tradition of whaling maintains community solidarity and collective security through the communal hunts and the processing, distributing, and consuming of whale products by community members. Whaling serves to link the Inuit materially, symbolically, and spiritually to their cultural heritage and ancestral knowledge [12].

Within Indigenous cosmologies, Sam Grey and Raj Patel assert, both landscapes and foodscapes occupy a simultaneously physical, spiritual, and social geography and just "as kinship is not restricted to consanguine human beings, sacredness does not merely congeal in particular places, but is a quality of the totality of the natural world—including all of the life-forms that provide sustenance and frame trade networks. Thus, food can be seen as the most direct manifestation of the relationships between Indigenous peoples and homelands, and it consequently occupies a central space in traditional thought" ([44], p. 436).

4. *Hishuk'ish Tsawalk*, "Everything is One"

I end this article with a brief discussion of my people the Nuu-chah-nulth-aht (Nuu-chah-nulth people) on the west coast of Vancouver Island in British Columbia, Canada, whose efforts to restore respectful and meaningful relationships with their environment are situated within this notion of Indigenous food sovereignty. The Nuu-chah-nulth-aht are actively engaging decolonization and sustainable self-determination through reinstatement of authority over our *ha-huulhi* (ancestral territory) and through the development of strategies and implementation of policies aimed at the sustainable production and consumption of traditional foods through an ecologically sound food system that honors our sacred relationships to land, water, plants and all living things. Embodied in Nuu-chah-nulth philosophies of *hishuk'ish tsawalk*, (everything is one), *uu-a-thluk* (taking care of), and *iisaak*, (respect) is the understanding that we must honor the wisdom and values of ancestral knowledge in maintaining responsible and respectful relationships with the natural world.

The Nuu-chah-nulth,[2] a word meaning, "all along the mountains and sea", are 15 independent communities, united through language, culture, and territory, In 1979, 14 communities came together to form the united political body the Nuu-chah-nulth Tribal Council (NTC).[3] Nuu-chah-nulth autonomy over our marine space is crucial to our survival as a people. Before the *mamalhn'i* (non-Indigenous people) arrived on the B.C. coastline, the Nuu-chah-nulth-aht derived most of their subsistence from the marine space with salmon being at the core of our identity. Through annual First Salmon Ceremonies, the spirit of the salmon is honored through songs and prayers that demonstrate respect for giving its physical form to feed our communities. Colonial encounters severed our sacred relationship to the salmon and through the years we have continually fought in the political and legal arenas to have our right to harvest salmon recognized and affirmed. In November 2009, after a decade of legal battling, the Nuu-chah-nulth successfully fought and won the legal right to control their fisheries. On hearing the decision, NTC President Cliff Atleo Sr. declared, "Today this decision confirms what we've known all along. We have been stewards of our ocean resources for hundreds of generations. And the government of Canada was wrong to push us aside in their attempts to prohibit our access to the sea resources our people depend upon" [45].

In March 2005, the Nuu-chah-nulth launched *uu-a-thluk*, an aquatic resource management organization administered through the NTC. The vision of *uu-a-thluk*

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[2] Also known as Nootka and Nutka.
[3] This political body was created out of the previous collectivity known as the Westcoast Allied Tribes formed in 1958, which changed its name to the West Coast District Society of Indian Chiefs in 1973 and was officially incorporated as the Nuu-chah-nulth Tribal Council in 1979.

is to "take care of" the *ha-huulhi* in a way that is consistent with Nuu-chah-nulth values and principles, a responsibility given to our people through *n'aas*, our Creator. The organization is guided by a Council of Ha'wiih (hereditary chiefs) who meet three times a year to provide guidance and direction through sharing their ecological knowledge and ancestral wisdom with the staff and seasonal interns [46]. This philosophy of marine management is consistent with efforts to become sustainable self-determining nations and reinforces the ruling authority of our *ha'wilth patuk ha'wiih* (traditional governance).

Nuu-chah-nulth-aht are raised with the understanding of *iisaak* (respect), which applies to all life-forms as well as the land and water. *Iisaak*, at its most basic understanding, teaches that all life forms are held in equal esteem. Our relationships to the plants and animals that give themselves as food derives from *iisaak*, which enforces sustainability and places sanctions on those who are stingy or wasteful ([47], pp. 17–18; [48], p. 1279). The principle of *iisaak* is embedded within an overarching philosophy of *hishuk'ish tsawalk*, everything is one.

Within the Nuu-chah-nulth worldview, Nuu-chah-nulth chief Umeek explains, "the universe is regarded as a network of relationships" ([47], p. 118). *Hishuk'ish tsawalk* represents the unity of the physical and metaphysical in a relationship embodied in the principle of *iisaak*. This philosophy connects people, animals, plants, and the natural and the supernatural (spiritual) realms in a seamless and interconnected web of life where all life forms are revered and worthy of mutual respect. The land, water, animals and plants are regarded as your kinfolk, not as a commodity that can be exploited ([47], p. 10; [48], p. 1279; [49], p. 540). The stewardship of our homelands was embedded in this philosophy, and this is what we are striving to revitalize.

Indigenous food sovereignty is positioned within a restorative framework that places responsibility and action on individuals and communities to repair and strengthen relationships to ancestral homelands weakened by colonialism, globalization, and neoliberal policies. Through a process of decolonization and sustainable self-determination, the Nuu-chah-nulth-aht are actively restoring and strengthening the spiritual and cultural bonds with their *ha-huulhi* (ancestral homelands) through the development of environmental and food policies that are grounded in principles of respect and responsibility. It is time, Kimmerer writes, that Indigenous peoples honor the responsibilities they have to the nonhuman world and acknowledge what has been given and was has been taken in this "moral covenant of reciprocity." She writes,

> "It's our turn now, long overdue. Let us hold a giveaway for Mother Earth, spread our blankets out for her and pile them high with gifts of our own making...Whatever our gift, we are called to give it and to dance for the renewal of the world. In return for the privilege of breath." ([1], p. 384).

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The White Mountain Recreational Enterprise: Bio-Political Foundations for White Mountain Apache Natural Resource Control, 1945–1960

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Abstract: Among American Indian nations, the White Mountain Apache Tribe has been at the forefront of a struggle to control natural resource management within reservation boundaries. In 1952, they developed the first comprehensive tribal natural resource management program, the White Mountain Recreational Enterprise (WMRE), which became a cornerstone for fighting legal battles over the tribe's right to manage cultural and natural resources on the reservation for the benefit of the tribal community rather than outside interests. This article examines how White Mountain Apaches used the WMRE, while embracing both Euro-American and Apache traditions, as an institutional foundation for resistance and exchange with Euro-American society so as to reassert control over tribal eco-cultural resources in east-central Arizona.

1. Introduction

This is a story about the appropriation of science, technology, and capitalism as tools of liberation, a moment in White Mountain Apache history where the tide began to turn in their resistance to the cultural hegemony of the United States government. This story is as an opportunity to illustrate a particular way that a local, place-based non-Western community responded to a wave of globalization after World War II. As Arturo Escobar points out, "Subaltern strategies of localization still need to be seen in terms of place; places are surely connected and constructed yet those constructions entail boundaries, grounds, selective connection, interaction, and positioning, and in some cases a renewal of history-making skills" ([1], p. 169).

Globalization has always been a process of entanglement among cultures: in essence a "glocalization process" [2]. For American Indians, this began when the first European explorers set foot in the Western Hemisphere and intensified with colonization. Both Richard White's *The Middle Ground* and James Merrell's *The Indians New World* provide excellent examples of Native American social and political flexibility in the seventeenth to early twentieth centuries to reimagine their societies

in the wake of ecological change and cultural disruption. They illustrate that the cultural appropriation and adaptation of Western technology proved key to the long-term survival and reinvention of American Indian culture [3,4]. This process of entanglement, what I call resistance and exchange, has continued into the twenty-first century and remains an important process of identity formation for American Indian groups [5–7].

It is from the subaltern, as a subject of the settler colonial power structure of the United States, that the White Mountain Apache Tribe and all other American Indian groups have reinvented their relationships with the land, their communities, and outside influences. White Mountain Apaches have shown that resistance to global forces is not futile, but requires a reimagining of tribal identity and interacting with non-Apache cultures. This resistance involves the retention and reinvention of local cultural attributes, knowledge, and technology but also involves appropriating and reformulating cultural attributes, knowledge, and technology of the hegemonic culture.

The White Mountain Apache Tribe exemplifies how globalization doesn't necessarily lead to cultural homogeneity, but a hybridization process. Rather than a single capitalist system, knowledge production system, and technological ethos, globalization leads to multiple capitalisms, multiple knowledge production systems, and multiple technological ethoses resulting from resistance and exchange that occurs among the dominant cultures and historically subjugated cultures [8–10]. The local and global have permeable, fluid boundaries where exchange occurs, albeit in an unbalanced way. Instead of wiping out local cultures, this process creates new cultures, retaining some traditions and spawning new cultural inventions that are rooted in maintaining close ties and identity with place. As Nelson Lupe, Sr., a White Mountain Apache leader in the 1950s and co-founder of the White Mountain Recreational Enterprise (WMRE) asserted, "We're not dying off... We're growing ([11], p. 37)." This was a call for cultural survival in the early 1950s that entailed the realization that Apaches must appropriate Euro-American science and technologies in order to maintain some level of cultural identity and ties to their homeland. For White Mountain Apaches, this place is the White Mountains of east-central Arizona on the Fort Apache Indian Reservation.

Maintaining sovereignty within the limits of the United States government's federal fiduciary responsibilities necessitated that American Indian groups establish modern governments, with bureaucratic and legal machinery to cope with county, state, and federal influences. The struggle of modern Native American state formation throughout American Indian history can only be understood as a reaction to settler colonial forces pushing for the liquidation of American Indian traditional governments or any government at all, including those established, reestablished, or reorganized under the Indian Reorganization Act of 1934 [12].

All American Indian groups continue to face this struggle. However, the pathway of resistance and exchange for maintaining a sovereign status, enforcing the trust relationship and the fiduciary responsibility of the United States government and its bureaucratic resource for American Indians, the Bureau of Indian Affairs (BIA), is context-dependent [13–16]. Each American Indian group has its own story and different levels of success. To illustrate how White Mountain Apaches opposed socio-political forces that attempted to limit their cultural and political autonomy in the middle of the twentieth century, this article tells the story of the formation of the White Mountain Recreational Enterprise in the 1950s, which marked a turning point toward regaining control over Apache destiny on the Fort Apache Indian Reservation. I argue that the WMRE, an Apache/Euro-American hybrid construct, became an organizational foundation for resistance to and exchange with Euro-American society that impelled the Apache people's quest to maintain tribal sovereignty and control eco-cultural resources on the reservation.

2. The White Mountain Apache Tribe and the Political Origins of the WMRE

The Ndee (the People) consist of several subgroups (White Mountain, Cibecue, San Carlos, Northern Tonto, and Southern Tonto) that belong to the Western Apache group [17,18]. Both Cibecue and White Mountain Apaches live on the Fort Apache Indian Reservation.[1] To create a sovereign identity, they have collectively chosen to call themselves the White Mountain Apache Tribe, although locally tribal members still distinguish between the two subgroups. Unlike many other Native American groups, the federal government created Fort Apache from a small fragment of their former homeland, the White Mountains of east-central Arizona.

In order to survive as a culture, the tribe depends greatly on an extensive renewable natural resource base. The reservation population has more than quadrupled since the 1930s from approximately 3000 to 13,000 members as of 2010 [19]. This population growth, along with the Apache people's desire to remain a sovereign nation, furthers their dependence on the reservation ecosystem's goods and services. Currently timber, cattle, hunting, fishing, ecotourism, cultural heritage tourism, a ski resort, a casino, agriculture, two manufacturing companies (Apache Aerospace Company and Apache Materials), and a number of retail stores support their economy [20]. The WMRE to a certain extent made much of the current WMAT economy possible. Its establishment allowed the WMAT to experiment with and adapt non-Apache knowledge systems, technology, and business practices

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[1] For stylistic reasons, I intermittently shorten White Mountain Apaches to Apaches. In addition, I shorten Fort Apache Indian Reservation to Fort Apache, not to be confused with the actual historic military Fort Apache that resides within the reservation boundary.

to their community needs. It allowed many Apaches to experimently determine effective ways of a interacting with Euro-American cultures so as to maintain Apache sovereignty and cultural identity: in essence, protect themselves against legislative efforts to dissolve fiduciary obligations and tribal sovereignty. While many Apaches at the time thought this was a risky proposition—to tangle with Euro-Americans was to be dominated by them and become like them—others thought the risk was necessary.

The White Mountain Recreational Enterprise's (WMRE) establishment in 1952 marked it as the first American Indian recreational business on an Indian reservation in the United States [21].[2] For the first time, White Mountain Apaches formed an independent organizational boundary, outside the tribal government, between themselves and Euro-American society. On the surface, the WMRE embraced the ideals of Euro-American land management and business techniques, developing reservation resources to generate revenue and supply jobs for tribal members. Upon a closer look, however, the WMRE embodied the tribe's quest to restore control over reservation resources. This enterprise made it possible for Apaches to escalate the appropriation of Euro-American science and technology for the benefit of the tribal community rather than outside interests, becoming an economic cornerstone from which they could rebuild their society. Furthermore, the WMRE became a platform from which Apaches could begin mediating and participating in knowledge production on the reservation, creating training programs that expanded the pool of Apache expertise. Some of these programs led to long-term career opportunities, contributing to a modest measure of economic stability for some tribal members.

Thus the WMRE became an institutional foundation for resistance to and exchange with Euro-American society and the intensification of globalization in the post-World War II climate. Although globalization is often seen as a homogenizing force projected outward from developed nations toward developing nations, in the United States, globalization has also been turned inward toward North America's original inhabitants in vacillations between nation building projects and assimilation policies (e.g., allotment of tribal lands). U.S. policy toward American Indians has been far from stable, but has been consistently paternalistic, coercing American Indians to adopt Euro-American lifestyles that fostered a culture of dependence until the 1970s [22]. Coming off a short-lived nation building effort known as the Indian New Deal that ended in the wake of World War II, the whims of the United States government swung back toward an assimilation policy that sought to extinguish its fiduciary responsibility and American Indian treaty rights, and thus any notion of

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[2]   The tribal council did not officially establish the WMRE until 1954.

tribal sovereignty. American Indians know this last grand assimilation effort, which occurred roughly from 1945 until the early 1960s, as the Termination Era.

Although the federal government had been practicing termination policy since 1945, it was not until 1953 that the U.S. Congress enacted Public Law 280, its legislative foundation. The Congressional architects of this legislation designed it to further dissolve federal responsibility for American Indians, authorized funding cuts for many federal American Indian services, and authorized states to assume jurisdictional control over criminal and civil law on reservations [23–25]. Essentially, the goal of the policy was to assimilate all American Indians into Euro-American society, "to make the Indians within the territorial limits of the United States subject to the same laws and entitled to the same privileges and responsibilities as are applicable to other citizens of the United States, to end their status as wards of the United States, and to grant them all of the rights and prerogatives pertaining to American citizenship" [26]. With its ideological roots in the individualist ethos of liberal economics, the homogenizing intention of the policy was to "liberate" Indians from the shackles of federal responsibility [27].

To administer this policy, tribes considered economically "self-sufficient" would have their lands taken out of federal trust, making them taxable, and would have federal support withdrawn, including basic services such as health care and education. Many tribes feared the consequences of termination because not only would it represent an abrogation of treaty rights and a denial of the federal trust responsibility, but withdrawal of services could also devastate the cultural integrity and tribal sovereignty of even the most economically advanced nations [5,13].

The WMRE emerged during this era. At the time the main forms of White Mountain Apache subsistence came from cattle and local farms, with Euro-American timber operations providing a source of wage labor for some. To get a sense of the White Mountain Apache Tribe's level of "self-sufficiency", Congress urged the Bureau of Indian Affairs (BIA) Central Office in Washington to conduct several studies to assess its withdrawal status. The reservation superintendent at the time, John Crow, suggested that the Apaches remained far from ready. Their lack of business, legal, and political experience on top of a persisting "low level of educational achievement" would leave the White Mountain Apache Tribe vulnerable to economic failure, pushing it further into poverty. He warned that because of the tribe's relative geographical and cultural isolation from the non-Indian world, "at best, assimilation will be a slow process" [28]. Ironically, while the purpose of termination policy was to push assimilation, in practice, it politically reinvigorated tribal politics in the United States. Many American Indian groups, including the White Mountain Apache, began economic and natural resource development projects, such as the WMRE, to reassert political autonomy and sovereignty ([29], p. 173).

Two figures in Apache history are prominent in the establishment of the WMRE: Nelson Lupe, Sr., a long-time tribal leader and two-time tribal chairman, and Silas Davis, a Euro-American and career Bureau of Indian Affairs forester who labored on the Fort Apache Reservation for the better part of two decades. Together, they worked tirelessly to create an Apache/Euro-American hybrid organization. In many ways, Lupe was a prototype of the Apache hybrid boundary worker that became more common later, well-versed in both Euro-American culture and his own culture, harboring extensive Apache historical, ceremonial, and religious knowledge [30]. Because of his ability to move back and forth between cultures with relative ease, he understood how to build an enterprise that would benefit the Apache community rather than outside interests. Beyond the economic benefits of tourism, he believed revenue from these endeavors could help support "a repository for articles of Apache culture and records which are fast disappearing" [31]. To convince the tribal council and Apaches in general of the merits of the WMRE, Lupe argued that by allowing non-Indians onto the reservation, the tribe could begin to compensate itself economically for past losses, asserting, "As long as we develop our land...we'll have something...to be proud of and something that we can claim as our own and something that we have done ourselves in developing the resources ([11], p. 38)." Through selling fishing and hunting permits, building hotels and gas stations, and creating lake resorts, the Apaches could assume control of their own economic future. No longer would they have to rely exclusively on the whims of the BIA and outside business interests. Lupe's economic argument implied that for Apaches to maintain their sovereignty and restore their cultural identity, they had to develop an independent economic base. Only from this standpoint would the tribal government acquire any political sway in its own affairs.

Silas Davis, well-liked among Apaches, brought his long history of working productively with Apaches, his natural resource management expertise, and his political leverage within the BIA to bear [32,33]. Two decades of forestry work on Fort Apache and training Apache fire fighters allowed Davis to build an intimate relationship with the White Mountain landscape and a solid reputation among Apaches. Truly enjoying his work with Apaches and having developed deep ties to the Apachean landscape, Davis relished the idea of devoting his services to the WMRE [34]. As a show of appreciation for his "long record of service" to the Apache people, the tribal council "granted [him] a lifetime free privilege of hunting and fishing on the Fort Apache Indian Reservation" [35].

Lupe and Davis's friendship marked a new level of exchange that went beyond a paternalistic, top-down model of knowledge production. Their relationship was built on a more even playing field: Lupe provided the political will and ability to convince a reticent tribal council of the merits of a recreational enterprise, and Davis shared his intimate knowledge of the Fort Apache landscape and conservation

techniques. Lupe claimed in an article about the WMRE in *Sports Illustrated* that he and Davis would have long conversations about developing a recreational enterprise. Lupe drew off his weekend recreational experiences while working at a copper smelting plant in Morenci, Arizona during World War II to imagine how Fort Apache could become a recreational hotspot: "It was Sy [sic] Davis who kind of pictured the whole thing to me. We'd talk about the streams. We'd drive out, and he'd say, 'Wouldn't it be wonderful, Nelson, to have a campground in here? We could sell fishing licenses and stock the stream with fish, so fishermen can come back here and give us some money in the summertime.' And right then and there, my mind went back to Morenci" ([11], p. 38).

Ultimately the WMRE provided the White Mountain Apache Tribe with political and economic leverage that it had never experienced before. As revenues increased, the tribal council reinvested in the recreational infrastructure of the reservation and, more significant, the ecological restoration of the Apache homeland. Its primary mission remained the protection, restoration, and conservation of "wildlife, recreational, and natural resources of the White Mountain Apache Indian Reservation for the members of the Tribe and the general public". And perhaps most important, in the spirit of resistance and exchange, the enterprise served as a "liaison...with State and Federal Agencies concerned with... wildlife and recreational resources" [36].

Until 1957, the enterprise derived most of its revenue from fishing permits and a few hunting permits. The WMRE's revenue source greatly increased with the construction of the Indian Pine Service Station and Motel Cabins (later known as Hon-Dah), the first tribally owned retail complex. Strategically positioned at the northwestern reservation entrance, these facilities functioned to capture the growing number of tourists entering Fort Apache. All of this increased interactions with Euro-American worlds but from a relatively increased position of power, a position where Apaches could effectively resist exploitation and also benefit from knowledge and technique exchanges with Euro-American institutions. What follows explores both sides of this process, a resource battle over water rights on the reservation and partnerships that formed as a result of the WMRE.

3. Hawley Lake as a Site of Resistance

Inevitably, with the growth of the WMRE, came resource battles with Euro-Americans. The construction of Smith Park Reservoir (later renamed Hawley Lake) to increase the recreational capacity of the reservation represented the White Mountain Apache government's first significant sovereign extension of the WMRE

to resist non-Indian influence over reservation resources [37].[3] The emerging political and economic leverage of the WMRE afforded the tribal government the capacity to fight institutions that had historically exploited tribal resources with little consequence. No longer were Apaches solely reliant on the BIA, whose decisions did not always work for the best interests of the Apaches.

The battle over Smith Park Reservoir began in 1954, as the WMRE laid plans to build the dam. The Salt River Valley Water Users' Association (SRVWUA) objected to the construction of the dam on the grounds that the WMRE was impounding water that the SRVWUA had claimed prior rights to for irrigating farms downstream of the reservation. The conflict came to a head in 1957 among sensational reports about the construction of the lake taking place under the protection of armed Apache guards. These stories inflamed racist images of Apaches as aggressive warriors, reviving visions among Euro-Americans of the nineteenth century Apache wars. These claims, however, were probably blown out of proportion, as even the Apache County sheriff, who made several visits to the reservation during the conflict, admitted, "There were no hard words ...They were just doing their job" [38]. Contrary to rampant rumors, "there has been absolutely no violence in connection with any actions of the tribe relating to Smith Park Dam, nor has any physical force been brought to bear upon any person to prevent his entering the construction area" [38]. However, some Apache leaders used this same opportunity to create support for the project among the Apache people. Lester Oliver, a tribal council member who eventually became a tribal chairman, told a different story: the sheriff pulled a gun on the guards, only retreating after he realized he was in the sights of an Apache rifleman perched on a nearby cliff. He also claimed to receive an anonymous phone call threatening that if Apaches remained on the "war path", the state would "send in the National Guard" [39]. Amidst conflicting reports, tensions ran high between Apaches and the SRVWUA.

Initially in 1954, when the SRVWUA learned of the Apache plan to create the reservoir, it didn't outright object to the project. The SRVWUA believed, however, that according to the Kent Decree, an Arizona court case in 1910 that supposedly adjudicated water rights in Arizona, it had rights to all water in the Salt River watershed. Realizing, however, that the decree never considered the White Mountain Apache Tribe, whose reservation encompassed the headwaters of the Salt River, the SRVWUA offered that it would allow the construction of the dam under the condition that the tribal council signed an agreement recognizing the SRVWUAs'

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[3] Smith Park Reservoir was later renamed Hawley Lake in honor of Albert Hawley, the reservation superintendent of Gros Ventre heritage who helped the tribe overcome legal hurdles related to the construction of the reservoir.

claim to all the water in the Salt River Basin. The BIA's Phoenix Area Director F. M. Haverland, describing the request as "unconscionable", counseled against signing the agreement [38]. After all, the federally established Winters Doctrine of 1908 trumped the Kent Decree, giving Native Americans prior use rights to water on their reservations.

In 1955, the SRVWUA threatened court action if the WMRE proceeded with the project. In response, Si Davis, Lester Oliver, and Nelson Lupe joined A. B. Melzner and Geraint Humphreys, field solicitors for the BIA, to determine whether the SRVWUA had a solid case. They determined that first, the construction of the dam would only minimally impact the flow of the Salt River; second, the White Mountain Apache Tribe held water rights equal to or above those of the SRVWUA because of the Winters Doctrine; and third, the contested watershed resided entirely within the bounds of the reservation, thus giving Apaches clear jurisdiction over the construction site. Based on these conclusions, the BIA encouraged the tribal government to proceed with the project [40].

Believing the law was on their side, Apaches commenced work in August 1956, only to stop five weeks later. The SRVWUA obtained a court injunction to halt construction "on the justification that the dam would result in undue water loss on account of evaporation" [41]. On 7 September, 1956, the deputy sheriff of Apache County served the construction company hired by the WMRE with a temporary restraining order. With their water rights thrown into jeopardy, tribal officials again sought the advice of the BIA; unfortunately, this time, the BIA wavered. Suddenly the tribal council and the WMRE found themselves fighting a battle on two fronts, BIA bureaucracy and the SRVWUA.

In response, Clinton Kessay, the current tribal chairman, outlined in a letter to BIA Commissioner Glenn Emmons what was at stake:

> Our water and the right to use our water to develop our resources is vitally important to us as a tribe, and we are therefore very anxious to know just what the Bureau of Indian Affairs position is and what action we can expect from the Solicitor's office regarding the present pending lawsuits and what we can expect if in the future the White Mountain Apache Tribe's water development program is harassed by outside agents [42].

Kessay's letter conveyed inherent distrust in the BIA's ability to protect Apache resources. The BIA had initially backed the project but subsequently took a weak position on the matter [43]. The lack of action perhaps wasn't surprising given that termination policy was in full swing by this point. An administration seeking the eventual assimilation of all tribes into mainstream society probably wasn't in a hurry to defend White Mountain Apache sovereignty. However, this time, the law was on

the Apaches' side. They joined a surging wave of tribal lawyers and Native American political movements that were beginning to challenge termination policy and hold the federal government under a legal microscope [44].

With the BIA dragging its feet, Barry DeRose, the White Mountain Apache tribal attorney, and the tribal council pressed the issue. On 5 February 1957, DeRose, along with a tribal delegation, traveled to Washington to discuss a loophole in the case with the BIA and other government officials. The tribe had found a loophole in the lawsuit: it only named the construction company the tribal government had hired to work on the project, failing to list the White Mountain Apache Tribe or the BIA. As long as the WMRE constructed the reservoir, the tribal government wouldn't technically violate the court injunction [45]. Taking matters into their own hands, in April 1957 the tribal council passed a resolution authorizing the acquisition of rented construction equipment and the completion of the dam [46].

Despite the tension with the SRVWUA, the WMRE moved forward with the project under armed guard. The SRVWUA caught wind of the construction soon after it recommenced. On 4 June 1957, they attempted to serve legal documents to the tribal government. To avoid being served, Chairman Kessay, Vice Chairman Lupe, and other tribal leaders fled to New Mexico [47]. In addition, under orders not to admit anyone on to the construction site "unless authorized by the tribal council", Apache armed guards rebuffed the Apache County sheriff's attempt to serve a new restraining order. In the meantime, WMRE workers completed the dam. State officials returned the following morning with armed "body attachments" to find the worksite deserted and water already filling the reservoir [38]. Two years later the reservoir was full and open for business.

Finally, despite a jungle of legal and bureaucratic hassles, the WMRE had managed to create Hawley Lake. The lake eventually served two major purposes: diversifying fisheries management options and increasing the profitability of the WMRE [48]. The WMRE, with tribal council approval, constructed three more reservoirs (Hurricane, Pacheta, and Drift Fence) in 1959 and another in 1960 (Earl Park), all while the Hawley Lake dispute persisted in court. With defiant plans to construct more reservoirs, Apaches had built a total of seven reservoirs on Fort Apache by 1960, while, to no avail, the SRVWUA continued efforts to have the Smith Park Dam removed [49].

4. Creating Mediated Pathways of Exchange

With resistance came increased exchange, and the glocalization process intensified. Exchange emerged in five different ways in the 1950s: through media interventions, guided tourism visits, training partnerships with state and federal agencies, ecological restoration work, and demonstrations of best management practices with other tribal governments. Exchange in many ways was more

complicated than resistance. In their interactions with outsiders, Apaches had to balance expertise of both Apache knowledge and Euro-American land management and business techniques in order to negotiate the epistemological boundaries between Apache and Euro-American cultures. A prominent presence of Apaches required outsiders to address local cultural and environmental concerns. Although Apaches stood to learn useful natural resource management and business techniques from outsiders, their ability to move fluidly among different knowledge systems allowed them to determine whether the interests of outsiders (e.g., BIA officials, state and federal natural resource management agencies, private business interests, tourists, etc.) were in line with Apache interests. Building these mediation skills through WMRE work, Apaches absorbed new knowledge while simultaneously protecting Apache assets. Eventually, tribal government officials and WMRE employees began to embody the process of resistance and exchange, cautiously erecting selective boundaries that delineated between knowledge that would benefit Apaches and knowledge that lacked application to Apache circumstances. What follows are a few examples of White Mountain Apaches building this multi-knowledge system in the 1950s.

If the recreational enterprise was going to be successful and attract Euro-Americans to the reservation, White Mountain Apache tribal officials realized they needed to mediate negative myths about Apache culture that were common in Euro-American culture. This knowledge exchange occurred at a very high level through the media. At the time, there were still persistent myths, which lingered from the wars of the 1800s, among the non-Indian public about the aggressive and unfriendly nature of Apache people. Much of this image was refueled in the press during the Hawley Lake controversy [50]. Soon after establishing the WMRE, the tribal government began work on public relations, promoting the enterprise in newspapers and magazines such as *The Arizona Republic, The New York Times, Arizona Highways,* and *American Legion Magazine* [51–53]. These articles often described the Fort Apache Indian Reservation as a primeval wilderness. *Arizona Highways* referred to the White Mountains as "the last remaining perfect wilderness area in the state" ([52], p. 13). In *American Legion Magazine* an article titled, "Apacheland Welcomes White Man", depicted the Hawley Lake area as "virgin forests of spruce, fir, and aspen" where one would have to pause "often to rhapsodize over the glorious scenery and gape at animals we'd never seen at such close range" [53]. Here, WMRE officials were capitalizing on Euro-American desires for a wilderness experience, which a growing American middle-class with disposable incomes began seeking in the 1950s [54,55].

Another strategy for exchange involved tribal officials spending time with journalists visiting the reservation. Following one such visit, Richard Dunlop of the *Saturday Evening Post* wrote an article that played off of old Apache stereotypes.

As the subtitle of the article indicates—"A family of palefaces from the Midwest spends its vacations on an Arizona reservation and learns Indian outdoor lore from Apaches whose ancestors once shot it out with U.S. Troopers"[56]—it did the double duty of assuaging public fears of Apaches, while advertising the recreational benefits of the reservation by turning such stereotypes on their head. Tribal leaders used these stereotypes to redraw Apache/Euro-American boundaries to their advantage. Clearly welcoming the characterization of the Wild West, Nelson Lupe traveled along with the Dunlop family and showed them "cliffs from which Apache snipers once shot down blue-coated troopers". At the same time, Lupe wasn't shy about the limits of the exchange: "Apaches have always lived around here ...We always will. We fought hard to keep this country. We know that whites are still trying to take it away from us. If we fail to develop our reservation, sooner or later outsiders will do it" [56]. Outsiders could visit the reservation, but they would have to leave, asserting a message of Apache independence and perseverance.

Tribal Chairman Lester Oliver worked to dispel the common myth that all Native Americans were on a "federal dole" at taxpayers' expense. Oliver was good at cleverly co-opting Euro-American rhetoric for Apache benefit. For example, he turned this comment found in a local Arizona conservation association report into positive press for the WMRE:

> The Whiteriver Apache Indian Reservation lies across a fence from the Tonto Soil Conservation District. Their conservation efforts...are handled in a semi-democratic, semi-fascistic manner. ...In conservation, restoration, water yield and water salvage, the Reservation is years ahead of us. Why should lands under the trusteeship of the Department of Interior come up with answers to present day land management problems so far ahead of lands administered under the U.S.D.A.??? [sic] At the start of their conservation program, their lands were in worse condition than the Forest lands are today. The White Mountain Apache Reservation is the most encouraging spot on the Salt River watershed [57].

Oliver referred to this comment in a letter to BIA officials: "I sincerely hope that our Tribe deserves these remarks, except perhaps for the one 'semi-democratic, semi-fascistic', whatever that means" [57]. Again, doing double duty, Oliver policed the political and environmental boundaries of the Apache homeland with subtle wit, taking credit for the natural resource management successes of the tribe while correcting political misconceptions about the tribal government.

Tribal officials also reinforced and created new relationships of exchange with federal and state natural resource management agencies through cooperative agreements with the United States Fish and Wildlife Service (FWS) and the Arizona Game and Fish Commission (AGFC) concerning the operation of the Williams

Creek Fish Hatchery, which was built on Fort Apache in 1939 [58]. Under the new agreement, Apaches recommitted the land and water for fish-cultural operations and took on more responsibility for distributing fish from the hatchery to waters on the reservation [59].

Some Apaches received technical training through this relationship, learning fishery management techniques and creel census methods for measuring fisher and hunter resource consumption. For example, they learned how to sample fish populations to determine the extent streams needed restocking. Fish populations were estimated by circulating electricity through streams with a 110 volt AC generator. An Apache trainee group consisted of one person handling the electrodes, another handling the cord, and three others extracting temporarily stunned fish with dipping nets. They typically sampled ten 500 foot stretches of streams, including areas of heavy and light activity, to determine how fishing intensity affected fish distribution. After measuring and tagging each fish with a unique number, they returned them to the stream [60].

The WMRE also collaborated with the AGFC in a pronghorn antelope transplant project in 1959. Antelope had all but disappeared from the reservation in the late 1930s, with only occasional sightings of a few individuals in any year thereafter. Many Apaches worked with the AGFC to trap and transport pronghorn antelope from viable populations around Flagstaff, Arizona and reintroduce them to Bonita Prairie on the reservation [61]. Within four years, the transplanted population increased to a size sufficient to allow a limited hunt [62].

This training was particularly important because the tribal council had assumed the responsibility for determining bag and take limits on the reservation. In this new arrangement, the tribal government depended on accurate fish and game population estimates from the WMRE. In the tribal council's determinations, tribal members received first consideration. Any surplus game, without unduly depleting populations, became available to non-Indian recreational hunters and fishers. The council also determined which species non-Indians could hunt; deer, turkey, and the Apache trout, for the most part, remained off limits to non-Indians until the 1970s [36].

On top of building relationships with federal and state agencies, the early success of the WMRE found Apaches in a leadership position among Native American groups adopting recreational programs. Thanks to "the effective program" on Fort Apache, the FWS experienced a general increase in demand for its services to initiate recreational enterprises on southwestern reservations in the late 1950s [63]. The San Carlos Apache, Navajo, Papago, Salt River, Gila River, and Colorado River reservations all had programs by the early 1960s. In 1962, the Nez Perce Tribe of Idaho requested a visit from Chairman Oliver and Superintendent Hawley to advise it on starting a recreational program. In subsequent years, knowledge exchange between the White Mountain Apache Tribe and other native nations increased,

as representatives from another forty tribes visited Fort Apache to study the inner workings of the WMRE [52,64].

5. Foundation for Cultural Autonomy in the Twenty-First Century

The 1950s signified a period when the White Mountain Apache Tribe, through the development of tribal enterprises, began to exert more power. As the 1950s drew to a close, the WMRE had become a profitable business supplying a growing number of jobs to the Apache people, not only as natural resource managers but also as hotel managers and clerks, store and gas station attendants, maintenance workers, bureaucrats, legal experts, and craftspeople. In many ways, while having major implications for the institutional capacity of the White Mountain Apache Tribe, some of the more important interactions occurred among individuals of different cultures. Such interpersonal interactions were by no means a story of complete domination of one culture by another. For example, Nelson Lupe and Si Davis were individuals helping each other out, respecting each other's culture. This relationship is symbolic of the many entanglements Apaches embraced in the future in order to reassert the tribe's cultural identity and political autonomy. The point here is not to dwell on the obvious negative past experiences of the White Mountain Apache Tribe with Euro-American paternalism and resource exploitation. Apaches had their fair share of well-documented bad experiences with archaeologists, anthropologists, Christian religious leaders, natural resource managers, and businessmen, but they also had positive entanglements with Euro-American cultures. For instance, Si Davis, like Apaches, had strong ties to the Apache homeland, making him a strong advocate for Apache causes.

Leaders such as Nelson Lupe and Si Davis exemplified what Dean Nieusma calls middle-out social change [65]. This process leverages expertise from both the dominant and local cultures without privileging one position of expertise over the other. Lupe and Davis, among many future Apache and Euro-American leaders on the reservation, avoided both a top-down management approach and a purely "traditionalist" grassroots resistance to the dominant culture. Together, using knowledges from Euro-American and Apache cultures, they helped create change from a middle ground. Their understanding of how things should work was more local and built on some level of exchange among cultures, with effective advocacy balancing the tension between service to the "elite" (a top-down bureaucratic organization like the BIA) and the isolationist tendencies of some Apaches [66]. By the 1980s and 1990s, evolving bureaucratic organizational and legal structures within the White Mountain Apache Tribe, the Arizona state government, and the federal government made middle-out social change more feasible and prominent.

Cultural entanglement played out not only with the WMRE but also with other tribal enterprises in the 1950s. The tribal government also established a

sawmill and lumber company (Apache Mercantile Company), which while largely unsuccessful during the 1950s, still symbolized an act of independence that led to a more successful operation known as the Fort Apache Timber Company in the 1960s [67]. Ultimately, lessons learned from tribal businesses translated into knowledge and political capacity to deal effectively with many lingering issues, such as the removal of Euro-American ranchers from the reservation. Through this ordeal, tribal ranchers and land managers learned about range management, as they realized the importance of establishing regulations and grazing associations for running a more effective cattle business [68].

Through these glocalized political and economic successes, the tribal government began molding the WMRE, the cattle industry, and the tribal sawmill as tools for expanding influence over reservation resources, assuring economic security and establishing political autonomy. Restoration of the homeland and building technical capacity remained important challenges of this political exercise. The WMRE, along with the cattle industry, had created a solid foundation for growth. The road to autonomy still presented many obstacles, but the path forward was more obvious than a decade earlier. The tribal council, having learned through its experiences with tribal enterprise development, continued to look for ways to wrest control of eco-cultural resources away from the BIA, other federal agencies, and the Arizona state government. By the 1970s, the White Mountain Apache Tribe had a nationally recognized endangered species restoration program, and by the 1990s it pioneered a form of agreement with the federal government that allowed the tribe to manage endangered species on the reservation without extensive federal oversight. Most important, the agreement reaffirmed Apache sovereignty: "Tribal sovereignty [White Mountain Apache Tribe] and Service [FWS] legal mandates, as applied by the Service, have appeared to conflict in the past, but both the Tribe and the Service believe that a working relationship that reconciles the two within a bilateral government-to-government framework will reduce the potential for future conflicts ([69], pp. 733–44)."

The thrust of the agreement emphasized that the FWS recognized "the Tribe's aboriginal rights, sovereign authority, and institutional capacity to self-manage" reservation lands and eco-cultural resources. The agreement also outlined Apache institutional responsibilities to continue updating their wildlife management program and develop management plans under FWS consultation that "will direct the assessment, management, and restoration of ecosystems in accordance with tribal values" [69]. This agreement would also become a model for how many other American Indian nations would handle infringements of tribal sovereignty by the federal government [70]. Endeavors such as this, among many more, led to explicit integration of natural resource management with cultural restoration projects [71,72].

Of course, the road toward political autonomy and eco-cultural revitalization hasn't been easy and the sustainability of this effort remains a challenge. The Rodeo–Chediski fire of 2002 wreaked havoc on the reservation's Ponderosa pine ecosystem, burning 276,000 acres of Apache timber. This led to the temporary shutdown of the tribe's timber operations and threatened a number of culturally important places and resources, setting back the significant economic gains and eco-cultural restoration efforts of the 1990s [73,74]. Even though tribal timber operations eventually resumed, more than a decade later, White Mountain Apaches are still feeling the economic and ecological impacts of the Rodeo-Chediski fire. This event illustrates the fragility of any political gains White Mountain Apaches have made in the past 60 years. While the WMRE and subsequent progress that stemmed from it marked significant improvements for Apaches, it is important to realize that as a nation, they still remain economically and ecologically vulnerable. Too many large-scale catastrophic events can easily lead back to times where Apaches are more dependent on federal resources, which in turn would threaten gains in political autonomy.

6. Conclusions

Ultimately, however, catastrophic events such as the Rodeo–Chediski fire emphasize why resistance to certain Euro-American ideals remain important, yet exchange with the dominant society became a necessity. In order to survive as a culture, the White Mountain Apache Tribe had to develop a diverse economic and natural resource base. It is this diverse base that allows Apaches to weather high impact events like the Rodeo–Chediski fire. It is important not to think of the WMRE and subsequent Apache endeavors, which are cultural hybridizations of Apache and Euro-American natural resource management and business practices, as a compromise; rather it is a strategy for maintaining a cultural identity. Far from a homogenization process, glocalization is about global forces being reshaped by local imperatives. Through entanglement and hybridization, the process borrows from multiple cultures to create new cultures. While these sorts of processes have been occurring since cultures emerged within the human species, what is relatively new in the United States is that historical power imbalances have slowly begun to be corrected. The power imbalances are still there, but many American Indian groups are in a better position to protect themselves from global forces than fifty years ago. This is true with a diversity of recent examples, including struggles with the Environmental Protection Agency to make sure tribal waters are afforded the same protections as Euro-American communities, protecting cultural heritage on and off reservations, or dealing with disproportionate harm resulting from climate change [5,6,75,76].

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Signifying Ainu Space: Reimagining Shiretoko's Landscapes through Indigenous Ecotourism[1]

ann-elise lewallen

Abstract: Recognized as Japan's indigenous peoples in 2008, the Ainu people of Hokkaido have sought to recuperate land and self-determination by physically reenacting Ainu traditional knowledge through ecotourism in Hokkaido. Colonization and assimilation have severed most contemporary Ainu from relations with nonhuman sentient beings (A. *kamuy*) rooted in land and waterways. Ecotourism provides a context for reenacting an ancestral ontology through engaging in wild food gathering, relearning subsistence practices for cultural transmission, and reinscribing Ainu cultural logics onto the land through stewardship and language. At the same time, the Japanese government's campaign to have Siretok nominated as a UNESCO World Heritage site can be interpreted as an attempt to legitimate Japanese claims to Shiretoko and reinscribe the authority of Japan, as both the proper steward to ensure responsible conservation of Shiretoko but also the rightful owner and proper occupant of the promontory and its surrounding waterways. The article reveals how Ainu attempts to establish relationships and assert ancestral claims with the *kamuy* in the landscape are stymied by the ongoing reality of settler colonialism and erasure of Ainu presence in the landscape. Further, it explores how a capitalist-driven economy of ecotourism unleashes new dynamics in relations between local Ainu fishers and farmers in Shiretoko and outsider Ainu who seek to develop ecotourist initiatives.

1. Introduction

> Settler colonialism strives for the dissolution of native societies. It erects
> a new colonial society on the expropriated land base[1] To get in the way,
> all the Native has to do is stay at home ([2], p. 38).

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[1] An earlier version of this paper was presented at the Conference "Ethnic Tourism and the State in East Asia" organized by Prof. Nelson Graburn and Dr. John Ertl at Kanazawa University, Japan, on 5–7th November 2010. This paper was published as Performing Identity, Saving Land: Ainu Indigenous Ecotourism as a Stage for Reclaiming Rights in Japan, pp. *112–124* in the Report of the 第13集 国際シンポジウム：観光から見る東アジアのエスニシティと国家 [13th International Symposium: *What we can see from Tourism in East Asian Ethnicity and the State*] *Kura:* College of Human and Social Sciences, Kanazawa University, available online http://dspace.lib.kanazawa-u.ac.jp/dspace/handle/2297/27860 [1].

In 2005, Shiretoko National Park in the eastern borderlands of Japan's northern island, Hokkaido, was selected as the nation's third World Natural Heritage site. Yet, until 1869, Hokkaido (Ezo until 1869) had not been officially incorporated into Japan, although ethnic Wajin (ethnic Japanese) settlements on the southern tip of the island date to the fifteenth century. For its indigenous Ainu community, the Shiretoko region was better known as *Sir-etok*, and the entire island was seen as the domain of Ainu ancestors [3]. On the one hand Shiretoko's selection as a World Heritage site appears to herald a new epoch with its conservation-based framework and to ensure economic opportunities for the local community. Yet, on the other hand, this article will elucidate how UNESCO's designation serves to reinscribe settler colonial "logics of elimination"—or the erasure of long-standing Ainu histories and memories of place in this land—after nearly genocidal policies eliminated Ainu bodies and lives in the Shiretoko Peninsula. To situate this transformation between Ainu ontological positions in being with the landscape and the settler colonial embrace of conservationism, below I introduce three historical moments that encapsulate that shift.

1.1. 18th Century Claims in Eastern Hokkaido

In July 1798, after three months of difficult travel from Edo (present-day Tokyo), Tokugawa-appointed surveyor Kondō Jūzō and his attendant Kimura Kenji arrived on the shores of Etorof Island on the eastern periphery of present-day Hokkaido. Kimura drew out his brush, and with a swift flick of his wrist, wrote out the characters for *Dainihon Etorof* ("Imperial Japan Etorofu") on a wooden placard, which Kondo then inserted in the soil of the newly claimed territory, thus, embedding Japan's authority in the land [4]. By the late 17th century, Matsumae authorities in southwest Ezo had set up trading posts around Hokkaido's perimeter. Merchants then leased these trading posts from the Matsumae domain, and during the next hundred years, they were transformed into contract fisheries. Contractors in the fisheries gradually coerced Ainu into serving as corvée labor and trafficked them to the fisheries in distant locales, thus curtailing the ritualized trade exchanges between Ainu and Matsumae authorities. With pressure from the Matsumae to increase production to help pay down the debt to the shoguns in Edo, conditions in the fisheries gradually worsened. In Eastern Hokkaido, anger and desperation from the abusive conditions in these fisheries prompted Ainu to launch the Kunasir-Menasi War to reclaim control of the fisheries (1789), a violent conflict that was brutally quelled by beheading 36 young Ainu.

I have lingered on this moment wherein Wajin sought to reinforce their settler presence in Ezochi through repression of indigenous labor and armed resistance to illustrate how settler colonialism achieves legitimacy through two processes: first, it "destroys to replace" and next, "it erects a new colonial society on the expropriated

land base" ([2], p. 388). It is in this act of inscribing the characters for "Imperial Japan Etorofu"[2] and embedding it in the earth that the Tokugawa regime sought to inscribe a new relationship to this land, initially an imperial claim and later instituted a settler colonial project. The imperial relationship that Tokugawa authorities sought to establish in 1798 is distinct in character and political administration from the totalizing colonial control exerted under Meiji era nation-building (1869–onward), nevertheless, these late-Tokugawa land-claims in eastern Hokkaido negate the autonomy and the physical presence of long-established Ainu communities in Etorof. Because the Tokugawa regime asserted direct control over eastern Hokkaido and introduced stringent assimilation policies among Ainu in the region just one year later, clearly the Tokugawa authorities sought to impose sovereign control over the land and resources here. Anxiety about Russian encroachment in the southern Kurils spurred Tokugawa officials to wrest control from the Matsumae domain.

Until the 18th century Ainu settlements thrived along the coasts of Hokkaido, but with the introduction of the contract fisheries in the mid-eighteenth century, the forced relocation and corvée labor radically reorganized Ainu relationships with nonhuman *kamuy* and their ancestors. Among other factors, Tokugawa forces' brutal clampdown on Ainu resistance to the fisheries' system in this war precipitated a massive depopulation of Eastern Hokkaido. A population of 2000 Ainu in 1789 had shrunk to 1312 Ainu in 1822, and by 1859 it had collapsed to 713 persons[3].

For example, Shari and Abashiri fisheries in Eastern Ezo at the gateway to the Shiretoko region, were two of the most productive fisheries across Ezo until the outbreak of the Kunasir-Menasi[4] War in 1789 [6]. During this conflict, Wajin observers reported that Ainu on Kunasir Island were annihilated by their *wajin* overlords. Ainu in neighboring regions such as Shari and Abashiri were recruited as replacement labor and compelled to move to Kunasir. The fisheries system also enabled Wajin fishery managers to institute gender-segregated labor, splitting Ainu families apart by sending husbands and wives to distant fisheries across Ezo. Ethnic Wajin fisheries managers instituted a system of sexual colonization, forcing Ainu women to serve as mistresses or "local wives" (J. *genchi zuma*) for mainland Japanese bosses, or subjecting them to sexual assault at the hands of *wajin* laborers [7,8]. This system

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2   In Japanese, the plaque was inscribed, 大日本登府. In this case, the use of the character "Dai" for "great" or "imperial" conveys imperial control over the land and corresponds to similar uses of "Dai" among Imperial rulers in the Ming (1368–1644) and Qing (1644 to 1912) dynasties of China. Tokugawa officials in particular used the character "Dai" (大) to distinguish Japan's rule as having dominion under heaven and independent from the rule of the Chinese emperors (Personal Communication: Luke Roberts, 9 November 2015).
3   ([5], p. 231).
4   Menasi is an Ainu term for "east" and in this case refers to eastern Hokkaido. The Kunasir-Menasi War pit Ainu in the contract fisheries against their *wajin* managers and overlords.

also fostered the spread of communicable diseases alongside venereal diseases, thus causing infertility[5]. Women (and men) of childbearing age were therefore separated from their spouses, and those who did not perish as a result of sexual and physical abuse or attempt suicide to escape found themselves infertile[6]. Today the official Ainu population of Utoro, the municipal base of the Shiretoko World Heritage site, is only four persons.

The third moment in Ainu-*kamuy*-*wajin* relations demonstrates more recent resistance to commodification of Shiretoko's forests. In 1986, the central Forestry Agency proposed to selectively log a virgin forest within the national park borders, a proposal originally tabled in 1956. The logging project engendered an intense controversy involving several environmental protection groups, Ainu, and the national government, lasting nearly two years. While the Forestry Agency described its target as harvesting one out of every 100 trees from an "overmature stand", environmentalists determined that trees were being earmarked for logging based primarily on market value and that the agency was targeting young, thick-trunked trees.

Meanwhile, eastern Ainu assertions of a strong link with the *kamuy* in Shiretoko reveal much about Ainu relationships with Shiretoko in the 1980s. On 8 September 1986, a broad coalition of eastern Hokkaido Ainu, calling themselves the Ainu Spirit Campaign to Block Logging in Shiretoko[7], demanded that the *kamuy* dwelling in the forests and the forests be protected at all costs. They proposed three actions: (1) a public *kamuynomi* prayer ritual at the proposed timber site; (2) a dramatic public reading of the Blakiston's fish owl *yūkar* (oral literature); and (3) as a last resort to protect local *kamuy*, the *kewtanke*, a ritual reserved only for states of emergency. Campaign leader Toko Nupuri defined the *kewtanke* as "a cry for rescue to the *kamuy* and a prayer to avoid disaster. We men who deliver the kewtanke will bellow with all of our physical and spiritual being until not one drop of moisture remains in our bodies. By risking our lives, we will implore those planning the logging to cease" (*Asahi Shimbun*, 8 September 1986). The *kewtanke* ceremony in Eastern Hokkaido harks back to Ainu grief rituals after the Matsumae officials' execution of 36 Ainu, as punishment for instigating the 1789 Kunasi-Menasi War.

The Shari mayor as representative of the local community initially took a hardline approach in his negotiations with the Forestry Agency, urging a total freeze

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[5] Okuyama (1966), for example, has argued that syphilis was a central factor in the sharp Ainu population decline in the 19th century, and Crosby (1986), writing on ecological imperialism likewise argues that venereal diseases destroy colonized peoples' ability to reproduce, leading to a population crash.

[6] ([9], p. 186).

[7] In Japanese, *Ainu Seishin ni yoru Shiretoko Rikki Basai Sōshi Undō no Kai*.

on the proposed timbering. Newspaper reports on 20 September 1986, however, hint at possible bribery, with the mayor demanding postponement of the logging and then suddenly three hours later suggesting a settlement. In sum, the mayor proposed a selective harvest after the Forestry Agency conducted an environmental impact study to project how the logging might affect the animal inhabitants. In March 1987, after determining that the endangered Blakiston's Fish Owl (J: *shimafukurō*) population would not be significantly impacted, the Forestry Agency approved the revised logging proposal. This moment in the history of settler engagement in the Shiretoko landscape demonstrates how *wajin* in Hokkaido had already adopted a conservationist approach to the ecology of the region, in contrast to the government's attempts to capitalize on its abundant natural resources. Further, inasmuch as Ainu attempts to block the timbering were discussed in only one of 37 news accounts, this episode suggests that Ainu were already erased from Shiretoko lanscapes sometime in the late nineteenth or early tweintieth century, as the depopulation figures indicate.

1.2. Settler Colonial Landscapes in Shiretoko

Since arriving in Shiretoko in the mid-eighteenth century, *wajin* merchants and later settlers have sought to capitalize on the resources of Eastern Hokkaido, including marine products, timber, sulfur deposits, Ainu labor, and since the mid-20th century, tourism. Farmers migrating from Honshu introduced agriculture from the late 19th century onward. In the wake of significant logging and continuing marine harvesting from fisheries that comprise the backbone of the region's economy, *wajin* naturalists and wildlife biologists began to assert conservationist principles in the mid-1980s. Even though the peninsula was officially incorporated into the fold of the national park system in 1964, selective logging continued unabated through the early 1990s. Meanwhile, fisheries unions proved formidable adversaries to the Natural Heritage campaign that culminated in 2005. They worried that the new World Natural Heritage recognition would impose drastically-reduced quotas in the Alaska Pollock (J: *suketō tara*) catch, the most productive element of the Shiretoko fisheries [3]. In sum, within little more than a century, the ecological footprint of *wajin* settlers drastically altered the ecological balance and composition of landscape in Shiretoko and Hokkaido more broadly.

From an Ainu perspective, the effort to consolidate *wajin* conservation and preservation of the landscape for the benefit not only of fellow Japanese but also for humanity worldwide through the World Natural Heritage system appeared to contradict systemic *wajin* exploitation of Shiretoko until that point. Moreover, the government's repeated assertions that Ainu simply *did not exist* as a separate people distinct from Japanese reinforced *wajin* settler colonial erasures of the Ainu relationships with, and care for, the landscape. Native studies scholar Traci Voyles distinguishes settler colonialism from other forms of colonialism by arguing that in

addition to resource extraction to provide energy or raw materials for the metropole, the settler state seeks to displace indigenous communities by sending in settlers to "remake Native land as settler home" ([10], p. 7). The settler state achieves this by disregarding indigenous relationships to the land and reimagining the land as already belonging to the settler newcomers, or as land that should be repurposed and rendered productive. Settler narratives in Hokkaido incorporate both approaches via the notion that Hokkaido was destined as a Japanese land based on Abeno Hirafu's seventh-century claims, and Hokkaido as an uncultivated wilderness to be "opened" and "developed" (J. *kaitaku*) by the "pioneer settlers" (J. *kaitakusha*). *Wajin* settlement in Shiretoko produced devastating long-term consequences for the survival of Ainu communities in Utoro, Shari, and Rausu, outcomes that cannot be dismissed as a one-time violent massacre such as the Kunasir-Menasi War. Rather, long-term structural changes such as loss of Ainu freedom and ability to nurture families through abusive nature of corvée labor in the contract fisheries; loss of their livelihood through prohibitions on agriculture in 1799 and bans on fishing and hunting in the late 19th century; and consequent loss of reciprocal relations with the nonhuman sentient beings (A: *kamuy*) in their traditional livelihood zones (A: *iwor*), resulted in prolonged Ainu culturaland a steady depopulation. Ainu dependence on *wajin* trade for metalware and Japanese foodstuffs precipitated an over-harvesting of venerated Ainu *kamuy* and, thus, accelerated Ainu vulnerability to *wajin* political and economic agendas, as Brett Walker [6] argues.

Because settler colonialism is a structure rather than a one-time event [2], its aims to "eliminate indigenous societies" regardless of the "presence or absence of the formal apparatus of the state" ([2], p. 393). Based on historical accounts of how the contract fisheries cleaved Ainu society, it seems apparent that in their operation, wittingly or unwittingly, they embodied this logic of elimination in exploiting Ainu labor. Indeed Patrick Wolfe has argued that, "there can be genocide without summary mass murder, as in the case of the continued post-frontier destruction of Indigenous *genoi*" ([2], p. 398). The logic of elimination that permeates the settler colonial process is reflected in efforts to preserve and enshrine the natural environment in Shiretoko, as an environment devoid of indigenous life with its Ainu community almost completely erased.

These historical frameworks for relationships with the land in Shiretoko call attention to a contradiction embedded in Shiretoko's status as a World Heritage site. On the one hand, the Japanese government embraces this global designation in an attempt to rebrand Shiretoko as the shared heritage of all humanity. Yet, this designation serves to interpolate Ainu within settler colonial imaginaries and legitimate the ongoing erasure of Ainu ancestral and contemporary ontologies in Shiretoko. The remainder of the article turns to Ainu agency in performing relationships with ancestors and place, using Shiretoko as a platform to reassert

their relations with the locally specific *kamuy*, including demands for access to local salmon, waterways, and forests. I situate Ainu assertions of ancestral heritage in Shiretoko as attempts to claim an "indigenous space".

Ainu ecotourism contributes to an expanding "indigenous space" in Shiretoko by countering the settler state's colonization and analyzing how ecotourism may serve as a strategy to reclaim usage rights and broader access to land and waterways. Following Michael Hathaway, the rubric of "indigenous space" examines how the notion of indigenous identity emerges in differing geopolitical contexts and tracks its evolutions and adaptations to local needs [11]. Thinking through indigenous space reveals how indigeneity is process-oriented, as politically and historically contingent, and altering social relations within self-identified indigenous groups, as well as between non-indigenous and indigenous society ([11], p. 304). For Ainu, indigenous space may be realized in part through reconstituting relations between Ainu and the land, one aspect of a comprehensive undertaking involving co-constitutive forms of memory. These memory practices complement oral, somatic, material, and text-based memories that emphasize Ainu bonds with their ancestors and to land- and water-oriented cultural practices in Hokkaido [12]. Erstwhile tourism was scorned for displaying Ainu as spectacles of difference, whereas Ainu and supporters suggest newly-emergent forms of ecotourism return authorship and representation to the Ainu, themselves.

2. Reimagining Shiretoko as World Heritage

In early 2004, the government nominated Shiretoko National Park as Japan's third World Natural Heritage site. The question of Japan's natural heritage achieving global recognition had weighty economic and political implications. The nomination papers casually noted that the region's name was derived from an Ainu toponym, *sir-etok*, meaning "promontory". Ainu had been neatly disappeared from the topography of Shiretoko:

> These bureaucrats and elite adminstrators from Kasumigaseki simply didn't get it. Whenever I pointed out that Ainu should be included in the property management committee, they brushed me off: "You know Fujisaki, you keep bringing up Ainu, but Ainu no longer exist, period." And that was the level of awareness of most Tokyo bureaucrats and anyone educated in Japan—an ordinary response from your average Japanese person. They weren't simply talking about Shiretoko Ainu, they meant no Ainu in Japan [13].

Fujisaki, an ecotour operator in Shiretoko, was concerned that an important stakeholder in deciding the future of Japan's last wild places was being ignored: the Ainu, indigenous people and custodians of the local flora and fauna for millennia[8].

This example of the administrative erasure of Ainu from the landscape of Hokkaido and Japan anticipates governmental attitudes toward Ainu in 2005. Yet just three years later in 2008 the government recognized Ainu as indigenous peoples. Dismissing Ainu in the process of Shiretoko's nomination as World Heritage site implied "discrimination by disregard" for some ([3], p. 42). Settler state policy toward Ainu has long focused on disciplining difference and, from 1799 to the present, on facilitating Ainu assimilation into majority Japanese society. Paradoxically, the government also sensationalized Ainu difference in pre-World War Two tourism, focusing on Ainu racial alterity as an index of primitivity and as a foil to Japan's own modernity. As post-1945 ideologues embraced a narrative of Japan the homogeneous, ethnic difference was neutralized, and Ainu were collapsed into the national polity as an assimilated people. Today Ainu efforts to reclaim tourism from former colonialist and spectacle-driven models derive from global indigenous movements and Ainu efforts to self-determine their futures throughout Japan and against the state.

In 2008, Ainu achieved a long-awaited goal: recognition as one of Japan's indigenous peoples. Of significance for Ainu activists who sought indigenous rights as a central component of exercising self-determination within Japan's borders, indigenous rights did not accompany the government's recognition. The Japanese government argues that Ainu "indigeneity" as recognized in Japan, may or may not correlate with international categories of indigenous peoples [14]. Before achieving this recognition, Ainu sought to recover land through ecotourism, and 2005 proved a watershed year. The nomination of Shiretoko as a World Natural Heritage site triggered a series of events leading to IUCN's recommendation that Ainu be included as co-stewards of Shiretoko. Ainu have also introduced place-based experiential tours in several localities across urban and rural Hokkaido. These tours focus on reclaiming Ainu narratives of place, or the particular relationships Ainu and their ancestors engaged with the land. Ainu now seek to reimagine their relationship with the land, as stewards of the land and waterways, agents mediating relations with *kamuy* and ancestors. Advocates of indigenous ecotourism may aim for usufruct or control of Ainu ancestral lands/waterways, yet not all ecotourism presupposes a political platform or assumes a European-based legal framework in asserting its position.

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[8]   The Shiretoko World Heritage Regional Consultation Committee was established in Utoro to develop a management plan for the property, and Fujisaki served on this committee. This committee included bureaucrats from the Ministry of the Environment, the Ministry of Forestry and Agriculture, and Hokkaido government representatives, representatives from Shari Town, Rausu Town, the local fisheries unions, and local tourism associations, and Fujisaki as a community representative.

The Ainu case confounds assumptions about indigenous activism or cultural revival, because unlike the strategies of indigenous peers in the Americas [15,16], Ainu organizing does not always position itself in opposition to the state. The largest Ainu organization, the Ainu Association of Hokkaido (AAH), receives 80 percent of its funding and top administrators from the Hokkaido government ([17], p. 187), compromising its ability to serve as a mouthpiece for political mobilization.

In July 2004, Katō Tadashi, AAH Director, met the International Union for the Conservation of Nature (IUCN)'s nominating representative David Sheppard at a dinner party. Sheppard asked Katō, "Do Hokkaido Ainu feel enthusiastic about nominating Shiretoko for World Heritage status?", and "Are there sites considered sacred inside the property?" Katō responded yes to the first and no to the second ([3], p. 45). While Katō had been elected as the representative of Hokkaido Ainu, many Ainu do not belong to AAH and, thus, did not contribute to the vote. Moreover, Katō had no local Ainu lineage in Shiretoko and thus was in violation of traditional ancestral boundaries in speaking on behalf of Shiretoko Ainu. Angered by Katō's dismissal of sacred sites in Shiretoko, another group of non-Shiretoko Ainu Association members determined that some 53 *casi* sites were dispersed across the Shiretoko peninsula, based on a 1953 archaeological survey. None of these sites had been listed in the Ministry of the Environment's report to IUCN. This group asserted that *casi*, a type of earthwork formation used for ceremonies, military purposes, and livelihoods, serve as repositories of ancestral memory. As such the association members appropriated these landscapes and their histories to signify Ainu belonging and to reinscribe Ainu sacred spaces in the landscape.

For Ainu, ecotourism provides space for Ainu selfcraft and instrumentalizes transmission of knowledge between knowledge keepers and culture inheritors. Before leading tours today's tour guides must educate themselves due to ongoing settler colonialism and the severing of Ainu ties to the land. Transmission enables the transfer of Traditional Ecological Knowledge (TEK) between elders and youth and between ancestors and the living. Anthropologist Fikret Berkes defines TEK as a "body of knowledge, practice, and belief, evolving by adaptive processes and handed down through generations by cultural transmission", describing relations between humans, and animals and the environment ([18], p. 3). By rejuvenating TEK, Ainu have begun investing themselves in Ainu-*kamuy* (human-nonhuman sentient beings) relations, and now seek to reestablish these relations as continuous rather than as confined to history. More important, this article demonstrates how Ainu embed these interactions within particular topographies, urging a reverence for the *kamuy* of certain locales and emphasizing place-based relations between local communities and the natural relations that sustain them. Ecotourism introduces Ainu cultural practices to outsiders as a demonstration of Ainu rootedness in the land. It also fosters sustained Ainu access to this land, thereby strengthening engagement

in ancestral land rites. Indigenous ecotourism enables Ainu to reconfigure their relationships with the land and in future decades may offer recuperation of terrestrial and marine access rights.

2.1. Legacies of Ainu Tourism in Hokkaido

Ainu have been synonymous with Hokkaido in the tourist imagination since Kondo and Kimura's imperial mission to Etorof in 1798. Souvenirs from Ezo exemplify Japan's imperial designs in claiming the territory. On their return trip, in Abuta Kimura purchased an elmbark robe (A. *attus*) customized for tourists with a *wajin* style sleeve design. Today this robe is the oldest extant example of Ainu clothing inside Japan [4]. In 1881, the Meiji Emperor and his entourage visited Shiraoi to observe Hokkaido's development progress. Shiraoi Ainu performed a simplified version of the bear spirit-sending ceremony, solidifying Shiraoi as a site of Ainu tourism. Ainu performances thus became part of the standard fare: by presenting traditional dances and songs, Ainu enacted submission to the emperor and, thus, advanced settler colonial erasures. Meanwhile, in 1941 Hokkaido prefectural authorities issued a directive banning all tourist activities, which may have dampened enthusiasm for these practices temporarily ([19], p. 115). Issued during wartime, this directive sought to clamp down on performance of Ainu difference for tourists to magnify Japan's unity under the Emperor. Banning the bear spirit-sending ceremony, dancing, and traditional clothing, reinforced assimilation while promoting Imperialization (J. *kōminka*) through ideological support for the Emperor and patriotism [19].

Meiji era tourist postcards featuring Ainu performing so-called traditional heritage synchronized Ainu within the landscape of Hokkaido, almost as natural formations. By the postwar era, Ainu outside the tourist industry lambasted what they termed "tourist Ainu" for circulating anachronistic images of Ainu, thus fanning racism ([20], pp. 111–18)[9]. In the 1980s a protest against the Japan Tourist Bureau (JTB) brought many popular package tours to a halt. The Anglophone newspaper, *Japan Times*, had published an advertisement, featuring "a fascinating visit to a real Ainu village in Shiraoi to see the ancient customs and culture of the famed hairy Ainu" [21]. Ainu and their supporters carried out denunciation (J. *kyūdan*) hearings against the JTB in protest of the advertisement's inclusion of discriminatory language. After six months of hearings, JTB agreed to run an apology and correction both in the *Japan Times* and four major Japanese papers [21,22].

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[9] Siddle also notes that in a 1975 survey of Tokyo schoolchildren and university students, all age groups associated Ainu with stereotypical images such as bearded elders, dancing, woodcarving and bears, and hirsuteness. Moreover, survey respondents did not see Ainu as Japanese, but identified them with Native Americans instead ([16], p. 58).

To assuage JTB anxieties about including Ainu villages in its tours, in 2005, the Ainu Association published a "Tour Operator Handbook" to encourage cultural sensitivity toward Ainu protocols. Moreover, enactment of the Ainu Cultural Promotion Act (1997) raised the stakes for cultural conservation and revival. Tourist communities no longer house the singular representations of Ainu because other communities are now fashioning viable cultural practices [12]. Ainu-authored expressions of ethnic identity have diversified, challenging the vacuum wherein tourist sites were the default public face of all Ainu.

2.2. Ainu Senses of Place

Ecotourism, Ainu explain, taps into embedded memory, or the memory held in places. This memory is hidden under layers of *wajin* (ethnic Japanese) settler history in Hokkaido. Taken together memory and place constitute this nascent brand of tourism: indigenous ecotourism. By recasting the history of particular topographies and articulating relationships as mutually constitutive understandings between Ainu and their *kamuy* caretakers in the land and waterways, Ainu ecotours become mapping devices for redefining these territories as Ainu. "No longer can we destroy this nature, this Ainu Mosir. Ainu here managed to live within and use the natural world without destroying it, and we need our youth to experience that history, and ecotours provide one means", ecotour guide Ishii Ponpe urged [23].

Ecotours shift the experience of the surrounding environment away from perception as an aesthetically-pleasing space of consumption (the tourist lens) or as a resource depot for harvesting and commodifying (the capitalistic, colonialist lens). Rather, they emplace visitors in a vast landscape of human-deity relations. The surrounding landscapes become animated through Ainu narratives as related by tour guides, revealing new relationships between humans and their supernatural hosts. Ecotourism provides a context for reenacting the historical Ainu worldview through engaging in wild food gathering and, in future iterations, hunting, and fishing. Tour operators seek to relearn subsistence practices and inscribe Ainu cultural logics onto the land through stewardship and language. However, contemporary Ainu practices are not and cannot be identical to their ancestors' ways, nor can they be limited to an isolated perspective. Through ecotourism, guides construct Ainu practices anew. Guests are asked to suspend their taken-for-granted assumptions and reimagine Hokkaido from an Ainu perspective.

Ecotour operators describe these tours as exercising "soft power" by fostering a base of supporters sympathetic to Ainu values who will support Ainu land claims and other politically sensitive issues in Hokkaido, without making waves among detractors [13]. Moreover, ecotours offer much more than a route toward economic stability through employment for Ainu youth. Rather, they offer the possibility of rejuvenation: transforming Ainu relations with the land toward renewed stewardship

and reciprocity, of being looked after by the land, rather than merely caring for the land. Operators present ecotours as sustainable, masking more overtly political applications of ecotourism, including future land claims. Finally, ecotours may provide a context for dramatizing narratives of interdependence between Ainu and *kamuy*, as a pedagogical tool for majority Japanese society today.

Two examples illustrate how memory sites rouse emotional responses in contemporary Ainu. In the "era of the ancestors", a nostalgic expression Ainu use to describe the precolonial era, Ainu villages clustered around riverbanks. Each community claimed exclusive usufruct to fishing, hunting, and plant gathering in a broad region surrounding the watershed, called *iwor* (A. historical harvesting region) ([24], pp. 56–68). Legal hunting and fishing for Ainu were truncated in the 1870s and replaced by agriculture and stringent assimilation policies, yet the concept of *iwor* continued to regulate territorial boundaries through the early 20th century. (In Shiretoko, early settler farmers did not arrive until the early 20th century.) In the Ainu worldview, the *kamuy* inhabiting the watershed in the terrestrial form of fur-bearing animals, fish, and plants, were understood to provide protection and sustenance for each community. Each *iwor* zone was perceived as belonging, not to Ainu but to *kamuy* who, based on ceremony and relations with humans, chose when to present themselves in the guise of a deer, bear, salmon, or owl ([24], pp. 77–78). Ainu understood their relations with these *kamuy* in a metaphysical sense: animals allowed themselves to be hunted to provide sustenance for Ainu, and Ainu in turn liberated the souls of *kamuy* spirits by harvesting these animals. In return, each village was expected to cultivate reciprocal relations with local *kamuy* spirits, through ceremony and exercising restraint in the hunt. Relations between Ainu and their *kamuy* were spatially oriented, based on contiguity with each Ainu community. Village locations were determined by salmon spawning areas, for example, and these regions were named and assigned to particular settlements. Likewise, *iwor* groups built deer and bear huts to mark their hunting grounds. Hunting, plant gathering, and fishing in another village's *iwor* required formal permission accompanied by ritual. Visitors were expected to greet the *kamuy* of the river or mountain and offer carved *inaw* branches to appease the local spirits. Fishermen were expected to leave a small portion of their catch as a gesture of gratitude to the host community.

Anthropologist Hitoshi Watanabe argues that Ainu claims on local resources were not driven by economic interests but stemmed from a metaphysical orientation toward preserving a delicate ecological balance between humans and the spirits to whom the river and watershed regions belonged ([24], p. 77). Fear of divine reprisal and the threat of starvation motivated Ainu to abide by these protocols and to mete out punishments against any who disregarded these agreed-on conditions. This delicate balance began to crumble as early capitalism spawned proliferation of *wajin*-run trading posts in the 17th century, posts that were eventually replaced by

the contract fisheries. *Iwor* communities began to compete in harvesting animals to trade with *wajin*, occasionally escalating into violent warfare and indelibly changing the landscape and relations with the guardian *kamuy* of their lands, who became increasingly commodified ([6], p. 52).

2.3. Ecotourism, A Vessel of Recovery

In recent years, ecotourism programs across Japan have fostered dynamic relationships between guests and hosts. Participation-based or experiential tourism has gained popularity, and package tours have declined, especially among the younger generation. Tours now compel visitors to take on participatory roles, occasionally involving risk, and to interact with living organisms, including human, animal, and plant life. These experiential programs provide for a more spontaneous and dynamic interaction with place, as opposed to static templates accessible through museum showcases or passive consumption of dance performances and model villages in Ainu tourist locales.

Chief among these new brands of tourism is ecotourism, combining multiple themes: understanding of new terrains and ecologies; environmental awareness; the potential for sustainable development through low-impact, localized tours; a range of experiential modes; and through the medium of indigenous ecotourism, cultivation and revival of Traditional Ecological Knowledge (TEK). Here tradition as a key component of TEK should not be construed as essentialist or static. On the contrary, students of TEK describe it as flexible and cumulative, constantly adapting to environmental changes and human needs. TEK focuses on a body of knowledge that has evolved through relations with a particular geographic area and its local ecosystem, and thus TEK frequently invokes the ecological knowledge of communities self-identifying as indigenous, but it may also include non-indigenous communities who depend on local ecosystems for livelihood [18]. For example, the government of Nunavut now draws on *Inuit qaujimajatuqangit* (IQ) as an ethical guide and policy model for honoring Inuit cultural heritage, enabling self-determination and designing government and society according to Inuit value systems ([25], p. 98).

2.4. Indigenous Ecotourism for Profit: Shiretoko

Japan initially applied for Shiretoko's designation as a World Heritage natural site in 2004, but based on the assumption that Ainu no longer resided in the region, the national government failed to include Ainu representatives in their bid. The decision to omit Ainu members reinforces an active discourse of erasure, an erasure that achieves legitimacy by reinscribing and normalizing *wajin* presence as proper stewards of the landscape. However, the landscapes of Shiretoko are branded

with the memory of Ainu and Tobinitai cultures[10], and living Ainu seek to renew relationships with these lands. Ainu ancestral presence is literally hewn into the topography, lingering in toponyms. As described earlier, Shiretoko is drawn from an Ainu word, meaning "the place where the earth protrudes." The landscape is dotted with earthworks known as *casi*, whose structure and purpose evolved across many centuries ([26], pp. 94–95)[11]. Moreover, supporters argue that including indigenous peoples in World Natural Heritage property management plans is widely accepted internationally, because indigenous practices of ecological sustainability helped to protect these ecosystems, preserving them for global posterity [27]. Notably, in their World Natural Heirtage application government boosters suppressed the histories of settler colonial violence that led to depopulation and expulsion of Ainu communities from this region.

Refusing to be ignored in the nomination process, a group of Ainu and *wajin* formed the Shiretoko Indigenous Peoples Ecotourism Research Union (SIPETRU) in April 2005 to develop indigenous ecotours[12]. SIPETRU urged the IUCN to formalize indigenous Ainu participation in the property management plan. Japan's largest Ainu organization, the Ainu Association of Hokkaido, criticized the government's failure to include it in the nomination process in a speech at the United Nations Permanent Forum on Indigenous Issues (UNPFII). This statement urged support for ecotourism, removal of the erosion control dams which block spawning salmon, and endorsement of salmon fishing and the salmon welcoming ceremony, *Asir Cep Nomi* [27]. Another group, *Uhanokka no Kai*, visited the IUCN headquarters in Geneva in person and urged the union to incorporate Ainu in the management plan. UNESCO, a body reputed to be vigilant of the relationships between indigenous peoples and heritage sites, responded that it would positively consider Ainu participation [3].

After much negotiation, Shiretoko was selected as a World Heritage site in 2005. In its technical evaluation, IUCN outlined conditions for maintaining the property's World Heritage status, such as removing the erosion control dams and expanding the protected marine areas to a three-kilometer radius, together with incorporating Ainu as co-stewards. The IUCN deemed Shiretoko desirable as a World Natural Heritage site not because of striking natural beauty; rather, it was chosen because of the particular mix of flora and fauna linking the terrestrial and

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[10] Archaeologists distinguish Ainu culture (thirteenth century to the present) from Tobinitai Culture (ninth to the thirteenth centuries), understood to incorporate from both Ainu and Okhostk cultures [26].

[11] Casi may be demarcated by moatlike trenches or earthen walls of fortification and thus leave a record in the soil structure [26].

[12] SIPETRU is drawn from an Ainu term meaning "big river path."

marine environments. In other words, the ecological balance and symbiotic linkages between terrestrial and marine life render Shiretoko unique in this North Pacific environment. One condition for Shiretoko to retain its status as a World Heritage site was to remove salmon-obstructing dams ([28,29])[13]. Restoring ecological balance is critical, not simply for the ecology of Shiretoko but is a key concern for Ainu as well. Erosion control dams that impede salmon spawning upstream negatively impact bears, eagles, and Blakiston's fish owls who then suffer from a dearth of foodstuffs in autumn. Ainu themselves are robbed of the very food that mediates their relations with the nonhuman world. The Meiji government stripped Ainu of salmon fishing rights in 1871, a legal prohibition that continues today, with the exception of limited access to salmon for ceremonial purposes.

In its technical evaluation, IUCN noted that Shiretoko bears an Ainu name, "reverently called by the Ainu People as 'sir.etok'", translated as "the end of mother earth" [29]. IUCN also recognized the importance of Shiretoko for "traditional inhabitants" and recommended that "the traditional wisdom and skills of local Ainu [be incorporated to] realize sustainable use of the natural environment" ([29], p. 31.) Finally the evaluation urged that Ainu be given the opportunity to assist with property management, specifically in developing ecotourism activities "which celebrate the traditional customs and uses of the nominated property" ([29], p. 31). Without access to oral histories or the ability to speak with those raised in this area, ecotour planners have focused on resources they do control: the archaeological record, memories of TEK, and oral literature. "Soft power" marshalled by ecotours may conceal more politicized agendas, while ecotours generate tools used to leverage restitution of waterways, land, and marine areas. SIPETRU aims to promote indigenous ecotourism, develop a guide program that engages indigenous peoples' culture and the restoration of Shiretoko's ecological balance, support employment and training of indigenous guides, and foster sustainable ecotourism that conserves the natural environment of Shiretoko [27]. *Casi*, for example, have emerged as focal points for ecotours because they condense the lived histories and agency of Ainu ancestors in sculpting the landscape of Shiretoko. *Casi* represented as sacred spaces may provide a basis for reclaiming land, according to SIPETRU. By linking the *casi* in Shiretoko with those dotting the landscapes of Hokkaido as a whole, advocates seek to broaden support for reviving indigenous rights across Hokkaido, as Maori communities have achieved in New Zealand ([3], p. 51).

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13   At present, nine out of forty-four rivers are still dammed.

3. Analysis: Weighing the Benefits of Ecotourism

As a new medium of representation, indigenous ecotourism places Ainu at the center, enabling them to author and control the content and delivery of messages about themselves. Proponents describe ecotourism as economically empowering, generating employment opportunities based on *Ainu meshi*, (literally feeding oneself through Ainu identity), or the ability to levy income by linking ethnic identity with livelihood. Yet the economic benefits of ecotourism are still minimal, as most ecotours outside Shiretoko across Hokkaido generate barely enough profit to cover supply costs. Ecotourism does cultivate new publics. Urban Ainu may benefit from joining ecotours to engage with the TEK of their ancestors; yet most ecotours attract a *wajin* demographic with the freedom and financial resources to travel.

Ecotourism may appear far removed from wildlife management or co-stewardship of Shiretoko, but it allows urban Ainu youth to learn the TEK of their ancestors, restore relationships with the *kamuy* of these regions, hone skills as naturalists, and reembody this knowledge, through embedding these practices in their bodies. It provides a context for a host of practices to resignify Ainu. The term *resignifying* suggests that these groups make choices about how to interpret and claim an Ainu identity anew. Proponents argue that ecotourism has the potential to restore the ancestral Ainu worldview through wild food gathering, relearning subsistence practices for cultural transmission, and inscribing Ainu cultural logics onto the land through stewardship and language. As one ecotour guide, Y-san explained, when Ainu youth are given the opportunity to work as nature guides, sustained access to non-urban spaces provides a context for crafting "sensibilities" as Ainu [30]. All life forms have stories, in Y-san's view, and storytelling helps cultivate awareness of the interconnectedness of all living beings and in turn urges greater consideration for others. Memories of the land transmitted through oral literature are today being recombined and invented afresh for this generation. Young Ainu may revisit traditional narrative forms to foster Ainu identities anew through linking them to relations with *kamuy*. This is what Y-san envisions as an Ainu contribution for Japan toward advancing sustainability and balance with the nonhuman world.

Critique and Remaining Challenges

Ecotours have become increasingly popular and attractive in recent years because of their alleged commitment to sustainability, their engagement with local communities, and the intimate knowledge of local places implicit in their design [31]. According to ecotourism models, these tours should bring economic and environmental benefit to local communities through encouraging sustainable economic development and minimal consumption of local resources. They should be sourced by local food and accommodations, and vendors should be monitored to ensure minimal local impact. Ainu ecotours have not managed to achieve this

yet: most rely on short-term stays by tourists flying in from Tokyo and, thus, leave a significant carbon footprint, but they do invest in the local economy and rely on local merchants for food and lodging. The impetus for designing ecotourism programs has not emerged organically from Ainu themselves but has been generated by Ainu and non-Ainu urban intellectuals and activists. In Shiretoko, indigenous ecotour programs have been organized primarily by urban transplants and led by urban Ainu guides housed in a locally based organization, rather than percolating upwards from the local grassroots [13].

Ainu involvement in Shiretoko continues today primarily through the architecture of ecotourism. Despite the IUCN recommendation that Ainu be included in management of the World Natural Heritage property through ecotourism, environment ministry personnel reported in February 2007 that they had no knowledge of this recommendation. Instead, they were preoccupied with requirements to rid the area of erosion control dams. To date, the Shiretoko experiment in indigenous ecotourism supports one full-time Ainu guide, with income supplemented by conventional ecotours offered by the host company, Shinra. SIPETRU aims to start a training program and cultivate future guides within the local community, seeing the current guides as a bridge. This program has not managed to establish strong links with local descendants of the Ainu community there. This stems in part from the fact that a publicly identified Ainu community no longer exists in Shiretoko. Some Ainu descendants of the Shiretoko region who now live outside Shari and Rausu have been vocal opponents of ecotour programs, lodging complaints with local officials when Sapporo Ainu conducted ritual prayers on ancestral land ([3], p. 47). These persons have expressed a sense of entitlement and desire to control the narrative of Ainu history inside Shiretoko because of ancestral connections there.

As these instances illustrate, stakeholders embrace competing visions about how the Ainu-Shiretoko narrative should be imagined. Although tour guides author the content of individual tours, central government staffers and tour companies choreograph ecotourism management. The concept of ecotourism has not been widely circulated in Japanese society and at present there are no local or national standards for indigenous ecotours. The Shiretoko examples I have cited cannot speak for a broad swath of indigenous ecotourism across Japan, but they illustrate the salience of indigenous ecotourism among Hokkaido Ainu communities.

4. Meditations on the Utility of Plants

This article has sought to address two aims: first, to assess how indigenous ecotourism fosters the growth of an indigenous space inside Japan and thus counters the imaginary of settler colonial conservationism; and second, to analyze how indigenous ecotours enact performances of TEK to further usage access and reclamation of land and waterways. Today's ecotours seek to raise awareness of

Ainu culture, history, and relations with the natural world, thereby addressing the question of indigenous space, while cultivating a sympathetic public and support for rights revival among non-Ainu. In contrast, the attitudes of central government administrators in rejecting a living Ainu presence from this land effectively reinscribe the settler colonial project and clinch this bureaucratic erasure. Ecotourism promoters, Ainu and non-Ainu supporters, seek to counter the continued erasure of Ainu ancestral and contemporary relationships with local *kamuy*, in spite of a *wajin* conservationism that seeks to imagine Shiretoko as an idealized pristine space, devoid of human interference. This *wajin* conservatism remains pragmatic in recognizing the centrality of the fishing industry as an economic base for the surrounding community and, thus the government's emphasis on restoring so-called natural spaces is limited to areas within national park boundaries.

Meanwhile, the second objective, linking usage to access rights, may be suspended indefinitely. While land reclamation is compelling for urban activists, for rural Ainu residents, this question is strewn with hurdles. Moreover, the national government has not indicated any willingness to negotiate over land rights, in part because of a delicate balance between local economic concerns and the mandates of the IUCN. The case of salmon illustrates this tension. Ainu may have difficulty finding sympathy from local Ainu communities on this point. Salmon represent a financial and symbolic investment for commercial fisherfolk (including Ainu fisherfolk) because they are no longer wild: 95% of Hokkaido's salmon are produced through artificial insemination. Hatchlings are scattered into the ocean, and when salmon return to spawn, fishermen feel a sense of entitlement toward salmon they personally hatched. When approached to issue salmon permits for a First Salmon Ceremony, one Ainu SIPETRU representative who runs a commercial fishery, responded, "Absolutely not, we can't allow Ainu traditional fishing in our river." While this person identifies as Ainu, he has refused to authorize a salmon catch, because of the economic sensitivity of this issue in the fisheries union [13].

At stake is not so much ethnicity, as the focus on *Ainu* ecotours suggests; rather, the viability of indigenous ecotourism consists in spatial relations, in human associations with locality and place. As another Ainu SIPETRU member suggested, "The idea of teaching people about weeds for cash is a tough sell. For Honshu people those might be endangered or rare plants, but here in eastern Hokkaido they're simply weeds, obstacles to our work as farmers and fishermen" [32]. As T-san implies, a slippage between rural and urban perceptions of the landscape and notions of value drives a wedge between local and urban initiatives. The transformative potential of indigenous ecotourism—to recover land, ancestral values, pride, livelihood, and sacred spaces—remains bound within the imaginations of urban intellectuals who inaugurated this and other ecotourism programs. For rural dwellers, regardless of ethnic identity, the natural environment is

frequently reduced to exchange value, a calculation of how natural resources may be commodified. Exchange values are determined at the apex of the economic system, in a top-down fashion, as are activist's visions of ecotours as a solution to Ainu dispossession and unemployment. Approximately 17 percent of contemporary Ainu across Hokkaido are employed in primary industries including fishing, agriculture, forestry, and mining [33]. Their labor generates value and livelihood; weeds simply aggravate.

Categorizing natural resources based on their exchange value continues the colonial logic that bolstered commodification of fur-bearing animals, leading to the breakdown of the *iwor* system and fomenting armed conflict between neighboring *iwor* districts in the 17th century, precipitating Shakushain's War[14]. Under assimilation policies and Japan's ongoing settler colonialism, Ainu economic survival remains embroiled in a system of capitalist values. Still, many Ainu remain ambivalent about a system that commodifies their labor and transforms wilderness into fields of production. Ecotour guide Ishii Ponpe, who worked in forestry in his youth, witnessed the clearing of Hokkaido's deciduous forests and their reemergence as coniferous tree plantations, followed by DDT being sprayed on the trees to eliminate rodents. The pesticide precipitated stinging nasal membranes, animal corpses in the forest, and fish kills in the rivers [23]. In contrast to economic relations based on exchange value, heritage Ainu worldviews find value especially in plants with medicinal or edible qualities. Under an indigenous value scheme, plants containing healing, nutritive, or protective properties were attributed names, while others were generically called grasses (*kina*). With this ancestral value scheme, reciprocity with flora and fauna demanded attitudes of humility and prudence, to use resources sparingly and leave the root structures intact.

Returning to his meditation on weeds, T-san suggested, "These weeds are around us so much, it's hard to see that they might be important. Ecotours force us to recognize that the environment is what actually matters. Fostering awareness locally, perhaps through ecotours designed for locals is what we need" [32]. Yet for the moment the need for income trumps indigenous values. With success in ecotourism and quantifiable proof that a person can generate income from "talking weeds", local Ainu may eventually choose careers in ecotourism [32]. In the pre-World Natural Heritage era, most Hokkaido residents, including Ainu, conflated Shiretoko with the rest of rural Hokkaido as an underdeveloped backwater. Starting in 2004, the government's hyper-focus on the area and an anticipated influx of

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14 Shakushain's War (1669) was a conflict which escalated due to tensions over access to a hunting-fishing territory, or *iwor*, in southern Hokkaido near present-day Shin-Hidaka. While it is often historically described as divided along ethnic lines between *wajin* and Ainu, recent scholarship was demonstrated that ethnic solidarities were more fractured than often recognized [6].

cash precipitated a gold rush mentality, and many rural Ainu communities saw ecotours as yet another money- and land-grab. To ground relations between urban Ainu nature guides and their rural counterparts confounded by this wilderness fetishization, T-san calls for sustained focus on local communities, drawing them in through communication, planning, and implementation. If local communities are simply sidelined, the ecotour will remain an exercise in outsiders consuming the local, again violating *iwor* boundaries. As rural localities such as Shiretoko become converted into newly indigenous spaces, exchange value-based economic models may gradually be superseded by indigenous value systems. Whether these relationships are recast in the legal vernacular of land rights or not, relearning ancestral practice and honoring local protocols will gradually restore the memory of these landscapes and self-determination in order for local communities to imagine future relationships.

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Saving the Other Amazon: Changing Understandings of Nature and Wilderness among Indigenous Leaders in the Ecuadorian Amazon

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Abstract: This article examines a new set of policies embraced by indigenous leaders in the Upper Napo region of the Ecuadorian Amazon, driven, in part, by a growing appreciation for "wilderness" —large areas where humans exercise a very light touch. In the past few years, leaders have pursued wilderness conservation initiatives while simultaneously promoting petroleum extraction in their own backyards. Both political positions run counter to those pursued in previous decades, when opposition to both oil development and strict forms of conservation within their territory was strong. To address this reversal, I trace some of the development interventions and North-South collaborations that have contributed to the emergence of "nature" as a meaningful imaginary for Amazonian indigenous leaders and for a new generation of young people, drawing connections to William Cronon's critical analysis of how wilderness conservation became a priority in the United States. I conclude that more than two decades of conservationist interventions in the Upper Napo region have led to some largely unintended consequences, as Amazonian leaders increasingly subscribe to Northern environmentalists' romanticization of "the Amazon" as a wild place, one that therefore must be distant from the places where they work and live.

1. Introduction

Two decades ago, environmental historian William Cronon published a derisive critique of First World environmentalists' over-romanticization of, and over-emphasis on, protecting large wilderness areas in areas remote to where one lives and works. He traced changing ideas of the meaning of wilderness throughout American history, claiming that the modern notion of untouched, pristine wilderness, where no people should live or work, is a fully cultural one, largely a product of historical changes such as urbanization. As part of his critique, he highlighted the special place held by the tropical rain forest in contemporary notions of wilderness, "which since the 1970s [had] become the most powerful modern icon of unfallen, sacred land—a veritable Garden of Eden—for many Americans and Europeans" ([1], p. 82).

Given this special importance, it is perhaps not surprising that many First World environmentalists working in the Amazon continue to advocate strongly for the protection of large areas in which humans are hoped to exercise a very light touch, if any at all. However, many scholars, including Cronon, have noted that the North American emphasis on wilderness has left little room for the people who inhabit these spaces to make a living [1–3]. Indian historian Ramachandra Guha, for example, provided a "Third World Critique" of the wilderness concept, arguing that "the implementation of the wilderness agenda is causing serious deprivation in the Third World" ([2], p. 71). Historically, countless indigenous peoples have been forcefully removed from landscapes in an effort to create a sense of pristine nature and what Roderick Neumann calls the "national park ideal" [3].

However, what do the people who live in the "veritable Garden of Eden" think? After more than two decades of conservation-driven efforts by North American and European environmentalists in the Amazon, are the region's indigenous inhabitants starting to see the rainforest the way these environmentalists do? In other words, is there any evidence that they are adopting the appreciation for remote and wild landscapes that Cronon critiques, or do they insist (as one might expect) that the Amazon rainforest remain a place where not only animals and plants can live, but people can live, work, and aspire to a better future?

Previously, I have argued that First World notions of setting aside lands for the conservation of animals and plants ran counter to the ways that at least one group of indigenous Amazonians, the Upper Napo Kichwa (previously spelled "Quichua"), understood their home and their relationships to other beings that share that home [4]. This argument was based on an examination of decades of organizational archives of the Rukullakta Indigenous Territory, located in Napo Province in the Ecuadorian Amazon, as well as an examination of documents produced by the larger indigenous rights organization to which Rukullakta belongs. It was also based on numerous oral history interviews with older Kichwa residents of Rukullakta, carried out in 2000 and 2001, and twenty months of participant observation, carried out over the course of fifteen years. My findings reinforced analyses by a number of scholars who show the diverse ways in which Napo Kichwa [5,6] and other indigenous Amazonians (e.g., [7]) understand the forest as a place where humans, animals, and plants, as well as various forest spirits, live together and engage in complex relationships.

During research trips in 2013 and 2014, however, I began to hear about new visions of the Amazon. The perspectives I heard were, on the one hand, increasingly open to petroleum development in the immediate region, despite the fact that opposition to such development had been consistently strong for at least a decade. On the other hand, these same leaders simultaneously advocated for the conservation of areas of the Amazon located far to the east (including, in particular, the prevention of petroleum development in that region). In other words, they were advocating for

"saving the Amazon" in an area remote to their homes, while supporting activities that had the potential to contaminate the part of the Amazon where they lived. This combination of visions indicate that something akin to the notion of wilderness, as defined and critiqued by William Cronon, could be gaining traction, at least among indigenous political leaders.

The politicians' comments to me were made in regards to a specific conservation project, the Yasuní-ITT Initiative, proposed by Ecuadorian President Rafael Correa in 2007 to preserve close to five million hectares of biodiverse habitat in an area over 100 miles to the east of where they lived. The Correa administration offered to stop planned oil extraction in exchange for compensatory contributions to an international trust fund that would offset the government's economic loss [8]. One of the people I spoke with in the Upper Napo region, Archidona Mayor Jaime Shiguango (a Kichwa man), bemoaned that the proposed project had not succeeded in raising sufficient funds to protect Yasuní from oil exploitation. He contributed $100 USD of his own money to the cause, and went on to say that if every Ecuadorian had just paid just $1 USD, when added to that offered by foreign governments, Correa's proposed conservation project would have raised enough money to proceed. I was surprised to hear about Mayor Shiguango's concern for protecting the distant Yasuní, as most of our conversations were about more local issues pertaining to his mayoral duties.

What made his comments even more puzzling, however, was that they were made within minutes of statements expressing support of oil extraction in his own municipality. Other indigenous leaders in the area articulated similar sentiments, representing a dramatic reversal from my previous conversations with them, carried out during multiple visits over the course of fifteen years. In 2013 and 2014, they made statements such as: "If the people desire petroleum development, it is my duty to comply" and "improved technologies make petroleum extraction much less dangerous than it was in the past".

What could explain this dramatic reversal? Perhaps, I thought, frustration over the low amounts of income provided by conservationist projects after two decades of implementation lends currency to a new social imaginary, in which the potential social benefits of oil concessions could outweigh the potential risks. Still, the two positions—supporting oil development in their own region while supporting strict conservation downstream—seemed highly contradictory, and I asked Mayor Shiguango to elaborate. All he said was that Yasuní is different from Napo and described a visit he had made there. His description of his visit and tone of voice indicated that he thought that Yasuní was much more important to protect than the area where he lives.

This response was particularly puzzling coming from Mayor Shiguango. Before being elected, Shiguango had worked for years as an agronomist for the local office of the German bilateral development organization GIZ, (Gesellshaft für

Internationale Zusammenarbeit, or German Agency for International Cooperation; formerly GTZ, Gesellshaft für Technische Zusammenarbeit, or German Agency for Technical Cooperation). He was thus very aware of their studies showing the high level of biodiversity and species endemism in Napo. These studies eventually led to the declaration of a United Nations Biosphere Reserve there on 10 November 2000, including all of the Rukullakta Indigenous Territory, where Shiguango grew up and owns land. Indeed, he had spent decades of his life working on projects devoted to finding and promoting forms of agriculture that could improve the income of local farmers while reducing rates of deforestation. What, then, could explain his sudden approval of petroleum development, and what made Yasuní so different from the place where he lives?

There are multiple processes that have contributed to these growing desires to "save the other Amazon." One boils down to simple economics. Oil might bring significant monies to municipal coffers, and it is hard for conservation to compete unless there is a government-sponsored plan to make conservation pay sums similar to those that oil extraction can, as in the ITT-Yasuní Initiative. Another process is the growing importance of party politics in this region, particularly the way in which Ecuador's President Rafael Correa engages with more local politicians and activists. In short, Correa, even more than most politicians, rewards those who support his programs and political party, and severely punishes those who do not [9]. Anthropologist Carmen Martínez-Novo even goes so far as to argue that Correa's regime has constructed indigenous subjects (and other members of Ecuador's dynamic social movements), "not as actors (who may give their support at times but with whom the government must negotiate) but as obedient subjects" and that "ambivalences or outright opposition will not be tolerated" ([10], p. 112). Correa has favored drilling for oil in Napo, while simultaneously proposing and advocating for the Yasuní-ITT Initiative. Those in Napo who have aligned themselves with his party, including Mayor Shiguango, have moved toward his positions on both counts.

While not discounting the importance of the current political and economic situation, this article focuses on a more subtle process through which indigenous people in the Upper Napo are increasingly seeing wild nature as something that should be appreciated and actively conserved, even as they advocate for urbanization of the places they live, including more and better roads, bridges, and recreational facilities. When this process, which has occurred gradually over the course of four decades, is examined alongside the more recent openness to petroleum development, a paradox emerges that goes beyond the issue of money or party politics. Petroleum development has always held the promise of income and jobs, but most indigenous politicians in the Upper Napo have still opposed it until recently. Furthermore, everyone recognizes that the social and environmental impacts of oil extraction will

long outlast Correa's presidency. Examining other processes that may be contributing to these paradoxical visions is therefore timely and worthwhile.

Cronon argues that wilderness came to be imagined in the North as a place of spiritual redemption, allowing one to live without guilt in an industrialized, polluted landscape and retreat to wilderness to cure oneself of capitalism's ills [1]. Thus, northern notions of wilderness are built on three interrelated visions. First, nature-with-minimal-human-impact must come to be seen as something of great value, in this case cultural and spiritual value. Second, it must come to be seen as in short supply or in the process of disappearing, and therefore necessary to protect. Both processes have been occurring in the Rukullakta Indigenous Territory. The third component of Cronon's "wilderness ideology"—that people are willing to live with pollution such as petroleum wells and their natural-gas-burning flames within view as long as they believe that wilderness exists elsewhere, is not explicitly discussed among the general population. However, the fact that they have elected indigenous politicians who support petroleum development, infrastructure improvements, and strict conservation of large areas located relatively far from where most people live and work suggests that these ideas may be starting to take hold. Only time will tell.

This article is not intended to imply that there has been an enormous ontological shift in the Upper Napo in which everyone fits the rather rigid mold of the North American environmentalist portrayed by Cronon. The Kichwa continue to hold many ideas that blur the boundaries among humans, animals and forest spirits, for example. Many people have spoken to me about how some human individuals can convert themselves into jaguars or anacondas; about how disease in one's plants and domesticated animals can be caused by the ill will or jealousy of one's neighbor; and about how culturally important trees can come to resent humans for selling their fruit on the market, producing relatively little fruit in subsequent years. Rather, I trace gradual changes and growing agreement that undeveloped "nature" is valuable, connected to Kichwa identity, and in short supply. Additionally, I trace how in very recent years, most efforts to set aside this "nature", have been pursued in places far from where most Upper Napo Kichwa live and work.

Interestingly, Mayor Shiguango not only supports petroleum development in Napo, he also organizes weekly outdoor recreational activities for his municipality's residents (not for tourists), such as climbing the nearby Sumaco Volcano (located in a national park) and mountain biking. The region's residents did not engage much in these types of activities before Shiguango's election as mayor. This is another piece of evidence that exposure to European and North American tourists and conservation-driven project personnel has introduced new ways of thinking about undeveloped "nature" as a desirable place to visit and recreate.

To understand the ways in which Northern environmentalists started to change indigenous leaders' ways of seeing the rainforest in the Upper Napo, it is important

first to describe the decades before their arrival. The Upper Napo has a particular history of land settlement that has contributed to recent worries that land is in short supply, particularly forested land. Furthermore, once environmentalists began their conservation-driven activities in Ecuador, they collaborated with many indigenous organizations in the country, and the leaders of these organizations circulate and share ideas. The following sections briefly outline these processes and interactions.

2. A Very Brief History of the Upper Napo

Before the 1960s, the Upper Napo region was not accessible by road. However, this did not mean that it was completely cut off from Quito, Ecuador's Andean capital, or from other parts of the country. Rather, the region's history of engagement with Andean polities and markets originated before the mid-sixteenth century, when the Spanish organized several expeditions in search of gold and cinnamon. Contrary to their expectations of these excursions, the Spanish found no gold and only very dispersed cinnamon trees ([11], p. 67). Subsequently, the colonial administration worked to establish dominance over the various Indian groups living in the region through the system of *encomiendas*, or reward of property to Spaniards through service to the crown. These grants gave beneficiaries access to Indian labor and to tribute that the Indians paid primarily with gold and cotton. The Spanish also worked to convert the indigenous residents to Catholicism, although this was less of a priority than extracting indigenous labor ([12], p. 29, note 14). Indians worked in Spanish fields, constructed houses, worked as domestic servants, panned gold, wove textiles, and carried both cargo and people on frequent trips to and from Quito, crossing frozen Andean passes on foot in trips that lasted eight days or more, often without shoes ([11], pp. 76–81; [13], pp. 22–29). Although population counts from colonial offices must be viewed with some skepticism, Blanca Muratorio estimates that the population in the Upper Napo region decreased by over 90 percent between 1559 and 1608 ([13], p. 41). Without a viable labor force, many *encomienda* beneficiaries left the region. Through the process of abrupt colonization and subsequent abandonment of this part of the Amazon, the Spanish managed to convert an area that had included quite populated regions and been strongly connected through pre-colonial political, economic, social, and cultural ties to the Andes into a sparsely populated and isolated zone ([14], pp. 23–26; [15]). This historical picture of the Amazon—a place that was heavily populated but that became depopulated because of disease and exploitation—is vastly different than the image of the Amazon as a "veritable Garden of Eden", held to this day by many Westerners.

During the two and a half centuries between 1640 and 1900, the Catholic missionary front grew, spreading out from a few colonial posts, but white and mestizo settlement remained low [14]. The indigenous population was able to recover some of its numbers and reclaim some of its previously controlled territory [11,14].

While the Upper Napo Kichwa continued to face exploitation [11], most were able to spend part of their lives living in and from the forest, far from missionaries and colonial or state representatives, for a number of reasons. First, because of waxing and waning interest in the region and its marketable products, the region's history of engagement with colonial/state agents and markets during this time was not a slow, unidirectional march from isolation toward greater engagement. Rather, the region has oscillated between periods of greater engagement with the outside world and relative isolation. Furthermore, because of difficulties in finding their way through the forest, nonindigenous people were often unable to access the forest products they desired, including *pita* (agave fiber, used for making rope), gold (panned from rivers), and later, rubber. They could only obtain these products by allowing or forcing indigenous people to take extended trips away from mission and government centers to seek these products in the forest [13].

By the beginning of the twentieth century, indigenous engagement with the state and markets intensified, albeit slowly at first [14]. The 1894 Special Law for the Oriente provided for the settlement of "vacant lands" (*terrenos baldíos*) in the Amazon region, but settlers were generally only interested in the lands surrounding towns. As long as the Kichwa population could still find forested areas for hunting and clearing their swidden gardens, there were no serious conflicts over land. The settlers took up cattle ranching or produced cash crops, the most important of which were cotton, coffee, rice, and sugar cane. *Hacienda* (ranch or large farm) owners gained access to Indian labor by encouraging them to purchase items on credit—shotguns, cooking pots, cloth, and axes—at severely inflated prices, then forced them to work to pay off their debt [13]. Still, many indigenous residents would spend periods of time working for whites to obtain the goods they desired, then retreat to their forest homes for several months to engage in hunting, fishing, and horticulture [16]. It is clear that most Kichwa valued this time of relative autonomy and self-sufficiency.

Agrarian reform began after the 1956 publication of the first national agricultural census, which revealed that Ecuador had one of the most imbalanced distributions of land in Latin America [17]. The Ecuadorian government encouraged poor highlanders from the Andes and coastal regions to colonize the less densely populated, Amazonian lowland region. The influx of people seeking land in the Amazon caused some Amazonians, but not all, to start to worry about reduced availability of land ([4], pp. 39–41). The government also promoted cooperative formation among the indigenous population to reduce the costs involved with demarcating and legalizing individual parcels. The state officials hoped that cooperatives would also maximize the reach of both agricultural extension and loan programs ([4], p. 39).

3. The Rukullakta Cooperative

The San Pedro de Rukullakta Agricultural Cooperative was formed during this time by 207 Kichwa households, with early organizational meetings held in 1970 and 1971. As part of the organization's mission, members began cattle ranching with loans from the state development bank, sharing responsibilities for taking care of the cattle by taking turns spending periods of roughly two weeks at the ranch, located some distance from where most people lived. This system of taking turns meant that most of Rukullakta's residents could continue to alternate between periods spent close to the mission town of Archidona; periods spent taking care of cattle in relatively isolated pastures located in otherwise forested parts of the cooperative's lands; and periods spent hunting, fishing, and gardening near their secondary homes, located in other parts of the forest ([4], pp. 49–59).

In the 1980s, when it became clear that cattle ranching would not produce the hoped-for profits (and sharing the care of cattle brought in-fighting among members), many switched to cash crop production to fund what had become thought of as necessities—school uniforms and supplies; certain Western goods such as machetes and aluminum pots; and food to supplement that which could be grown on the small garden plots afforded them by the cooperative administration. This cash cropping involved a more dramatic change in livelihoods for many, as it required remaining near agricultural fields for more extended periods. Those who engaged in cash cropping no longer divided their lives into more-or-less equal periods spent near the town and periods spent in the forest; rather, they spent much more of their year in a single home, close to areas where they could plant cash crops (the increasing importance placed on sending one's children to school also contributed to this) ([4], pp. 118–25). Many who engaged in cash cropping would still visit more forested, less populated areas to hunt and fish for a few days at a time, but this was now thought of as a recreational and supplemental food-providing activity, rather than forming a key part of their annual cycle of moving between a town-centered life and a forest-centered one. This was therefore a key period in the history of beginning to think of the forest as a place to recreate rather than a place to live, one that predates Northern environmentalists' involvement in the region.

A 1987 earthquake destroyed a road that provided access to oil fields located hundreds of kilometers northeast of Rukullakta. International consultants visited the Upper Napo to evaluate whether it was an appropriate site for building a new road to access those fields. During these visits, the consultants became aware of the biological diversity in the region. The German Reconstruction Bank, impressed by the region's "extraordinary faunal, floral, hydrological, and cultural richness", agreed to construct the road on the condition that its representatives would be able to remain in the region, working for development that would both "conserve and take advantage of" the region's resources "in a sustainable manner" ([18], p. 3).

This began a new chapter in development projects in the region, in which most projects were designed to discourage farmers from practicing cash crop agriculture and cattle ranching. Unlike the national agencies and international donors of the 1970s and early 1980s, which pushed for increased clearing of the forest and its conversion to pasture, these new development organizations tried to convince indigenous people to stop clearing the forest and to engage in completely different economic endeavors such as small-scale fish-farming and ecotourism. International conservationists saw only that farmers growing cash crops were breaking up what the former perceived as pristine forest (even though some of it was in the same locations where cooperative members had practiced cattle ranching in the 1970s). They therefore sought to prevent these farmers from continuing what they saw as "forest destruction" ([4], pp. 127–28).

4. International Conservation Visions and the Ecuadorian Amazon

Efforts by Northern conservationists were not limited to the Upper Napo region during this time. Rather, they funded various initiatives throughout the Ecuadorian Amazon and Andes and worked with indigenous organizations of different sizes. For example, the Global Environmental Facility (GEF), established in 1991 as a collaborative effort of the World Bank and the United Nations, favored Ecuador in its projects. One of GEF's first initiatives (beginning in April 1992) was a US $7.2 million project for biodiversity conservation in Ecuador. Ecuador was also the site of ten single-country GEF biodiversity protection projects, totaling US $39.2 million in grants, and five climate change projects, totaling US $7.64 million in grants, between 1992 and 2002. It also shared five regional grants (either for Amazonian nations or for Latin America) for biodiversity protection during that decade.

Both GEF and various bilateral funding organizations working in Ecuador, such as the US Agency for International Development and the German Agency for Technical Cooperation (GTZ), positioned indigenous Amazonians in their publications as stewards of the rainforest, not as threats to nature. The projects they funded were generally directed at conserving both tropical forests and indigenous cultures, although the former was given a higher priority than the latter ([4], p. 153). For example, the executive summary of the World Bank's 1990 discussion paper, *Ecuador's Amazon Region: Development Issues and Options*, began with this question: "Why single out a national region for specific analysis as part of the Bank's country economic studies?" ([19], p. ix). The first answer supplied for this question was: "Ecuador's Amazon Region has several unique features, among which are the extreme fragility of the region's natural resources, its rich biological diversity, its significant native populations, and its large, but diminishing, petroleum reserves" ([19], p. ix). Shortly thereafter is a section that explains why readers should be concerned about the region's inhabitants:

The region is home to approximately 85 thousand to 100 thousand native peoples that have retained a relatively autonomous life style. Over the past years, some of these indigenous groups have remained isolated; others have retained their cultural identity while incorporating some services (e.g., education, health care) offered by the broader Ecuadorian society. The opportunity for preservation of cultural choice (including sophisticated ecological knowledge and resource management strategies) for the Amazon's native populations is another of the region's unique characteristics ([19], p. ix).

In this section of the World Bank report, indigenous people are described as an integral part of the biologically diverse ecosystem in the Amazon, particularly because of their sophisticated ecological knowledge. Thus, the portrayal of the Amazon they give is not an unpeopled one, but it is one inhabited by indigenous people who live harmoniously with other living beings, apparently cut off from most markets. The report's executive summary does not acknowledge the widespread cattle ranching projects of the 1970s, the nonindigenous residents of the region, or the political activism of indigenous organizations, although they are mentioned briefly later in the report ([4], p. 154).

Since the publishing of the World Bank report and through many interactions with foreigners who support the idea that indigenous people have a special connection to nature (for additional examples, see [20]), some indigenous leaders have come to believe the portrayal, at least to some extent. While there is no doubt that leaders have at times engaged in a certain amount of strategic essentialism, adopting phrases such as "Mother Earth" and "Gaia" in their public discourse to pursue land claims or protection from polluting industries, multiple decades of hearing about the connection between indigenous peoples and nature and, importantly, being rewarded with land and money for doing so, has shaped notions of their own identity beyond any strategic purpose. In Rukullakta, exposure over the years to environmentalist discourse has at least partially convinced many leaders that a connection to, and knowledge of, nature was what made indigenous people different from everyone else. Losing access to nature therefore represented a threat to their indigenous identity and cultural continuity. For example, many leaders describe their ancestors as *sinchi*, or strong, because they could live in the forest without many of the luxuries of the town. In particular, there is a strong sense among most Kichwa that early-morning bathing in cold forest rivers and eating wild meat makes one strong and resilient [5], while eating processed foods and living in town makes one weak.

However, ideas that celebrate certain aspects of indigenous difference co-exist with a long history of exposure to foreign missionaries and non-indigenous Ecuadorians and the preferences both have had for visible signs of progress. As I

have argued at length elsewhere [4], being a good Kichwa leader means bringing projects such as new schools, new bridges, and new roads. So how can a leader show that he is both strong and capable of living away from the luxuries of the town, while simultaneously showing that he is capable of improving the town through visible signs of progress? One solution, repeatedly modeled by many foreign conservationists who spend time in the area, is to work in the town and recreate in the wilderness, a wilderness that seems increasingly distant with the growing number of roads and buildings.

While far from the same process that Cronon describes for the United States, there is some discernable overlap; he argues that fears of losing the American frontier and its deep connection to American identity propelled the growing appreciation of wilderness. Wild land was deeply connected to American ruggedness and strength and to its sense of difference from Europe:

> if wild land had been so crucial in the making of the nation, then surely one must save its last remnants as monuments to the American past—and as an insurance policy to protect its future. It is no accident that the movement to set aside national parks and wilderness areas began to gain real momentum at precisely the time that laments about the passing frontier reached their peak. To protect wilderness was in a very real sense to protect the nation's most sacred myth of origin ([1], pp. 76–77).

In the Upper Napo, the perception that such spaces needed to be available for future generations of indigenous children—at least to visit if not to subsist from—grew. However, this has been a slow process that has occurred over decades, as demonstrated in the following sections.

5. Early Evidence that Indigenous Activists Began to Prioritize Conservation

In the 1970s, indigenous activists in the Ecuadorian Amazon recognized that colonization by non-indigenous farmers was threatening their access to land. Their response, as described above, was to prioritize land titling, and one of the ways to secure land was to clear forest and grow pasture. Gaining secure land title was also the main priority in many other parts of Latin America at this time ([21], p. 21) and continues to be so in areas where tenure is still insecure. In the 1980s, however, the influence of international environmentalists slowly started shaping indigenous activists' agendas, expanding beyond the focus on territorial demarcation and legalization to thinking more about what was occurring on those lands. This can be seen through an analysis of the issues the delegates discussed during the biannual conferences of CONFENIAE (*Confederación de Nacionalidades Indígenas de la Amazonía Ecuatoriana*, or Confederation of Indigenous Nationalities of the Ecuadorian Amazon).

At the first CONFENIAE congress in 1980, the overwhelming emphasis was on gaining more lands for indigenous peoples and pursuing both agricultural intensification and cattle ranching projects to improve their income ([22], p. 100). However, in the next three conferences (held in 1982, 1984, and 1986), there was a gradual increase in the number of issues discussed that pertained to the environment. In the 1982 congress, delegates continued to talk about gaining additional lands for indigenous people, but there were also resolutions urging the reduction of negative impacts associated with petroleum extraction, mining, and African palm plantations on indigenous lands. This indicates a growing awareness of the environmental degradation each of these caused—particularly the damage and contamination caused by petroleum extraction in the northeastern Ecuadorian Amazon ([4], p. 142).

By the fourth congress, in December 1986, delegates were discussing several new issues concerning the environment. For the first time at a CONFENIAE, they addressed the perceived need to be more proactive in conserving forests and their flora and fauna. Specifically, the 1986 resolutions included a call to reforest indigenous lands and the suggestion that communities control hunting and gathering of animal and plant species, especially if conducted by people not belonging to the community ([22], p. 106). Thus, while land scarcity was an ongoing concern that began with the immediate impacts of colonization following the 1964 Agrarian Reform, the damages caused by some of the influx of outsiders into the region did not become salient until the 1980s. Indigenous activists began to place more emphasis on the qualities of the territory—whether it was forested or not; how many fish and animals lived there; and the importance of clean water and fertile soils. Interactions with Northern environmentalists undoubtedly helped these issues to become more salient to congress participants and shaped how they proposed to move forward in their activism.

6. The 1990s: Conservation in the Upper Napo

As part of the development agreement signed between the German and Ecuadorian governments described above, Germany's bilateral development organization GTZ began the Proyecto Gran Sumaco (Great Sumaco Project) in 1995. Through this project, GTZ became the largest financial player influencing the direction of development in the Upper Napo region. The concept guiding the project was to seek "a harmonious relation between human beings and nature through maintaining the integrity of the natural areas and their genetic materials, and the improvement of the quality of life of its population" ([23], p. 3).

Soon after beginning its work, the project staff sought to attract greater international attention to the region by applying for its designation as a "United Nations Biosphere Reserve." They began the lengthy process of compiling the necessary information and developing cross-organizational collaboration (with state

agencies and local organizations, including indigenous ones) to be able to submit an application to the United Nations. GTZ worked to win broad local approval of the biosphere reserve through several mechanisms, including the sponsoring of periodic meetings with local leaders from the area; financially supporting some of the NGO activities that were seen as promoting environmental sustainability; and conducting pilot projects of what were seen as environmentally and economically sustainable market pursuits, such as cultivating oyster mushrooms and silkworms, as well as various wild fruits.

The application was accepted by UNESCO, and the region was officially declared a biosphere reserve on 10 November 2000. The reserve covers 931,215 hectares, with a core area of 205,249 hectares and a buffer zone of 178,629 hectares (the rest is part of the reserve but does not have the same limitations on activities as the core and buffer zones). The entire Rukullakta Cooperative fell within the reserve, and about two-thirds of the cooperative was in the buffer zone—which implied that agriculture would be severely restricted there. According to the project's application for biosphere reserve status, the buffer zone "presents a minimum of human intervention, containing characteristic ecosystems, in which moderate use is permitted, for scientific ends, tourism, forest management, and wildlife" ([18], p. 18). So even though early project documents emphasized a harmonious relationship between humans and nature, these later documents give the impression that people were not actually intended to live in two-thirds of Rukullakta's territory.

This external zoning did not stop Rukullakta's members from growing cash crops in the buffer zone, and elected leaders did not attempt to forcibly remove farmers from the areas they had already cultivated, although they continued to discourage new land claims. The leaders also engaged actively with GTZ's staff, taking advantage of the funding they provided for small, alternative development projects. Specifically, they collaborated in various projects aimed at providing alternatives to *naranjilla* (a fruit in the tomato family and the most important cash crop in the region) and to the cutting down of rainforest that often preceded its cultivation. Through their various interactions with GTZ staff, they learned about new methods of territorial mapping through the use of satellite images, scientific data on soil suitability, and Geographic Information Systems (GIS) technologies, and were thereby once again reminded of the limits of their territorial holdings.

The influence of these various collaborations can be seen in a growing number of calls during the early 2000s to use these tools to create a land use plan for the central leadership to employ in its policymaking decisions. Leaders began to seek assistance from topographers and others who would assist them to more accurately map land claims and land use in their territory. In 2007, they obtained funding from the EcoFund Foundation Ecuador and successfully made a connection to Rodrigo Sierra of the Center for Environmental Studies in Latin America at the University of

Texas at Austin, convincing him to provide GIS expertise and guidance for drafting a new management plan. Sierra trained some of Rukullakta's members in using GIS, paid for low-flying planes to photograph the large territory and thereby gain a better understanding of the extent of tree cover in various zones, and funded consultants who assisted the leaders during the eight-month process of creating the plan.

The management plan they produced shows language and concerns learned from twenty years of interactions with foreign forestry and conservation experts. For example, the introduction to the management plan begins with a succinct statement of the leaders' vision for the future: "The communities that make up the Kichwa People of Rukullakta [Territory] recognize the importance of natural resources which are found in their territory as the base of their economic and social development, and furthermore constitute their natural capital which generates goods, direct and indirect user services. For this reason, they are conscious that these need to be managed sustainably to guarantee the economic and social development of future generations, and that they are a critical element in the participation in new markets of goods and ecological services, taking advantage of green markets and fair trade" ([24], p. 15).

Several of the statements in the document are quite startling and demonstrate growing fears over land availability, such as the following: "If the average family size [in Rukullakta] is eight members per family and this continues in the next two decades, the population could easily pass ten thousand people by the year 2028. This means that an equitable distribution of the territory in the year 2028 would give each [person] approximately 4 hectares" ([24], p. 49). For most of Rukullakta's history, the assumption has been that a reasonable land allocation for each family was at least 25 hectares, so four hectares must have seemed paltry in comparison. From this it is clear that while the collective title may have seemed large in the mid-1970s, thirty years later, fears had grown considerably over whether the territory would be able to support the growing population. Already in 2000, some leaders mentioned to me that they thought they would need to limit land allocations one child per family so as to significantly slow the number of people who would expect to receive land for farming in the future. Politically, however, this would be extremely difficult, and no one has made a serious attempt to implement it.

Rather than attempting to implement family-level restrictions, leaders instead pursued a very different response to the perception of a disappearing frontier—they began to advocate setting aside some lands for conservation. Through a process of thirty-five separate workshops held with groups of Rukullakta's residents to discuss the issue of conserving land, they managed to guide the membership to a consensus that there should be a sizable reserve protected from agriculture within the territory. This is particularly notable, since there are many protected areas in the region surrounding Rukullakta, including the Sumaco National Park and the Antisana Ecological Reserve. The desire to have a reserve under indigenous control

was thus seen as substantively different and important. Shamans (known locally as *yachaj*, or "one who knows") present at the workshops also expressed their opinion that access to forests was important for continuing their work, according to various people I interviewed.

Based on this consensus, Rukullakta's leaders worked with the researchers from the University of Texas to delimit an 11,000-hectare conservation zone in the southeastern portion of Rukullakta, an area that was still largely forested. The reserve occupies about a quarter of the entire territory, an enormous percentage given the fears over population growth described in the same management plan. By setting aside the land, leaders knew they were reducing land availability even further, but they still believed that it was worthwhile.

Leaders' reports of the conversations they held with territorial residents during the planning process indicate that there has been a noticeable shift how they imagine the remaining forested lands within their territory. Setting aside land within Rukullakta's borders was not unprecedented—there were two previous efforts. One was in 1994, when a group of residents spent two years petitioning the cooperative administration to set aside one thousand hectares as a potential site for ecotourism. In 1999, a different community within Rukullakta, located in a more densely populated area, set aside seventy-five hectares of its community lands for "wildlife reproduction" ([4], pp. 151–52). Both initiatives were justified in very pragmatic and economic terms. Both were also in areas adjacent to where people were actively farming. In the 2008 case, on the other hand, the land under consideration was much larger and quite far from where most people lived and farmed.

Also, some of the reasons for setting it aside were different. Some of the motivations could still be labeled as pragmatic or economic, since Rukullakta's leaders did submit the reserve to a national program that pays landowners an annual rent to set aside lands for twenty years (called *Socio Bosque*, or Partner Forest). However, spiritual and cultural reasons were, for the first time, added to the list of motivations. Shamans needed intact forest to be able to connect with forest spirits, far from the urban noises that could drive them away. Others wanted future generations to be able to be able to visit an undeveloped forest and to be able to hunt and fish as their grandparents had done. Both reasons speak to a growing appreciation for large areas of forest unbroken by agriculture, a growing sense that such areas were in short supply (even though there are several protected areas nearby), and a commitment to setting off a large area of land that people would visit rather than occupy or cultivate.

7. Conclusions

The leaders and citizens of Rukullakta have gradually moved toward conserving areas of their own territory. While efforts in the 1990s were aimed primarily at creating spaces for ecotourism and were located in areas close to agricultural fields,

the most recent move to set aside 11,000 hectares is distinct. That expanse of forest is far more than any eco-tour would utilize and it is located in an area relatively distant from the most occupied areas of Rukullakta. It therefore seems to be guided by something akin to a growing appreciation for wilderness, although there are differences. In Rukullakta, the reserve was and is imagined as a large area in which forest would remain intact, unbroken by roads or settlements, a place where shamans could connect to forest spirits. Somewhat ironically, because of its distance from population centers and roads, many have never visited it nor have concrete plans to do so, although knowing that the area is there may provide a certain level of comfort.

Contributing monies to protect the even more distant Yasuní region, even though most have no interest in visiting it, does not seem like such a large leap given the gradual move toward setting aside remote lands for conservation. While most of Rukullakta's residents have not contributed funds to the ITT-Yasuní Initiative, the fact that some prominent leaders have done so indicates that "saving the other Amazon" has some local resonance.

None of this, however, addresses the issue of why some of the same leaders are weakening in their opposition to petroleum development. Once again, Cronon's critique provides a potential explanation. Part of his argument against wilderness is that by preserving wilderness, "we give ourselves permission to evade responsibility for the lives we actually lead" ([1], p. 81). Could it be that as Upper Napo residents increasingly contribute to the conservation of parts of their lands (and contribute monetarily to conservation of the Yasuní area far to the east), allowing petroleum development in one's backyard seems less distasteful? Certainly, most infrastructural projects (new roads, buildings, and bridges, for example) have broad support among most Kichwa living in the area. "Development" is generally considered a good thing, not something to prevent.

It is too early to argue that the process Cronon describes has occurred in the Upper Napo. At this point, it might just be President Correa's politics or municipal dreams of economic windfalls that are contributing to changing attitudes toward oil. However, it is certainly possible that the Northern environmentalists who focus their energies on saving the Amazonian wilderness rather than their own backyards have provided a model in their preference for saving remote landscapes.

Conflicts of Interest: The author declares no conflict of interest.

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Morrku Mangawu—Knowledge on the Land: Mobilising Yolŋu Mathematics from Bawaka, North East Arnhem Land, to Reveal the Situatedness of All Knowledges

Bawaka Country including Kate Lloyd, Sandie Suchet-Pearson, Sarah Wright, Laklak Burarrwanga, Ritjilili Ganambarr, Merrkiyawuy Ganambarr-Stubbs, Banbapuy Ganambarr and Djawundil Maymuru

Abstract: Yolŋu mathematics refers to the complex matrix of patterns, relationships, shapes, motions and rhythms of time and space that underpin the ways that Yolŋu people, Indigenous people of North East Arnhem Land in northern Australia, nourish and are nourished by their environments. Through its fundamental reliance on human and more-than-human connectivity and situatedness, Yolŋu people mobilise the concept of Yolŋu mathematics to challenge Western knowledges, including Western ideas of mathematics and environment. This paper discusses Yolŋu mathematics and the relationships between humans and more-than-humans, which co-produce a world that is living and interconnected, and which reveals all knowledge as situated.

1. Introduction

Gänma is where the salt water and the fresh water meet and mingle, at Bawaka and throughout Yolŋu North East Arnhem Land in the north of Australia. As the fresh water comes off and out of the land and sky, it meets the salt water of the sea. There is a mixing, a meeting and mingling, that brings difference together without erasing it. *Gänma* thus means new life and new ideas. It evokes knowledges coming together. There is power and knowledge with two waters mixing[1].

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[1] Some of the text this paper draws on was reworked to become our co-authored book *Welcome to My Country* [1]. Other quotes, attributed to specific authors, come from conversations between the authors as we co-wrote the paper.

Gänma is an important concept for Yolŋu people and has been used to describe and understand Yolŋu-*ŋapaki* (non-Yolŋu) intercultural relationships and learnings in a range of environmental, educational and other contexts (for example, see [1–7]). One important aspect of *gänma* is Yolŋu mathematics, a concept put forward by Yolŋu to encourage *gänma*, meeting and mingling, as it prompts a coming together of ontologies, of ways of being in and with the environment or ecological systems more broadly. Yolŋu mathematics refers to the complex matrix of patterns, relationships, shapes, motions and rhythms of time and space that underpin the ways that Yolŋu people nourish and are nourished by their environments.

In this paper we write as a human and more-than-human collective of Yolŋu and *ŋapaki*, with and *as* Bawaka homeland to elaborate some aspects of *gänma* and Yolŋu mathematics. In doing so, we aim to introduce some aspects of Yolŋu ontology within which humans and more-than-humans co-become with and *as* Country [8,9]. Within Yolŋu ontology, relationships between humans and more-than-humans co-produce a world which is living and interconnected, and which admits no ontological division between humans and their environments or ecologies [10]. As such Bawaka Country is the lead author and heart of this paper. Bawaka has enabled our learning, our meeting, the stories that guide us, the connections we discuss and has brought us into being today.

Bawaka Country is a known place/space, located in North East Arnhem Land, a large area of Yolŋu Aboriginal land in the far north of Australia. Richly nourished and attended, Bawaka is *Country,* as encompassed by the Aboriginal English term Country, a term that includes humans, more-than-humans and all that is tangible and non-tangible, and that co-becomes with humans as an active, vibrant, sentient and sapient presence. Country is sentient and communicative, it can know and be known, and can take action. Debbie Rose ([11], p. 7) explains, "Country is a living entity with a yesterday, today and tomorrow, with a consciousness, and a will toward life. Because of this richness, Country is home, and peace; nourishment for body, mind, and spirit; heart's ease." Our research collective that writes this paper is part of Country too, is part of its vibrant knowing and being. Together we co-become through webs of responsibility and reciprocity with all Country's fellow beings and becomings.

As in the title of the paper, *morrku mangawu*, knowledge is on, with and as the land. Bawaka cannot be separated, as we humans cannot be separated, from being part of Country. It is these intense, ordered and patterned connectivities—Yolŋu mathematics—that this paper focuses on. We look to these connectivities to highlight one of the many ways Yolŋu people have generously created space for *gänma,* for two ways learning, for a shift in power relationships, for recognition and respect. However our contribution is not an ethnography of Yolŋu knowledge. It is not an example of academics coming in to an "authentic" and separate Yolŋu world,

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discovering it and exposing it to others. Rather, our contribution is itself an example of *gänma*, of knowledges and ontologies that mix and mingle, and that is what we share with you. For as we write as Bawaka, we write as Laklak, an Indigenous Datiwuy elder and caretaker of Gumatj (including Bawaka) Country, as her sisters Ritjilili, Merrkiyawuy and Banbapuy, teachers and community leaders, their daughter Djawundil, who hosts tourists for their family-owned business, and, as Sandie, Kate and Sarah, three academic human geographers who, through their work at and with Bawaka, have been adopted into the family.

In this paper we share with you some of the ways the world works in a Yolŋu way of thinking and being, in particular how the rules are mathematical. To Yolŋu, there are logical orders in the land. There are rules and patterns, like the rules of *gurrutu* (kinship) that are part of the cycles of the universe. There is counting and sharing, physics and measurement, and there are cycles of growth and harvesting. Yolŋu look at the water, at the tides coming and going, at the flows of the rivers and the movement of light through the sea, and see order and system. There is mathematics in the moon and the seasons, in the rain and the clouds. Yolŋu know these things through the land—*morrku mangawu*. When a wind starts or a flower opens, that is the land teaching. That is Yolŋu mathematics, a mathematics that places Yolŋu in, with and as Country.

As the land has been teaching Yolŋu people, Yolŋu have been teaching *ŋapaki*. As discussed below, two ways learning has been occurring in North East Arnhem Land, however the waters are yet to mix and mingle in many broader contexts. As such, the paper argues that Yolŋu mathematics in the context of *gänma* has to be actually be two ways. Western knowledges too need to learn. Indeed, the challenge of Yolŋu mathematics opens a space for multidirectional, more-than-human centred learnings—a recognition of environmental and educational situatedness, diversity and plurality. It is a pluralistic approach that unsettles universalisations, homogeneity and human-centred authority and agency.

In making this argument, the paper firstly outlines the emergence of Yolŋu mathematics as a concept within the context of empowerment and *gänma* in North East Arnhem Land. It goes on to discuss how Yolŋu mathematics is the connectivities between humans and more-than-humans, which co-become a world that is living and situated. Here, notions of "the environment" or ecologies are expanded beyond reductionist notions that see humans as the only beings able to act, think and acknowledge. Instead, the Aboriginal Australian notion of *Country* enables conceptualisations of more-than-human, co-emergent co-becomings. This is then illustrated by the co-becomings of Yolŋu mathematics in the context of the Yirrkala Community School and cultural tourism in North East Arnhem Land. The paper concludes by arguing that this generous sharing of knowledge, this engagement with Yolŋu mathematics, reveals all knowledges as situated and

issues a profound challenge to western-centred environmental and educational discourses and practices.

2. Two Way Learning

In writing of *gänma* and Yolŋu mathematics, we position ourselves within a long history of Yolŋu empowerment and resistance to colonialism. Yolŋu have been at the forefront of assertions of sovereignty in a wide range of realms including in art, science, religion and politics [7,12–16]. Yolŋu launched the first land rights case in Australian history and in 2008, won a landmark sea rights case that saw recognition of their sovereignty into the sea [17]. They have led efforts at bilingual learning, and have been widely acknowledged for their work in art, music, cultural tourism, writing and dance. In all these spheres, whether dance or mathematics or tourism or through overt political action, they have been engaged in putting forward a diverse way of being in and with the world, asserting Yolŋu ontologies and Yolŋu sovereignty.

These assertions of sovereignty are set against enduring legacies of colonization which have included European dismissal of non-European, and Indigenous, ways of being and thinking. In Australia, for example, Aboriginal people were serially denied recognition of their knowledges and rights over land, even their very existence [18]. In the 1960s, Yolŋu played an important role in the fight for land rights in Australia, in the effort to overturn concepts of *Terra Nullius* (the legal assertion of Indigenous absence upon which British colonial claims over Australia proceeded). In the 1970s and beyond, the homelands movement presented a powerful response to European understandings of people's relationships to land as alienable. The homelands movement was thus a movement asserting Indigenous rights over and with their homelands as well as an expression of cultural strength and continuity [12,13]. As Laklak states:

> It was about us being in our home, having a right to belong where we are. We can be equal Australians. We can be Australians and have culture. We should have rights to be Yolŋu. For us, the homelands cannot be ignored. We can't run away from the kinship we have with Country and all the animals, plants, winds and spirits that dwell there. We have a place where we belong. That movement that we started forty-plus years ago, it still goes on.

For Yolŋu people, any understanding of order or patterns in the universe, that is, mathematics, cannot be understood outside Country or kinship. Country, as Laklak states, "cannot be ignored". The powerful land rights and homelands movements that begun in the 1960s, strengthened and extended in the 1970s and beyond, to focus

on a wide range of domains including an insistence on recognizing Yolŋu ways of knowing and being, including mathematics and relationships with/as Country.

Yolŋu first used the notion of Yolŋu mathematics in the 1970s as a way of countering the idea that Western practices of mathematics had no equivalent in pre-colonial Yolŋu society [15,19–21]. Indeed, Helen Verran, a key contributor to the emergence of the Yolŋu mathematics curriculum at Yirrkala, makes a case that mathematics and land ownership are intimately related. Verran argues that mathematics of Aboriginal land ownership has historically been ignored, marginalised and denigrated in Australian (and international) politics, law, academia and practice [22]. She goes on to reveal Yolŋu mathematics as both analogous to western mathematics, yet significantly different, and she re-imagines the implications of this for the politics, negotiation and co-existence of land ownership/s in Australia.

Not only have legal and political systems been unable to grapple with the challenge of Yolŋu mathematics but mainstream education systems have also been unable to recognise alternative mathematics and their importance for Indigenous rights and education [22]. Yolŋu mathematics thus presents a challenge, and critiques the development and pedagogical domination of Western mathematical traditions [23]. The establishment of the Gänma mathematics programme at the Yirrkala Community School in the 1970s was primarily concerned with providing a cognitive link between Yolŋu and western mathematical practices and terminologies as well as bridging a gap between two distinct knowledge systems [19]. The development of the Gänma mathematics programme is epistemologically dependent upon a number of Yolŋu metaphors, in particular *gänma*, that highlight the potential for a two-way system of equal knowledge exchange. As explained above, this exchange is not limited to educational reform but is also implicit in land-rights [22] and is embedded in the wider socio-political desire for autonomy [16]. We explore Yolŋu mathematics in the school context later in the paper. Firstly, we discuss in more detail the connectivities and situatedness of Yolŋu mathematics.

3. Yolŋu Mathematics

Yolŋu mathematics, like Western mathematics, is the science of patterns, groups, relationships, rhythms and space. To understand Yolŋu mathematics, however, it has to be linked to place. For us, as we write this paper, that place is Bawaka. So it is important to know that as we discuss Yolŋu mathematics, we are telling it through Bawaka, through, with and as our homeland.

At the back of the beach at Bawaka is a big *raṉan*, a big paperbark tree. If you open it you will see there are layers and layers, layers and layers of bark. As the bark peels away, there is more bark. It is all intertwined together. That is Yolŋu knowledge—there are layers and layers of it. These layers are mathematics. Mathematics is about the patterns and the rhythms, about counting and time and

space. It is about how things are connected to other things and about the relationships between them.

This vision of mathematics is one that is absolutely situated. As Donna Haraway asserted in her influential work on situated knowledges, there is no objective knowledge, all knowledge is indeed situated [24]. Bawaka reminds us that it is not only situated, but that this situatedness is place-based in a profound way. This is knowledge intimately embedded in Country, in what it means to live, to be, on this earth and to be connected within more-than-human communities. Put simply, *nothing* can be understood without reference to its *waŋa*—its special place. It literally buries down in layers like charcoal in the Australian landscape.

Yolŋu mathematics is very complex. It talks about place and it talks about the ordering of numbers, the infinite cycles and patterns that hold the world together. The ordering of numbers is like this mat (see Figure 1). It is woven, and in the middle is its starting point. Every child who is born is in the system. They have a place. They have a family [25]. They have totems. They have a language. Kate, Sarah and Sandie's adoption as Bawaka family embodies this situatedness—is an ongoing aspect of Yolŋu mathematics' co-emergence, co-becoming through infinite patterns of recursion that loop and fold, making and remaking people and Country, time and place/space [8]. As Merrkiyawuy states:

> So here we are—Banbapuy is *yapa* (sister) for me, and so is Sandie. So they've (Sandie, Kate and Sarah) now been put into our place, and they are like family; they can't be moved to another. Everyone who comes to our communities we put into place, if you are not put in a place, then you are nothing. You're not there. So Banbapuy and I and Sandie are here. Our children—*waku*—are Kate and Karina. So they've got a place. Everything and everyone has a place.

The specificities of place and relationships are understood through *gurrutu*, kinship. *Gurrutu* is a complicated pattern that holds all people and more-than-humans in relationship with each other in ways that circumscribe roles and responsibilities. As Laklak describes:

> *Gurrutu* is cyclical, like a helix, going up and around and up. For example, we have a *märi*, a grandmother. She has her *waku*, daughter, and her *gutharra*, granddaughter. Now the daughter of the granddaughter is not the *märi's* great-granddaughter but rather her mother. See the pattern? The new-born baby is the mother of the old woman. The old woman is the new-born baby's daughter (see Figure 2).

Figure 1. Woven mat by Banbapuy.

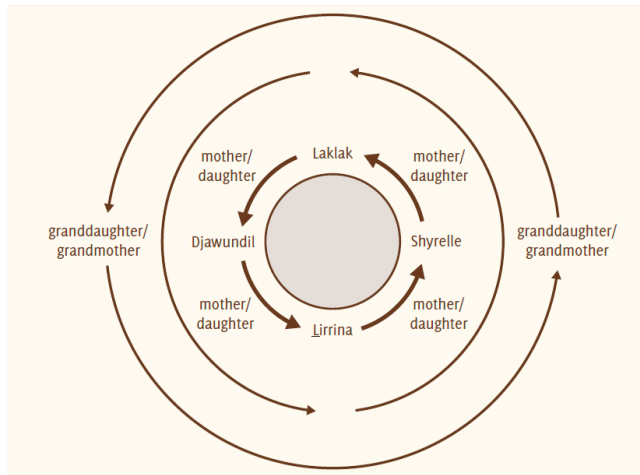**Figure 2.** Basic *Gurrutu* cycle of Laklak and daughters ([1], p. 147).

Gurrutu is underpinned by the patterns of Yirritja-huwa and Yothu-Yindi (child-mother). Everything in the Yolŋu universe—Yolŋu, non-Yolŋu who have been adopted into families, animals, rocks, plants, winds, songs, cycles, clan estates—is either Yirritja or Dhuwa. Together, Yirritja and Duwa make up the cosmos. Yirritja and

Dhuwa also interrelate with another fundamental pattern of *gurrutu*, the Yothu-Yindi relationship. Here Yirritja gives rise to Dhuwa and Dhuwa to Yirritja as Yothu-Yindi (child-mother) so that all beings are either a mother or child within a relationship. If a child is Yirritja and *madirriny*, the South Wind, is Yirritja, that wind would be their sister or cousin. The *ritjilili*, choppy water, which is Dhuwa, would be their mother and their child.

Gurrutu takes these recursive patterns and layers upon them. It brings complex roles and specific kinship relations that follow the patterns of Yirrtija and Dhuwa, and Yothu and Yindi, and build upon them in ways that dictate, for example, who may marry whom, who will care for a certain piece of Country, who has responsibility for a certain song-cycle or sacred art, and who/what you might avoid out of respect. The complex mathematical aspects of these patterns—and it is worth pointing out here that we have only touched upon the most basic patterns of kinship, have been documented by Rudder, Verran, Christie and others [6,7,19,26,27]. As these authors point out, while these mathematical formulations may be recognisable as complex mathematical frameworks within a Western perspective, they are more than abstractions. For Yolngu, relationships and relationality take precedence over ideas of discreteness or abstract quantity [27]. Mathematical patterns bind people to each other and to Country in relationships of co-becoming and as manifestation of strong ethical frameworks. Here, then, is an effort to go beyond superficial renderings of Indigenous mathematics so that, rather than picking certain examples that easily map onto a Western understanding, a more profound ontological view is embraced. For a Yolŋu view of knowledge, of mathematics, comes from a relational ontology, from connectiveness and relationality [8,9,28,29]. In Yolŋu mathematics, people are not separated from nature. The earth is not separated from the sky. Songs and stories are not separated from people and objects. All these things exist as part of one another and come into being together [29,30]. It is a form of relativity.

Coming-into-being-together implies a co-emergence of humans and more-than-humans. As such, Yolŋu mathematics acknowledges non-humans as important, active agents with their own knowledges and with important roles to play in the functioning of the cosmos. This is not a human-centred vision but one that recognises non-human agencies as sapient and purposeful. Bawaka Country is active. It is knowledgeable. The land and the spirits, the sea and all beings have their own mathematics—their own languages, rules, and relationships, their own *gurrutu* and their own places within the cycles of *gurrutu* that make up Country. The sea has its own *wäŋa*, its own mathematics. The *guya*, the fish, stingray and the *miyapunu*, the turtle have all got their own language, they have their own rules, style of talking and living with one another. The birds and animals know where to sleep, where to put their babies, where to build their nests, and how and when to migrate. The same for trees and bushes. The land knows what their language is.

These mathematics are constantly being brought into being through song and story, through *manikay*. They are performative and the performance of Yolŋu mathematics is essential for nurturing and (re)creating the cosmos. As Laklak explains:

> When *manikay* start you have to start from the place—whoever, whatever clan you are you start from your own land. And then you sing what's there in the land, how it was made, the creation of the land, and then you move from there to where the creator beings or the spirit beings that created that land, the creators journey you're singing, how he or she, found or created on the way, like animals, or where his or her foot, the soil the sand the land the waterholes the rivers.

Laklak tells us that *manikay*, Yolŋu songs of Yolŋu mathematics, which underpin Yolŋu life worlds, weave through the web and bring it all together. The shape of all things—valleys, mountains, plains, people, actions, and events—can all be sung. There are songs for the sea and for the freshwater and the land. Trees, spirits, land, animals, plants, winds, waters, people are sung. They are kept alive through *manikay* even when they have passed on.

There are Bawaka songs: songs about going out with the boat, songs about people sitting in the shade of the *djomula* (casuarinas trees), looking at Bawaka and the nice and calm water (*marrawulwul*), the *naykuna* (flat) water, and all the rocks. The rocks up here are called *rirralin* and *bakitju*—where the kids swim in the water hole in the rocks. The rocks have lots of names of significance to Gumatj and they sing about them 3–4 times and then stop, and then sing about the calm water. Then they sit and see the islands from Bawaka and sing the names of places like Nanukala, each beach and island has got a name.

Gurrutu, manikay and the mathematics they perform are multilayed, complex and interwoven in and through time and space. They constantly co-become through the co-emergence of these ongoing relationships. We now explore this co-becoming in the context of g*änma*, of two-way learning in schools and with tourists.

4. Co-Becoming Yolŋu Mathematics

4.1. In Schools

Yolŋu have been particularly strong in integrating principles from Yolŋu mathematics, including *gurrutu,* into the Yirrkala Community School curriculum and teaching practices. Incorporating a Yolŋu perspective, including Yolŋu language, Yolŋu concepts and Yolŋu mathematics into educational curriculums is seen as an important part of sovereignty and the assertion of Yolŋu rights, and an important part of cultural maintenance. Yolŋu mathematics reflects a Yolŋu worldview in the classroom, and provides a way of supporting and validating Yolŋu knowledges and

ontologies. It also provides a cognitive bridge between students' cultural milieu and the purportedly abstract world of Western mathematics [31–33].

The Gänma mathematics curriculum at Yirrkala Community School revolves around mapping western and Yolŋu thinking together in two ways. Firstly, there is the linkage between the western numeracy system and the Yolŋu *gurrutu* system as recursive ordering systems. Secondly, there is the mapping of the logical orders located in the land; the western system of quantification or measurement and the Yolŋu system of Djalkiri in which value is inherent in the land due to action of creation and sacred sites.

Yolŋu mathematics is taught everyday and in ongoing ways at the Yirrkala Community School. Merrkiyawuy and Banbapuy, principal and senior teacher at the school, teach Yolŋu mathematics as they want the students to learn two ways. Learning becomes *gänma*, an exchange between Yolŋu and *ŋapaki* knowledges and ontologies. Instead of knowledge flowing in one direction, from *ŋapaki* to Yolŋu (as in most of the mainstream education system in Australia), Yolŋu are recognized and valued for their knowledge. For Merrkiyawuy and Banbapuy, as well as other staff, that is important for teachers, for Yolŋu and for Yolŋu kids. It is also important for Country and for human-more-than-human co-becoming.

The Gänma curriculum is based on learning on Country. As such it is constantly emerging and co-becoming through intense interrelationships between children, teachers, family members and Country. Teachers take the children out onto the land, for example to collect turtle eggs from the beach. As Merrkiyawuy and Banbapuy explain:

> To find the eggs we use Yolŋu mathematics. We look at the tracks of the turtle—it's important we don't just dig anywhere, because when turtles come up onto the beach they turn around and then they dig over here, dig over there—we need to look at the shape of the track, learning the tracks, to see exactly where the eggs were laid in the buried hole. So we don't just go up there and start digging—otherwise it's just ruining the land, we have a look first—the shape of the track, and then try and find where it is. So the kids learn this and they look at the hole and they dig. By digging the kids learn how to identify the air pockets, about depth and length. Then when we bring the eggs out we use a Yolŋu way of counting—*waŋgany, marrma, lurrkun, dämbu miriw*, one, two, three, four—and then one on the top, that's one *rulu*—and then there's two *rulu*, three *rulu*—and that's how the children are counting there—so learning their way of mathematics. Then they decide, how many will I

be taking—how many eggs shall I take home to my mum and dad. It's a living maths. Garma[2] is living maths (see Figure 3).
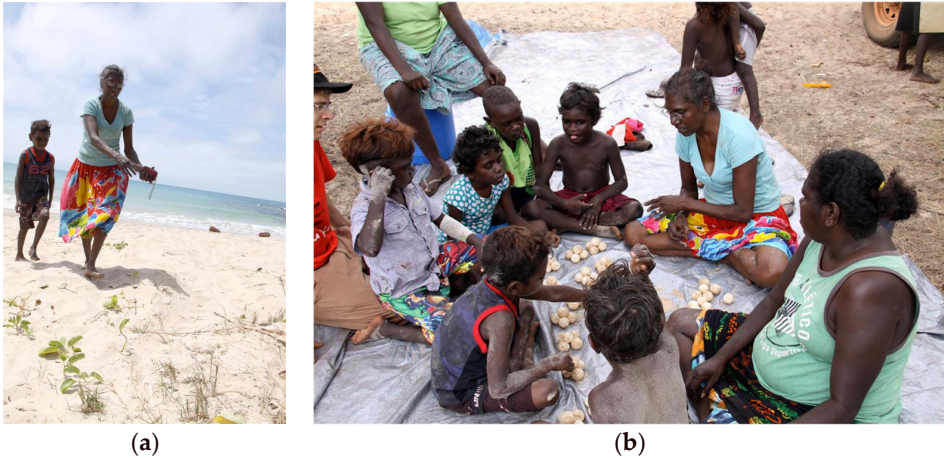

Figure 3. (**a**) Merrkiyawuy identifying *miyaupu* tracks; (**b**) counting *miyaupu mapu* with Yirrkala School children.

Learning mathematics is thus a way of learning Country, of learning how to listen to Country, to care for Country and be cared for by Country. Most profoundly, learning mathematics reinforces for students that they are not and cannot be separated from Country, but rather they come into being with it.

4.2. With Tourists

Conceptualisations of Yolŋu mathematics have been taken up by many Yolŋu as a way of interpreting and communicating their relationships with each other and with the environment, and as a way of asserting the importance of Yolŋu knowledge and authority for non-Yolŋu people, *ŋapaki*. While Yolŋu mathematics at Yirrkala community school largely speaks to Yolŋu children (and Yolŋu and *ŋapaki* teachers), Yolŋu people have found other ways to specifically reach *ŋapaki*, including through tourism.

A range of Yolŋu tourism businesses, including corporate, educational and custom-made tours, engage visitors with Yolŋu kinship, traditional lore and language, both spoken and sign. One business—Bawaka Cultural Experiences (BCE) is owned

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2   *Gänma* and *garma* are different words and concepts but are often used interchangeable to refer two ways knowledge.

by the Burarrwanga family[3]. BCE's focus is on sharing Yolŋu knowledge, through *gänma*, two-way learning: "The business is about Bawaka people sharing knowledge with the world. It is how Bawaka people are, sharing knowledge with the world, learning from each other, Indigenous and non-Indigenous" ([34], p. 27). Through this sharing BCE helps visitors develop an understanding of the holistic nature of Yolŋu knowledge and offer glimpses into some of layers of patterns, rhythms and relationships with and as Country that underpin it. This is fundamentally about reasserting control over how Yolŋu knowledge is communicated to *ŋapaki* audiences. As Laklak argues:

> We've got to stand on our two feet. Yolŋu should be in charge of the politics that affect us. It is time for a *yuta* (new) generation. Bäpa [Laklak fathers], he taught all the other Elders how *ŋapaki* work, their knowledge. And he taught Yolŋu knowledge to *ŋapaki*, so they could be equal. *Napaki* politics and Yolŋu politics. *Napaki* could see Yolŋu knowledge and Yolŋu could see *ŋapaki* knowledge. That is the most important thing, for young people of the future, to understand politics and Rom (Law/Lore).

Tourists are immersed in Yolŋu mathematics from the moment they step out of their vehicle onto Bawaka sand. Through the welcome smoking ceremony, through activities that give them a skin name and through the diverse ways they are guided—doing, talking, being, and becoming—by Yolŋu hosts, they are invited to understand how Yolŋu mathematics connects all. Tourists are encouraged to understand the centrality of Country to all knowing and being, including mathematics. As one tourist reflected:

> . . . it was the fact that we were on their land, hearing their stories, told their way in their time and having being invited to be part of that. You know, I really felt they were sharing something very important and special to them with us [35].

BCE often invoke *lirrwi*, charcoal, to emphasise their connections in, with and as place. As Laklak explains:

> Everywhere you dig in Australia you'll find some charcoal from the fires of Indigenous people. It shows that Indigenous people lived there, that we are from this place. There are layers and layers of it too, just like the *raŋan* and just like our knowledge. When you first dig, you'll see one layer of *lirrwi*; when you'll dig more, you'll see more. It's significant knowledge

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[3] Senior sister and author of this paper, Laklak, led the establishment of Bawaka Cultural Experiences with her extended family.

that goes down deep. It's from our ancestors. It's knowledge that's
embedded in the land and that has been part of the lives of Aboriginal
people for generations, forever ([1], p. 190).

This is done in ways that emphasise the place-based and situated nature of
Yolngu mathematics, but also in ways that may challenge tourists' conceptualisations
of Indigenous knowledge as something located in the past, without reference to
contemporary realities. The puzzle designed by Merrkiyawuy (see Figure 4) makes
the vibrant, contemporary and practical ramifications of *gurrutu* abundantly clear.

A *gurrutu* puzzle, invented by Merrki

There are five Yolŋu travelling together on the plane from
Nhulunbuy to Darwin. On one side of the aisle there is a
group of three seats. On the other side there are two seats.
The five Yolŋu must decide how to arrange themselves.
There are

two brothers, Djawa and Rrawun
a sister, Djawundil
the wife of one of the brothers, Yalmay
and the wife's mother, Marrpalawi

Try to decide where everyone must sit. You will have to
ignore the boarding passes to keep to the rules of *gurrutu*.
The answer is given below.

ANSWER: brother brother wife AISLE sister mother-in-law
(The brothers cannot sit close to the sister or especially the mother-in-law, but
the wife can talk to anyone.)

Figure 4. A *gurrutu* puzzle ([1], p. 154).

The layers of *lirrwi*, like the layers of *rangan*, are Yolŋu knowledge and
Yolŋu mathematics co-becoming with and as Country. Tourism, then, provides
an opportunity for Yolŋu to share some layers of Yolŋu mathematics and to engage in
gänma, co-becoming together, in a different context. Tourism brings Yolŋu into
relationship with people from across Australia and from around the world to
share Indigenous ways of being, knowledges and practices. Through this *gänma*,
Bawaka becomes for tourists more than "the environment", it becomes Country,

knowledgeable, sentient and caring, not a static background to culture or a canvas on which to write abstract knowledge, but an intimate part of what it means to know, live and co-become.

5. Mixing, Mingling and Concluding

From its birth in the Yirrkala Community School, Yolŋu mathematics has been mobilised to encourage mixing and mingling. Despite these intentions, *ŋapaki* have much to learn from Yolŋu mathematics and there is a persistent and widespread lack of knowledge around Indigenous mathematics and land management systems, and the ways these may interact. As Laklak reflects:

> Many people have worked so hard to get a curriculum that builds on Yolŋu knowledge and *ŋapaki* knowledge. But the government is trying to take it out, to make Yolŋu children foreigners in their own school even though they are the first people. We could learn from each other. Why can't the government see that?

Echoing Verran's work analysing pre-native title attitudes towards Indigenous mathematics in Australia [22], continuing debates in Australia reinforce the ontological arrogance of thinking there is only one form of mathematics—either through the dismissal of Indigenous knowledges or expressions of surprise as other knowledges are "suddenly dis-covered":

> I don't understand why we are including these [Indigenous] perspectives in these subjects. Science and maths are universal. (The head of the Prime Minister's indigenous council, Warren Mundine, cited in [36], in response to the Federal Government's review of the new national curriculum which sought to embed Aboriginal and Torres Strait Islanders Cultures and Histories as a cross-curriculum priority).

> While English speakers may talk of infinite possibilities, ancient Australian Aboriginal languages very rarely stretched past number five. However, a study published today shows that far from being simple, Aboriginal numeral systems "lost and gained" numbers over time [37].

Such comments point to the lack openness towards "infinite possibilities" not of Yolŋu or other Indigenous knowledge systems, but of those unable or unwilling to see beyond one-way learning [38]. While *gänma* has always been understood by Yolŋu and their allies as about intercultural exchange, this kind of pluralistic approach eludes most mainstream knowledges. Thus, as critical as it is to teach Indigenous students through appropriate Indigenous approaches [39], principles of *gänma* could be adopted more broadly in mainstream educational practices throughout Australia

and ideas of environment opened up to and respectfully recognise and engage with alternate ways of knowing—a true two ways learning.

Knowledge on, with and as the land, *morrku mangawu,* has much to offer understandings of human-environmental relations, ideas of knowledge and of mathematics. If, for Yolŋu, things and being can only be understood in relation to other things and beings—what might be called relationality or relativity—an insistence that a thing or being can be understood in an abstract, discrete way, as unrelated to others, is revealed as deeply culturally embedded. Indeed dominant Western ways of knowing, and mainstream mathematics, are often dependent upon such abstractions. These abstractions tell us as much about cultural understandings and preoccupations as they do about the objects of that knowledge, which, after all, only come into being with others.

Within Yolŋu mathematics, there can be no human that sits separate from their environment, from other humans or from other more-than-human becomings. Humans can no more act on a separate, discrete or unknowing environment than they may act upon their own selves. In place of environment, Yolŋu mathematics is knowledge of, with and as Country. Yolŋu mathematics is the multi-species, more-than-human knowledges and practices that emerge through our co-becoming, assertions of knowing, being and becoming-together. Such assertions underscore the situatedness of all knowledges and challenge universalist claims around abstract mathematics, human subjectivities, or ideas of environmental management that perceive the environment as something that exists separately from people, as something to acted upon.

However, understanding Yolŋu mathematics as *morrku mangawu* points to more than knowledge *two* ways. It points to radical more-than-human multiplicity and multidirectionality. There is no singular Yolŋu mathematics—as knowledge with/of/as the land is dependent upon different homelands and contexts. Similarly, Western mathematics is plural and diverse, with the mathematics taught in schools and integrated into most people's daily life bearing little resemblance to the complex and relational ideas of mathematics explored (and contested) within and between pure mathematics and quantum physics. For Yolŋu, furthermore, it is not just humans who understand, generate and interpret patterns and relationships—more-than-humans too have law, language, knowledge and logic. Knowledge, mathematics, is indeed multi-centric and multi-directional. Yolŋu mathematics, *morrku mangawu,* underscores this plurality, this situatedness, this more-than-human diversity.

In this paper, we have attended to Bawaka Country, and its mathematics, by acknowledging its place as author, and acknowledging our co-constitution as part of each other and of Country. We speak of *morrku mangawu*. In doing so, Bawaka has guided, shaped and taught us. We have tried to practice *gänma* in a different context,

in an academic world, by taking seriously Yolŋu ontologies and inviting new forms of mixing and mingling, within our Indigenous-ŋapaki-more-than-human collective and with you. As you read this paper, the salt water and fresh water, the diverse currents, different temperatures, carrying different lives, different knowledges and different becomings over time and space, come together again in new ways. This is living mathematics.

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Cartographies of the Voice: Storying the Land as Survivance in Native American Oral Traditions

Ivanna Yi

Abstract: This article examines how Native places are made, named, and reconstructed after colonization through storytelling. Storying the land is a process whereby the land is invested with the moral and spiritual perspectives specific to Native American communities. As seen in the oral traditions and written literature of Native American storytellers and authors, the voices of indigenous people retrace and remap cartographies for the land after colonization through storytelling. This article shows that the Americas were storied by Native American communities long before colonial contact beginning in the fifteenth century and demonstrates how the land continues to be storied in the present as a method of decolonization and cultural survivance. The article examines manifestations of the oral tradition in multiple forms, including poetry, interviews, fiction, photography, and film, to demonstrate that the land itself, through storytelling, becomes a repository of the oral tradition. The article investigates oral narratives from precontact and postcolonial time periods and across numerous nations and geographical regions in the Americas, including stories from the Mayan *Popol Vuh*; Algonkian; Western Apache; Hopi; Haudenosaunee/Iroquois; and Laguna Pueblo stories; and the contemporary poetry and fiction of Joy Harjo (Mvskoke/Creek Nation) and Leslie Marmon Silko (Laguna Pueblo).

1. Introduction

In the oral traditions and written literature of Native American[1] storytellers and authors, the voices of indigenous people story the Americas, investing the land with the moral, spiritual, and cultural perspectives specific to their communities.

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[1] The terminology used to name the indigenous peoples of the Americas is a subject of ongoing discussion and debate. "Native American" and "American Indian" are the terms commonly used in academia. Native Americans use the names of their communities, such as Diné, Hopi, and Abenaki, to refer to themselves. I follow this tradition and name specific nations in this article whenever possible. The word "tribe" is also contested, as it is considered to be an anthropological term, although it appears frequently in Native American and Indigenous Studies (NAIS) literature. The words "nation" and "community", which are often preferred by Native American peoples and scholars, will be used in this article. For further discussion on terminology, see Lindsey Claire Smith [1].

The place-making that occurs in and through these stories enacts cartographies for indigenous communities which meld geography with native history.[2] The Americas were storied by Native American communities long before colonial contact beginning in the fifteenth century, as evidenced in works such as the Mayan *Popol Vuh*[3]. This process of storying the land has never ceased; contrary to the myth of the "vanishing Indian"[4], the indigenous people who live in the Americas have continually made, retraced, and adapted these stories.

In his essay, "Yeats and Decolonization", Edward Said discusses the geographical violence of imperialism on Native places, places which were once inhabited by indigenous communities prior to contact with colonizers. Said asserts that the imagination plays a critical role in restoring indigenous "geographical identity":

> Now if there is anything that radically distinguishes the imagination of anti-imperialism it is the primacy of the geographical in it. Imperialism after all is an act of geographical violence through which virtually every space in the world is explored, charted, and finally brought under control. For the native, the history of his or her colonial servitude is inaugurated by the loss to an outsider of the local place, whose concrete geographical identity must thereafter be searched for and somehow restored. ([5], p. 77)

In Said's view, the colonial subject is exiled from an indigenous landscape which is transformed by colonization. That landscape can be recreated, despite these transformations, through the "cartographic impulse", an act of the imagination that seeks "to map, to invent, or to discover, a *third* nature, which is not pristine and prehistorical...but one that derives historically and abductively from the deprivations of the present" ([5], p. 79). Through the metaphorical space of a "third nature"[5], writers can restore, reclaim, or recreate their native places, places which may be physically altered or physically irretrievable.

The geographical violence Said describes is, in the case of the Americas, inextricably bound with linguistic violence. The journal of Christopher Columbus from his voyage to the Americas in 1492 and his letter to Queen Isabella of Castile and King Ferdinand of Aragon in 1493 show how his intention to claim ownership

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2   See Vine Deloria Jr.'s discussion of the "sacred geography" of Native American communities in [2].
3   The *Popol Vuh*, literally "Council Book" or "Book of the People", was originally a hieroglyphic book of ancient Mayan literature. Hieroglyphic books were burned by missionaries after European contact in the 16th century. Dennis Tedlock traces the writing of the alphabetic *Popol Vuh* to between 1554–1558 [3].
4   For discussion of this myth and the continuance of Native American peoples and presence in New England, see Lisa Brooks [4].
5   In speaking of a "third nature", Said builds on the concept of a "second nature" proposed by the geographer Neil Smith, who defines the term as a landscape transformed by the commodification of space under capitalism and imperialism.

of the land of the Americas for Spain was enacted through renaming the lands he encountered.[6] In a journal entry from 19 October, Columbus writes:

> After less than three hours' sailing we sighted an island to the E. We braced up and headed for it, and the three vessels reached it before noon at its northern point, where there is an islet and a reef running off it to the N, and another between it and the island proper. The men from San Salvador whom I have on board told me that its name is Samoet; I have named it Isabela [sic]. The wind was northerly, and the islet I mentioned is on course for the island of Fernandina, on a line E-W of my departure point from there. From the islet the coast ran westward for twelve and a half leagues to a headland. I have called the cape here at the western end Cabo Hermoso, and it is indeed beautiful, round and with plenty of depth of water, with no shoals. [6]

It is clear from Columbus' journal that he was aware that the lands he saw were already named by the indigenous people who inhabited them. Columbus renames Samoet, the name the Taíno people had given to the land on which they lived, as if the new name would give Spain the right to ownership. In his 1493 letter to Queen Isabella and King Ferdinand, Columbus later recalls,

> I named the first of these islands San Salvador, thus bestowing upon it the name of our holy Saviour, under whose protection I made the discovery. The Indians call it Guanahanyn [Taíno for "iguana"]. I gave also a new name to the others, calling the second Santa Maria de la Concepcion, the third Fernandina, the fourth Isabella, the fifth Juana. In the same manner I named the rest. [7]

Naming for Columbus entails taking possession: it is method of remapping indigenous geography into Spanish territory.

Storying the land by the indigenous peoples of the Americas works against the geographical and linguistic violence that began with Columbus. This practice traverses the precolonial past and the present and enables what Indira Karamcheti calls a "linguistic reoccupation of the land" [8]. This article examines the process of storying the land to show how Native places are made, named, and reconstructed after colonization through storytelling. It demonstrates that this cultural practice began prior to colonial contact and has since become a method of Native American decolonization and survivance. Building on Anishinaabeg scholar Gerald Vizenor's

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[6] Queen Isabella of Castile and King Ferdinand of Aragon were married in 1469. Their policy of joint rule resulted in the unification of the Spanish monarchy.

concept [9], this article shows how survivance occurs through the continuing voices of Native American storytellers and authors who retrace and remap cartographies of the Americas after colonization.

Storytelling abounds in various artistic media in contemporary Native America, going beyond oral narrative and written literature to include genres such as film and photography. In readings of oral stories recorded in poems, fiction, interviews, film, and photography, this article will demonstrate that, across Native American nations in widespread geographical regions, the land itself becomes a repository of oral traditions through storytelling.

Because each Native American nation has a specific relationship with the land with which it is associated, this article investigates the diversity of those relationships while identifying common themes and concerns through analysis of oral narratives across precontact and postcolonial time periods and from numerous nations across the Americas. Although it is not possible to represent all Native American communities here, the article will examine stories from the Mayan *Popol Vuh* (Mesoamerica)[7], Algonkian (New England, Canada, and Great Lakes Region)[8], Western Apache (East-Central Arizona), Hopi (Northeastern Arizona), Haudenosaunee/Iroquois (Northeastern Woodlands, New York)[9], and Laguna Pueblo (Central New Mexico) stories, and the contemporary poetry and fiction of Joy Harjo (Mvskoke/Creek Nation, b. 1951)[10] and Leslie Marmon Silko (Laguna Pueblo, b. 1948). In responding to the specific local relationships between the land and the culture of individual Native American peoples while looking across national boundaries toward commonalities in Native perspectives on the land, this article is in accord with Craig Womack's [10,11] call for a literary criticism that is rooted in nation-specific realities while affirming international Native concerns.

2. Inscribing the Land with the Voice: Storytelling as Place-Making

In Native American oral traditions, words are accorded generative power and are capable of bringing the world (literally "sky-earth, or *kajulew*" in Quiché) into

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[7] The Mayan civilization lived in Mesoamerica, including present-day Guatemala, Southern Mexico, Belize, and portions of El Salvador and Honduras.

[8] The term Algonkian includes the Native communities who speak an Algonquian language. Geographically, Algonkian communities encompass all of the Native Nations of New England, most of Canada, and the Great Lakes region.

[9] The Haudenosaunee/Iroquois Confederacy was originally comprised of five nations: the Mohawk, Seneca, Oneida, Onondaga, and Cayuga. The Tuscarora nation later joined the confederation in 1722. Collectively they are called the Six Nations.

[10] The Mvskoke/Creek Nation is originally from the southeastern Woodlands area (Florida, Georgia, Alabama, Southern Tennessee, and Mississippi). The Mvskoke/Creek Nation was forced to relocate to Indian Territory, now known as Oklahoma, in the 1830s following the Indian Removal Act in 1830. Joy Harjo was born in Oklahoma and currently lives in Albuquerque, New Mexico.

being. As seen in the Mayan *Popol Vuh* (alphabetic version recorded in the mid-16th century): "And then the earth arose because of [the gods], it was simply their word that brought it forth. For the forming of the earth they said 'Earth'. It arose suddenly, just like a cloud, like a mist, now forming, unfolding" ([3], pp. 59, 65). Out of their breath, their imaginative saying, the Mayan gods create the land and the world.

Blood Moon (Xkik'), a moon goddess and daughter of the Xibablban lord, demonstrates how her relationship with the land can be storied to transmit knowledge about the land. Pregnant with the twins of One Hunahpu, Blood Moon is put to a test by her mother-in-law, Xmucane, to prove she is the mother of the twins. Although Blood Moon finds only one clump of corn plants in the garden, Blood Moon calls on all four names of Xtoj, the "guardian of the food", to rise up and aid her in her task to gather a netful of corn from the garden cultivated by One Monkey and One Artisan. After calling out to Thunder Woman, Yellow Woman, Cacao Woman, and Cornmeal Woman, Blood Moon's prayers are answered when the corn cooperates with her: "And then she took hold of the silk, the bunch of silk at the top of the ear. She pulled it straight out, she didn't pick the ear, and the ear reproduced itself to make food from the net. It filled the big net" ([3], p. 103). In speaking the names of the guardian goddess, she activates the powers those names contain as they relate to the natural world. Blood Moon entreats both the goddess and the land, and the self-generating corn is evidence of their collaboration.

When the corn responds to Blood Moon's request to help her prove her identity, the story shows how the process of "silking" is critical for the method by which corn plants actually reproduce. Like the storying of the multiplication and giving of corn in the *Popol Vuh*, ancient events such as climate change, glaciation, and evolution are encoded in Algonkian "deep time" stories, especially in a body of Native oral traditions Abenaki anthropologist and storyteller Margaret Bruhac calls "Earthshaper" or "Transformer" stories. Bruhac observes:

> The Algonkian stories that have survived resonate with, and record, historical presence, and provide the background, frame, stage, and context for the material world. Some of the oldest oral traditions describe how ancient beings left physical traces, by marking the landscape with their footprints, reshaping natural earth formations, carving out rivers, doing battle with superhuman elementals and molding giant megafauna down to their present size. ([12], pp. 57–58)

Whereas the European scientific tradition may describe topographical change through the term "glacier", for example, Bruhac argues that an "Earthshaper" from the Native American oral tradition is no less meaningful as a historical record. One such precontact Algonkian Earthshaper story tells of the Great Beaver who dammed the Connecticut River Valley and caused it to flood, creating the built

environment. The oral tradition is significantly older and more voluminous than the scientific tradition, as Bruhac notes: "The archaeological evidence of pre-glacial human habitation has been destroyed by glacial scouring of the land, but the oral tradition suggests that human witnesses may have observed glacial events, and encoded them in a memorable narrative form" ([12], p. 66), events accessible through the Earthshaper stories that continue to be told in the Algonkian tradition. Bruhac emphasizes the similarities in the oral and scientific narrative frameworks in their description of topological change, suggesting that human history in relation to the earth is impoverished when the oral tradition is dismissed.

As seen in the precontact stories in the Mayan *Popol Vuh* and in the Algonkian oral tradition, storying the land enables a conduit for the continued transmission of cultural knowledge. When the land is storied, it acquires the cultural value of a place. Because the place-names[11] of the Western Apache of Cibecue, Arizona are invested with the breath and story of ancestral storytellers, the names are traces of their presence; places, in being called their given names, remember their namers. As Keith Basso, an anthropologist who worked with the Western Apache community, notes,

> the past is a well-worn 'path' or 'trail'('*intin*) which was traveled first by the people's founding ancestors and which subsequent generations of Apaches have traveled ever since. Beyond the memories of living persons, this path is no longer visible—the past has disappeared—and thus it is unavailable for direct consultation and study. For this reason, the past must be constructed—which is to say, imagined—with the aid of historical materials, sometimes called 'footprints' or 'tracks' (*bike' goz'aa*), that have survived into the present. ([13], p. 31)

The breath of storytellers continually construct the past, making verbal marks on the land that define it as a place. These place-names are a form of "footprints" or "tracks" that invest the land with Western Apache history and culture, creating a kind of map that renders the "path" of the past visible in the postcolonial present.

As the land is storied, it accumulates the speech of its storytellers. Basso discovers the living nature of this speech when he continually mispronounces a Western Apache place-name in the presence of his guide. His failure to pronounce the name correctly is seen as disrespectful because he is misquoting the speech of the guide's ancestors ([13], p. 10). In mispronouncing the place-name, Basso unwittingly commits a speech act that dishonors both the place he is referring to and the memory of the guide's early ancestors who named the place. The place-name

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[11] This compound noun appears both with and without a hyphen in scholarship. I follow Keith Basso's use of the hyphen, which I interpret as a reflection of his finding that names, with their storied meanings, are culturally fused to places in Western Apache culture.

carries the speech of the Western Apache ancestors which was passed down through generations and is believed to live on in the community: Basso is receiving an inheritance in learning the place-name, both activating the speech of those ancestors and adding to their speech with his own voice.

Through the activity of place-making, the physical land surrounding the Western Apache becomes an extension of the identity of its people. This belief that the land is a part of the people is shared across numerous Native American nations. As Vernon Masayesva, a Hopi Tribal chairman from 1990 to 1994 states, "As a Hopi, when you look out into the landscape, you have to remind yourself that's where you came from, and in Hopi religion and culture, that's where you go back to" [14]. As Laguna Pueblo author Leslie Marmon Silko asserts, the English word "landscape", conventionally understood as an external place separate from the viewer, is problematic insofar as it suggests a demarcated exterior place. In her discussion of Laguna Pueblo migration stories, Silko suggests that Pueblo consciousness is deeply integrated with and therefore inextricable from the landscape:

> Pueblo potters, the creators of petroglyphs and oral narratives, never conceived of removing themselves from the earth and sky. So long as the human consciousness remains within the hills, canyons, cliffs, and the plants, clouds, and sky, the term *landscape*, as it has entered the English language, is misleading. 'A portion of territory the eye can comprehend in a single view' does not correctly describe the relationship between the human being and his or her surroundings. This assumes the viewer is somehow *outside* or *separate from* the territory she or he surveys. Viewers are as much a part of the landscape as the boulders they stand on. ([15], p. 27)

Silko's words here resonate with Mvskoke poet Joy Harjo's search for a "land-based language" to arrive at words that articulate "the spirit of place recognized" [16]. Harjo's belief that decolonization is possible through language, even through a reinvention of the language of the colonizer, is reflected in an anthology of contemporary Native American women's writing she edited with Gloria Bird, titled *Reinventing the Enemy's Language* [17]. For Silko, the word "land", as opposed to "landscape", includes and involves the Pueblo potters, whose being-in-the-land shapes their identity and artwork. As with the Western Apache of Cibecue, whose place-names tell a collective history, the land as viewed by the Pueblo potters is an interconnected web, of which the potters are part and with which they participate: "Even in the most sophisticated abstract form, a squash flower or a cloud or a lightning bolt became intricately connected with a complex system of relationships that the ancient Pueblo people maintained with each other and with the populous natural world they lived within" ([15], p. 28). The Pueblo

artists' pottery are expressions of the potters' integrated consciousness with the land as they continue to retrace a map of the past through new works of art in the present.

3. Land as Interlocutor in Joy Harjo's Poetry: Tracing the Route of Emergence

In the Native American oral narratives examined above, the land is seen as an active and dynamic force, a storyteller itself. In Joy Harjo's poetry, the dialogic relationship between human beings and the land is made explicit. In Harjo's poem, "For Alva Benson, and For Those Who Have Learned to Speak" ([18], pp. 33–34), both the speaker and the land respond to each others' voices:

> And the ground spoke when she was born.
>
> Her mother heard it. In Navajo she answered
>
> as she squatted down against the earth
>
> to give birth. It was now when it happened,
>
> now giving birth to itself again and again
>
> between the legs of women. (1–6)

The ground speaks, as if welcoming the new member to its society and affirming the creative work of the mother. The girl's mother is capable of hearing the land's voice and enters into conversation with it, answering in Navajo. The interconnectedness of the mother's and child's relationship to the land is evident in the way the child's birth is simultaneous with and equated to the earth's own birth: the ground "now giving birth to itself again and again/between the legs of women" (5–6). These lines suggest that the human mother's body is an extension of the land's body; like artistic works of the Pueblo potters, the mother's giving birth is an expression of her unity with the land. The mother is the immediate "Emergence Place" of the child, and through the mother's intimate relationship with the land, the earth where the child is born is an extension of that site of emergence. Because Harjo defines the mother and the land as a part of each other, they give birth together, the child's appearance an affirmation of the land's present life.

In Harjo's poem, the kinship between the mother and the earth is so durable that they are able to converse with each other even when the setting of the birth changes. Although Harjo initially presents the birth scene as occurring directly on the earth as it might have in ancient times ("she squatted down against the earth/to give birth"), in the second, she posits, "Or maybe it was the Indian Hospital in Gallup" (3–4; 7–8). Whether the birth happened "against the earth" or in a modern hospital on the Navajo Reservation is of peripheral importance, Harjo suggests; the most crucial fact was that "The ground still spoke beneath/mortar and concrete" (8–9). Even when the mother's hands are tied down, "her body went on speaking" in determined conversation with the earth (12–13). Because the mother and the land are

of one body, their integrated consciousness does not require the use of words, even of the Navajo language. Although the mother's labor screams are muffled, the earth can still hear her "body...talking" throughout the process of their joint birthing (12–13).

Harjo situates the birth between worlds and times; the mythic world of the mother's ancestors is as present in the poem as the postcolonial Indian Hospital in Gallup. Her use of ambiguity regarding the exact place of the birth suggests that the mother's dialogue with the earth persists through time. In her discussion of the Emergence Place of the Laguna Pueblo people, Silko postulates that the storied land as understood in its "ritual-mythic" dimension is still meaningful today for the Laguna Pueblo who continue to traverse the route of their Emergence:

> if the stories about boulders, springs, and hills are actually remnants from a ritual that retraces the Creation and Emergence of the Laguna Pueblo people as a culture, as the people they became, then continued use of that route creates a unique relationship between the ritual-mythic world and the actual, everyday world. A journey from Paguate to Laguna down the long decline of Paguate Hill retraces the original journey form the Emergence Place, which is located slightly north of the Paguate village. Thus, the landscape between Paguate and Laguna takes on a deeper significance: the landscape resonates the spiritual, or mythic, dimension of the Pueblo world even today. ([15], pp. 35–36)

The Laguna Pueblos' relationship with their Emergence Place has remained intact, Silko contends, through the perpetuation of the story and the continued use of the route of their creation. In "For Alva Benson, and For Those Who Have Learned to Speak", Harjo simultaneously depicts the postcolonial reality of giving birth on the Navajo Reservation while asserting that the child's birth is a renewal of the covenant with the Emergence Place: "It is the ground murmuring, and Mount Saint Helens/erupts as the harmonic motion of a child turning/inside her mother's belly waiting to be born to begin another time" (30–33). Harjo's poem supports Silko's view that the land's longstanding relationship and dialogue with Native American people continues in the postcolonial present.

The relationship Harjo describes is a symbiotic one. The land is accorded the agency to speak, but the speaker acknowledges that the land's voice can become obscured amid the din of the city. The child grows up speaking both Navajo and English, and watches

> ...the earth around her shift and change
>
> with the people in the towns and in the cities
>
> learning not to hear the ground as it spun around
>
> beneath them. She learned to speak for the ground,

the voice coming through her like roots that

have long hungered for water. (16–22)

The child inherits her mother's relationship to the land and also becomes an extension of the land's body. Her voice becomes a conduit for the land's voice, which comes "through her like roots that/have long hungered for water" (21–22). The girl's speaking for the ground is not a form of ventriloquism because her body is part of the land and vice versa. In an articulation of mutual reciprocity, the ground in the poem turns to the girl's voice for life-giving water. She is the life-sustainer for the earth, learning "to speak for the ground" even as others in the city learn "not to hear the ground" (19,18). This is the voice that the girl's mother heard and that she hears herself when she becomes a mother: "a voice like water, like the gods weaving/against sundown in a scarlet light" (26–27). Here, the land is an interlocutor and a vehicle of continuing orality: it depends on the girl to speak for it and to carry that voice on to the next generation.

4. Storying the Land as a Method of Survivance

As seen in Harjo's poetry, listening to the land and articulating the stories with which it has been embedded is a method of physical and cultural survivance. A Native American story incorporating the landscape can serve as practical a function as a physical map, as Silko relates: "hunting stories were not merely after-dinner entertainment. These accounts contained information of critical importance about the behavior and migration patterns of mule deer. Hunting stories carefully described key landmarks and locations of fresh water. Thus, a deer-hunt story might also serve as a map" ([15], p. 32). The physical survival of Pueblo hunters and their families depended on careful listening and memorization of stories. Landmarks which were storied by these hunting tales could serve as mnemonic devices for the encoded knowledge that would help hunters find sustenance.

Storying the land entails more than physical survival, however. For Vizenor, "Native survivance" means "more than mere survival, more than endurance...Native survivance is an active sense of presence over absence, deracination, and oblivion; survivance is the continuance of native stories, not just a reaction, however pertinent, or the mere right of a survivable name" ([9], pp. 12–13). Inherent in the continuance of Native American culture through storying the land and place-making is the perpetuation of the moral ethos with which places are imbued. As the land remembers its storytellers and their worldviews through their place-names and associated stories, it simultaneously relays the embedded moral dimension of those stories.

A Haudenosaunee story, "How the Bear Clan Became Healers", demonstrates how the storied land can be a guide for perpetuating cultural and moral values while

ensuring the physical survival of a people. In the story, an elderly man arrives at a Haudenosaunee village, begging for food. Clan after clan refuse to help him, and finally a young woman from the Bear Clan named Little Light takes the man in and feeds him. The old man suddenly falls ill and undergoes a series of successive illnesses, which he teaches Little Light how to cure with medicines gathered from the environment. The choice of Little Light as a healer is not made lightly; the power of healing is entrusted to her because her heart is worthy of the gift. Little Light is characterized as a morally sound person: she has "the goodness of heart to relieve suffering" ([19], p. 84). Like the mothers in Harjo's poem, Little Light is taught to be in conversation with the land, learning not only what to gather but also how to gather it. Before taking the herb for a stomach ache, for example, "she was to make an offering of tobacco and say a prayer of thanks to the plant" ([19], p. 80). In addition to relaying which medicines are effective for specific illnesses, the Haudenosaunee story also conveys how to honor and to be in conversation with the land.

The storied land is a moral force that reminds people of their responsibility to it and to each other. In an interview with Annie Peaches, an elderly Western Apache woman from Cibecue, Basso records her conviction that "The land is always stalking people. The land makes people live right. The land looks after us. The land looks after people" ([13], p. 38). Because the land is physically present in Peaches' life and in the life of her community, the stories with which it has become inextricably linked over time accord the land the moral agency to make people "live right". Nick Thompson, an Apache horseman, singer and medicine man, shares Peaches' view, relating that even if the person who told the story dies, "It's like that person is still alive... The names of all these places are good. They make you remember how to live right, so you want to replace yourself again" ([13], p. 59). Thompson emphasizes that living near storied places allows for the moral values intertwined with the land to be continually imprinted upon the mind of the viewer. If one strays from the Apache moral code, a member of the community can "shoot" the offender with a story that will continue to "stalk" her; the story-arrow is intended to correct her ways. Thompson indicates that an Apache in need of moral correction does not merely seek a superficial change in behavior, but rather a radical replacement of the current self with the "right" self as suggested by the land. Becoming this replacement entails looking to the storied land for direction, a realignment of self as part of and in accord with the land as it has been named.

If the physical presence of the places that are named by the community increase the efficacy of moral correction, what happens when members of the community relocate? In Thompson's view, the storyteller still "lives" through the story arrow, and place-names outlast their storytellers. Distance does not diminish the power of the land's voice: A place-name, though disembodied, endures in the memory and continues to work in the life of its rememberer. The place-name is a form of

oral technology, ensuring the memorability of the Western Apache way of life: the place created through the storying of the land remains fused to the place-name, thus becoming a "portable" reminder of Western Apache culture and morality. Not all Western Apaches share this positive outlook, however, insisting on the importance of the lived nearness to the physical land itself to maintain the culture of the community. Western Apache children are regarded as "losing the land" when they act contrary to the tribe's social norms, and it is believed that the source of their troublesome behavior lies in their ignorance of place-names and the stories associated with the land.

The film *In The Light of Reverence* makes a strong argument for the necessity of the physical land in preserving Native American culture. In his advocacy against the gravel mining of the Woodruffe Butte in Arizona, a site sacred to the Hopi tribe, former Hopi tribal chairman Vernon Masayesva shows how the land is physically storied. Masayesva's Hopi ancestors wrote directly onto the land, inscribing their presence and stories with petroglyphs on the rocks composing and surrounding Woodruff Butte. The inscribed land itself, Masayesva argues, is the Hopi "history book". Masayesva shows areas where rifle shots have effaced these pictures; erasure of the land entails the erasure of Hopi history and stories. The Hopi view themselves as a part of the corpus of the land they have storied and inscribed: as Masayesva notes, "In our worldview, we are the clouds. We are the rain that comes down." The demolition of Woodruffe Butte threatens the destruction of the Hopi culture because their sacred shrines, nine of which have been destroyed, cannot be taken out of context. For the Hopi people, land is more than a vehicle of the oral tradition or a mnemonic for cultural values; it is the repository itself. These sacred sites are not portable in the way place-names may be.

5. Adaptation and Continuance in Leslie Marmon Silko's *Storyteller*: Storying the Land in Contemporary Fiction and Photography

Whether place-names in themselves, detached from the land, can serve to perpetuate the cultural universe of the Western Apache is unclear, but it is evident that these place-names keep an oral record of environmental and human-initiated changes in the land. Storied place-names such as the "Great Beaver" (Algonkian) can explain how natural phenomena came to be, and can also give voice to how the land has changed over time through dissonance with the names' original source and context. Snakes Water (*Tliish Bi Tu'e*), currently an inactive spring a few miles west of Cibecue, is an example of a place-name giving "evidence of change" in the land. Charles tells Basso the story of how his ancestors survived by relieving their thirst at the once-active spring. Standing at the site, named after a source of water, Charles states, "The names do not lie...They show what is different and what is still the same" ([13], p. 16).

Photographs now serve as contemporary place-names in that they are also mobilized to tell stories through differences between the captured image and the present state of the land. Like place-names, they signal what has changed and what has remained, making visible that which has disappeared. In the "Yellow Woman" section of her book, *Storyteller*, Silko includes a photograph taken by her father, Lee H. Marmon, to convey the human devastation of Laguna land at the site of the Anaconda company's open pit uranium mine ([20], p. 80). In the photograph, cumulus clouds hover over mesas and hills, and what appear to be shelters or dwellings appear in the foreground, along with dirt roads. The quiet scene is devoid of people, but it is evident that people are living or working on the land. Only when one turns to the back of the book, to Silko's caption, does the reader learn that this is the site of an open pit uranium mine which has inflicted massive damage to the land:

> Looking east from Paguate Village at the open pit uranium mine which the Anaconda company opened on Laguna land in the early 1950's. This photograph was made in the early 1960's. The mesas and hills that appear in the background and the foreground are gone now, swallowed by the mine. In the beginning, the Laguna people did not want the mining done on their land, but then as now, military needs and energy development far outweighed the people. ([20], p. 270)

Silko's caption locates the reader in time, describing the view of the land in the photograph taken about ten years after the opening of the mine. She also notes how much the land has changed: "The mesas and hills that appear in the background and foreground are gone now." Like the girl in Harjo's poem, Silko's voice becomes a conduit for the land, speaking in concert with her father's photograph for its changes. The photograph immediately following the image of the mine is of Laguna village, showing the presence of the Laguna people on the land. Silko also speaks for her community, clarifying that the Laguna people were against the mining but could not prevent or put an end to it.

Silko uses her father's photographs of the Anaconda company's mine and the Laguna village as "place-names" to relay knowledge of the land's changes twenty years later, from the viewpoint of her generation. Silko's literary voice layers onto her father's photographic voice, and their work together allows the land to speak the story of its changes. Through visual and literary depiction, the land is able to speak more effectively than with words alone. As Bernard Hirsch notes, by using her father's photographs, Silko is not limited in her storytelling by her sphere of knowledge; she is able to transmit the cultural context of the land and its relationship with the Laguna people as it has continued from her father's generation to hers ([21], p. 155).

Silko goes back further than her father's generation to tell the story of the land's changes, calling on ancient destroyer stories such as that of the giant *Estrucuyu* to

contextualize modern damage to the land. Immediately following the images of the Anaconda company's open-pit uranium mine and Laguna village, Silko tells the story of a young Laguna girl, Kochininako, who meets the animal *Estrucuyu* on a hunting expedition. Silko writes, "*Estrucuyu was some kind of giant/they had back in those days*", in the italicized voice, which in juxtaposition with the standard type face seems to relay the collective voice of Silko's storytelling ancestors. *Estrucuyu* takes all of Kochininako's rabbits, as well as her weapons and clothes, but his hunger is insatiable. The giant animal is akin to an Algonkian Transformer and is as memorable as the Great Beaver; unlike the Beaver, however, *Estrucuyu*'s actions shape the world by taking and destroying rather than building and creating. The only way for Kochininako to survive is to use her wits to hide in a cave where the giant cannot reach her. She calls on her Twin Brothers, heroes recorded in Native American literature as far back as the *Popol Vuh*, to rescue her ([20], pp. 82–88).

Silko's juxtaposition of her father's photographs with this story serves to situate contemporary destroyers such as the mine within the tradition of Native American storytelling. By doing so, Silko extends its repertoire of monsters: the mine is a symbol of a postcolonial system that dislocates human beings from the land. By drawing on both her father's photographs and the Native American oral tradition, Silko articulates the "psychic dislocation" [22] that is a condition of modernity for her people and works to reorganize what N. Scott Momaday calls an "ethical idea of the land". Silko creates an implicit comparison between the mine, whose hunger for the land's resources is insatiable, with the *Estrucuyu*'s hunger, warning that unless it is stopped, it will take all. Silko identifies the mine for what it is, in a language that exposes the full force of its threat: it is a present-day destroyer, as dangerous to human survival as the *Estrucuyu*. Through Silko's use of interconnected premodern oral storytelling and contemporary fiction, the land is given voice to "stalk" its reader to bring her back into dialogic relationship with the earth.

6. Conclusions

In her poem, "A Map to the Next World", Joy Harjo writes, "When you emerge note the tracks of the monster slayers where they/entered the cities of artificial light and killed what was killing us" ([18], pp. 41–42). The storytelling in Harjo's poetry and Silko's fiction engenders "monster slayers" which hunt the contemporary *Estrucuyus* of the postcolonial Americas. Storying the land enables a means of retracing and continually remaking the cultural and physical maps which were created prior to colonial contact.

Native American oral traditions such as that of the Western Apache reveal that when the land is inscribed with the storytelling voice, it acquires the cultural value of a place and is embedded with the moral ethos of the community. In readings of Native American oral narratives, including the Mayan *Popol Vuh*, Algonkian, Western

Apache, Hopi, Haudenosaunee, and Laguna Pueblo stories, and the contemporary poetry of Joy Harjo and fiction of Leslie Marmon Silko, this article examined how native places are made, named, and reconstructed after colonization through storytelling. As seen in these narratives, the land becomes a repository for the oral tradition through the process of storying the land, a process which, as seen in the Mayan *Popol Vuh*, began prior to colonial contact, and, as exemplified in Harjo's poetry and Silko's fiction, continues to this day. The "path" of the past becomes visible and audible through the storied land, and transmission of these stories and place-names is a method of physical and cultural survivance for Native American communities after colonial contact.

Native American oral narratives often articulate a dialogic relationship with the land in which communities speak of, with, and for the land. Indeed, Harjo and Silko indicate that for the Mvskoke and the Laguna Pueblo, the land is not considered to be an external entity from their people. Storytelling enables the Laguna Pueblo to continue traveling the route of their emergence in the postcolonial present and to remain cognizant of their integrated consciousness with the land. Once stories about the land and the people are heard and understood, they are internalized; the place is carried inside the listener, and the land speaks from within. The Hopi oral and pictorial tradition insist, however, that the importance of maintaining a direct relationship with the land is paramount when the land itself is physically inscribed as a repository for the oral tradition. As Harjo and Silko illustrate, in the absence of such a relationship because of physical removal or destruction of the land, Native geographical identity and places can be reclaimed in the spaces created by storytelling.

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"No More Boomerang": Environment and Technology in Contemporary Aboriginal Australian Poetry

John Charles Ryan

Abstract: Based in oral traditions and song cycles, contemporary Aboriginal Australian poetry is full of allusions to the environment. Not merely a physical backdrop for human activities, the ancient Aboriginal landscape is a nexus of ecological, spiritual, material, and more-than-human overlays—and one which is increasingly compromised by modern technological impositions. In literary studies, while Aboriginal poetry has become the subject of critical interest, few studies have foregrounded the interconnections between environment and technology. Instead, scholarship tends to focus on the socio-political and cultural dimensions of the writing. How have contemporary Australian Aboriginal poets responded to the impacts of environmental change and degradation? How have poets addressed the effects of modern technology in ancestral environments, or country? This article will develop an ecocritical and technology-focused perspective on contemporary Aboriginal poetry through an analysis of the writings of three significant literary-activists: Jack Davis (1917–2000), Oodgeroo Noonuccal (1920–1993), and Lionel Fogarty (born 1958). Davis, Noonuccal, and Fogarty strive poetically to draw critical attention to the particular impacts of late modernist technologies on Aboriginal people and country. In developing a critique of invasive technologies that adversely affect the environment and culture, their poetry also invokes the Aboriginal technologies that sustained (and, in places, still sustain) people in reciprocal relation to country.

1. Introduction

Based in oral traditions and song poetry [1], much of which bears a more than forty-thousand-year-old lineage, contemporary Aboriginal Australian poetry is replete with references to the natural world: plants, animals, earth, sky, wind, water, creation beings, ancestors, and living communities of people [2]. In ancient Aboriginal worldviews, the environment is a dynamic, ever-shifting nexus of human and non-human actants ([3], pp. 106–22)—and one which modern technology increasingly impacts today [4]. Indigenous Australian epistemologies of the

environment largely resist the Western categorical distinction between "human", on the one hand, and "non-human", on the other. Philosopher Mary Graham describes this condition in terms of relationality between beings: "The sacred web of connections includes not only kinship relations and relations to the land, but also relations to nature and all living things" ([5], Section "Custodial Ethic toward Land"). Mediated by typographical conventions but retaining traditional storytelling modes [6], Aboriginal poetry also preserves ecological knowledge, reflects environmental concerns, and lodges ecopolitical critiques of land-related issues, including the disintegration of biocultural heritage.

In Australian literary criticism, Aboriginal poetry has been the subject of scholarly studies and numerous collections [7–9], especially since the seminal anthology *Inside Black Australia* from 1988. Even so, Cooke ([6], p. 89) observes that research into the oral aspects of Aboriginal writing has been limited historically to the fields of musicology [10] and anthropology [11,12], rather than literary studies. What is more, weighted toward life writing and fiction, the collection *A Companion to Australian Aboriginal Literature*, edited by Belinda Wheeler and published in 2013, includes only one chapter devoted to traditional and contemporary poetry through Western critical discourse [6]. Hence, the relative scholarly underemphasis on Aboriginal poetry is broadly evident in Wheeler's volume and elsewhere. The lacuna, the author argues, also includes ecocritical frameworks that could articulate the pronounced interconnections between environment, culture, and technology in much of the poetry—the subject and intended contribution of this article.

How have contemporary Australian Aboriginal poets responded to the cultural impacts of environmental change and degradation? How have poets addressed the intrusion of technology in ancestral environments or country? How might poets adopt or reject technology for the creative expression of their cultural concerns? Responding in detail to the first two questions but peripherally to the third, this article will develop an ecocritical and technology-based perspective on contemporary Aboriginal poetry through the work of three poet-activists: Jack Davis (1917–2000), Oodgeroo Noonuccal (1920–1993), and Lionel Fogarty (born 1958). The cultural perspectives presented by these poets implicate both colonial-era and high modernist technologies in the devastation of country and the disruption of traditional lifeways, including intertwined cultural, spiritual, and ecological practices. As a caveat, the examples from Davis, Noonuccal, and Fogarty are by no means intended to represent the full spectrum and ecocritical possibilities of contemporary Aboriginal poetry. For the sake of narrowing the scope, other prominent voices, such as Kevin Gilbert [13], Lisa Bellear [14], and Samuel Wagan Watson [15], will not figure into this discussion, but their poetry nevertheless offers significant material for ensuing studies through technologically-sensitive ecocritical frameworks.

The approach to Aboriginal poetry developed here will invariably draw attention to the nodes between ecocriticism, philosophy, and technology. It could be asserted that, since the beginnings of the field over twenty-five years ago, ecocritical scholars tend to display an inherently skeptical and prevailingly negative perception of high modernist technology as one of the principal roots of environmental catastrophe ([16], pp. 51–54), climate change [17], the commoditization of nature ([18], pp. 22–24), and even anthropocentrism itself [19]. Jonathan Bordo traces the connection between trauma and the technological sublime, positing what he terms the "incommensurability" between nuclear arms and ecological peril that has become an integral—though, at the same time, a confounding and alienating—dimension of public discourse ([20], p. 174). On the whole, ecological critics and activists often regard technological over-advancement—and the process of technologization—as inescapably antagonistic to the long-term well-being of bioregions, ecosystems, and nonhuman life ([21], p. 41). However, contemporary Aboriginal poetry reminds us of the plurality of technology and the actual range of practices included within the term throughout history—from low impact, temporally extensive, and bioculturally sustainable technologies to the high impact, short-term, and ecologically damaging forms of late modernity (a term denoting the pervasiveness of global capitalist societies characterized by information exchange, also described by sociologist Zygmunt Bauman [22] as liquid modernity).

The analysis of poetry in this article reveals the implicit position taken by the poets that technology constitutes a continuum from pre-settlement to contemporary eras. An example of what I mean by a long-term, pre-settlement Aboriginal technology is the detoxification of the fruits of zamia cycads, such as the burrawang (*Macrozamia communis*), rendered nutritious through soaking, fermentation, grinding, and other practices. The pineapple-shaped fruit of the burrawang contains seeds that Aboriginal people processed and consumed. In contrast, British colonists referred to burrawang as "fool's pineapple" for its toxic effects when eaten raw ([23], p. 50). A more prominent and widespread illustration can be found in the complex systems of fire applied by Aboriginal societies to regenerate the landscape and support the proliferation of vegetable and animal resources [24,25]. In *The Biggest Estate on Earth*, Bill Gammage argues that "knowing which plants welcome fire, and when and how much, was critical to managing land. Plants could then be burnt and not burnt in patterns, so that post-fire regeneration could situate and move grazing animals predictably by selectively locating the feed and shelter they prefer" ([24], p. 1). These examples, of food and fire, are precursors to what theorists today refer to as "sustainable technology" *vis-à-vis* solar, wind, geothermal, and other renewable energies [26].

2. Song Poetry: From Country to Technology

An appreciation of the conjoined ecological and technological dimensions of Aboriginal poetry involves an understanding of the nuances of the term country. For non-Aboriginal people, the term generally denotes either nation—a region delineated by geopolitical boundaries—or undifferentiated landscape, as in the expression "spending the day in the country" ([27], p. 7). However, in an Aboriginal sense, country does not neatly align to Anglo-European concepts of nature, wilderness, environment, or pastoral countryside. Instead, the signifier is "multi-dimensional", consisting inclusively of "people, animals, plants, Dreamings; underground, earth, soils, minerals and waters, surface water, and air", as well as the sea, shoreline, and sky ([27], p. 8). The term comprises ancestral homelands, family origins, totemic systems, and other enduring cultural and ecological associations. As a living being involving reciprocal obligations, country is a place of belonging, where Dreaming—or creation—narratives center around the actions of ancestral entities in the form of plants, animals, winds, fire, stars, and the moon ([10], p. 95). Recognizing its life-sustaining qualities, Deborah Bird Rose characterizes country as a "nourishing terrain", a sentient and conscious landscape that "gives and receives life" ([27], p. 7). In relation to her anthropological fieldwork with Aboriginal communities, Rose further elaborates that "country expects its people to maintain its integrity [. . .] to take care of country is to be responsible for that country. And country has an obligation in return—to nourish and sustain its people" ([3], p. 109). Aboriginal people visit, respect, sing and speak to, feel sorry and long for, and dream and worry about country, in the same way that another human individual or family member would be treated ([27], p. 7).

The contingent relationship between country and song is fundamental to recognize in the context of poetry. Engendering cultural connections to the land and between human communities, traditional Aboriginal verse—or song poetry—underlies contemporary Aboriginal writing ([6], p. 92). Song poetry can be described as a "spoken text but also a musical assemblage of various human and nonhuman actors" ([6], p. 92) and is characterized by metricality in which sung word patterns serve as rhythmic units ([10], p. 94). The expressions "singing country" and "singing up country" refers to *in situ* performances of song poetry. Based on extensive research with Yanyuwa families of the Borroloola settlement in the Northern Territory, John Bradley explains that *kujika* denotes a way of knowing in which singing becomes a mechanism to sustain country and kinship relations ([1], p. xiii). Kujika is a "most precious repository of knowledge" involving *wandayarra* or following the song paths overland and through the sea ([1], p. xiii).

Country and song poetry are crucibles for Aboriginal cultural knowledge. Indigenous technological practices also involve environmental and cultural understandings, particularly of country. Thus, a crucial dimension of my ecocritical

triangulation of Aboriginal poetry and country is technology. A principal theme within the poetry of Davis, Noonuccal, and Fogarty is the friction between technology (historicized and conceptualized broadly), country, and traditional lifeways. However, their poetry intimates that not all technologies result in the same environmental and cultural impacts. Since the eighteenth-century European colonization of Australia and, specifically, the arrival of the First Fleet of British vessels at Botany Bay in 1788, diverse technological forms have impacted Aboriginal communities across Australia in myriad ways—both for better and worse. Modern developments—mining operations, tourism infrastructures, and networks of roads, railways, flight paths, and shipping lanes—bear a legacy of fragmenting Indigenous cultural practices, siphoning away resources, and channeling economic benefits from communities to the dominant settler society typically located in urban centers like Sydney, Melbourne, and Perth [28]. In Australia, while the exploitation of mineral resources has been essential to the economy, particularly during the Global Financial Crisis since 2008, the capital derived from country has not been proportionately returned to communities to improve the destitute conditions facing many rural Aboriginal people today. The uneven allocation of land-derived resources underscores the social inequities of technology [29]. In contrast, other technological introductions to country have enhanced traditional practices, such as the hunting of game using cars and communication between family groups through mobile telephony ([30], pp. 117–24).

For environmentalists, including some Indigenous people, technology refers prevailingly to that of "late capitalism", a neo-Marxist term denoting capitalism since the end of World War II, marked by high-tech developments and the prevalence of speculative financial capital. In the general view of activists, these forms—mining, damming, monocropping, land clearing, factory farming, and genetic engineering—clash, to greater or lesser extents, with land conservation values and sustainability. Notably in relation to climate change, environmental discourse implicates technology in ecological catastrophe and problematizes the Enlightenment-based ideal of progress through scientific development and the extraction of resources [17]. Many Indigenous rights movements have been galvanized by their opposition to proposed or actual alterations of land, air, and water triggered by technology. A significant historical example from the United States is the Cherokee people's vehement resistance to the Tellico Reservoir and the flooding of the Little Tennessee Valley—places considered sacred and, thus, central to cultural identity. The construction of a reservoir destroyed irreplaceable heritage and erased the Cherokee archaeological sites of Chota, Tanasi, Toqua, and others ([31], p. 4). A current instance of Aboriginal Australian activism against the destruction of the sacred sites of country (albeit urbanized in this instance) is the proposed extension of Roe Highway in the city of Perth, Western Australia, across

the North Lake and Bibra Lake areas. The Nyoongar people of the metropolitan Perth area regard the lakes as significant songline, or Dreaming, sites and dwelling places of the Creation serpent known as the Waugal—a history that vastly predates British colonization since 1829 [32].

In examining Aboriginal views of technology as expressed in poetry, it is crucial to conceptualize technology not as a monolithic concept, singularly denoting the dams, highways, computers, and nuclear reactors of late modernity, but as a plurality of practices intrinsic to all cultures and eras. In this regard, philosopher Alan Drengson understands technology as "the systematic organization of techniques and skills, so as to produce some product, by means of reorganizing a raw material or some other appropriate medium" ([33], p. 30). Importantly for Drengson, technology is not limited to technological products or techniques but comprises four aspects: "technical knowledge and skill; organizational structure; cultural purposes and values; and resource use, raw materials and the environment" ([33], p. 32).

For Don Ihde, technology amplifies human (and presumably other tool-bearing animals') relation to and modifications of their environments. While it is a somewhat obvious argument that technologies of the late twentieth century underlie the current environmental crisis (*i.e.*, climate change, species loss, urban pollution, food allocation, energy use), Ihde observes that cultures throughout history employed relatively simple "lo-technologies" to transform the environment in highly deleterious ways, resulting in desertification, deforestation, erosion, and overgrazing. Although hi-tech forms magnify and accelerate processes of anthropogenic change, technology itself is always culturally dependent. Meanwhile, the obvious beneficial effects of technology, such as immunization practices, underscore that modern technologies have "greater amplifactory and magnifactional powers" than their ancient equivalents ([16], p. 53). The analysis of the consequences of technology, for Ihde, therefore, should consider: "(a) the nature of the various technologies involved; (b) the relation or range of relations to the humans who use (and design or modify or even discard) them; and (c) the cultural context into which ensembles fit and take shape" ([16], p. 54).

Drengson, Ihde, and other philosophers of technology agree that technology is more than its late modernist incarnations and has been located in cultural values throughout history. Ihde references environmentally catastrophic examples from ancient cultures, as well as the positive and negative consequences of modern technology. What appears largely missing from their positions, however, is a strong enunciation of the beneficial, sustainable, and generative aspects of traditional technologies, specifically those developed and applied by Aboriginal Australian people over millennia. In conjunction with the seasonal movements of Indigenous hunter-gatherers, many "lo-technologies" have enabled people to occupy

environmental niches for considerably long time periods without dramatically and permanently exhausting the resources of country [30].

3. Jack Davis' Critique of Modern Technologies

Born in 1917 in Perth to parents from the Pilbara region of Western Australia, Jack Davis was a poet, playwright, and Aboriginal rights advocate. His family, including ten brothers and sisters, lived in the rural communities of Lake Clifton, Waroona, and Yarloop outside Perth where Davis developed an attachment to the natural world in his early years. "Much of our childhood was spent in the bush and I learnt to love the wildlife that existed around our home. The path to school passed through a patch of scrub and jarrah (*Eucalyptus marginata*) forest" ([34], p. 13). During family moves, as recounted in his memoir *A Boy's Life*, he would explore "each side of the road for bush tucker such as wild berries and prickly pear fruit [. . .] bush tucker was important because it helped augment the family larder" ([35], pp. 7, 10). The environment—"lofty redgum and jarrah trees [. . .] a new bird's nest, swooping magpies and bush animal or reptile tracks across the path through the bush"—figured appreciably into his upbringing in the 1920s and 1930s and subsequently into his creative writing throughout his life ([35], p. 11).

Davis also relates how his parents told the children traditional Nyoongar stories, such as the Dreaming of *karda*—the racehorse goanna (*Varanus gouldii*) whose tail is said to bear the yellow stripes of burns caused by the boomerang of a jealous lover ([35], pp. 20–21). Stories of whispering trees ([35], p. 25) and carnivorous fungi that iridesce ([35], p. 27) as well as firsthand experiences of using balga (*Xanthorrhoea preissii*) foliage for camping ([35], p. 76) fostered Davis' knowledge of the immediate environment and nurtured his imagination with the animistic beliefs of Aboriginal heritage. A mounting respect and awe for the natural world is evident in childhood recollections of a massive jarrah tree as "a real wonder of nature. It took 32 of my boyish steps to circle its sprawling girth. Years of storms had trimmed the growth of its branches, but it reared sixty metres into the blue of the sky" ([35], p. 82). These memories and their poignant cultural registers would later feature in Davis' poetry while also invigorating his campaigning for Aboriginal rights.

Davis' most distinguished works are the poetry collections *Jagardoo: Poems from Aboriginal Australia* (1977) [36], *The First-born and Other Poems* (1983) [37], and *Black Life* (1992) [38] and the plays *Kullark* (1984) [39] and *No Sugar* (1986) [40], all of which address the challenges of maintaining Aboriginal cultural identity and ensuring basic human rights in modern Australian society. For instance, by offering an Aboriginal outlook on Western Australian settlement, *Kullark* attempts to refute and counterweigh the entrenched misconceptions of European colonial history that sought to nullify Nyoongar presence. The play dramatizes key events such as the murder of Yagan (1795–1833), the Nyoongar freedom fighter who led campaigns

against British settlement in Western Australia but was later decapitated, his body shipped to England and displayed as an exotic curiosity at museums up to the 1960s [41]. *Kullark* also involves depictions of the Waugal, or Rainbow Serpent of the Nyoongar, as a symbol of Aboriginal cultural rebirth and the deep indigenous history that precedes European arrival ([34], p. 195).

In addition to his poetic and dramatic writings, Davis became the director of the Aboriginal Advancement Council (AAC) of Western Australia and served as the manager of an Aboriginal community center in Perth in the 1960s and 1970s. The AAC lobbied for the Australian referendum of 1967 (known officially as the Constitution Alteration), forging the path to greater land rights, economic support, and cultural heritage protection for all Aboriginal people. During this time, Davis became active politically in Western Australia as an organizer of, and participant in, public protests and street marches: "Our banners were conspicuous, our views well publicized, and I believe that the firm and consistent pressure we placed upon the government, church bodies and the public conscience brought about a change in attitude" ([34], p. 159). His activism also included time as a committee member of the Australian Institute of Aboriginal and Torres Straight Islanders Studies and the Aboriginal Arts Board of the Australia Council, as well as editor of one of the first Aboriginally focused and run magazines *Identity*, launched in the 1970s ([42], p. 191). However, while Davis composed a number of poems in response to socio-political events impacting Aboriginal lives, his work on the whole reflects a range of themes, including health, family, and environment. Critic Adam Shoemaker observes that less than one-third of the poems in Davis' *Jagardoo* speak to issues of racism, oppression, and dispossession ([42], p. 191). Therefore, in arguing that Davis is not only a political writer but also an environmental poet, I aim to extend ecocritical approaches to the analysis of his work.

Some of Davis' poetry examines the devastating impact of modern technology on Nyoongar culture in the heavily forested Southwest corner of the state. This is a region of abundant forest resources, consisting primarily of the large eucalypts, or gum trees, known as *jarrah*, *marri*, *karri*, *tingle*, and *tuart*. In the Southwest, the infrastructure of the logging industry—axes, chainsaws, diesel trucks, and timber mills—sits at the center of a history of jeopardizing the conservation of Aboriginal heritage, traditional livelihood, and forest protection [43]. The poem "Forest Giant" from *Black Life* epitomizes these tensions ([38], p. 63). The fifteen-line poem elegizes an ancient gum tree—much like the "old forest giant" Davis recounts in his memoir ([35], p. 85)—that has survived the onslaught of land clearing, symbolized in the poem by the colonial, non-motorized implements of axes and saws. The poet addresses the forest giant directly, as a person, in the opening line, and subsequently characterizes the old tree in active terms through his use of the gerunds *standing* and *reaching*. Davis' diction attributes corporeality—embodied presence—to the giant:

"You have stood there for centuries/arms gaunt reaching for the sky" ([38], p. 63, ll. 1–2). For an Aboriginal storyteller like Davis, the entire forest, including the soil, is an animate system constituted by symbiotic physiological interactions between living beings. Highlighting the ecological interactions between trees and the soil, Davis stays in the mode of direct address—a technique used by other Aboriginal Australian poets to underscore the principal role, within Indigenous epistemologies, of dialogic relations, as well as the possibility of speaking, of dialogue, between beings: "your roots in cadence/with the heart beat of the soil" ([38], p. 63, ll. 3–4). Davis' "ecological" poetics imply his awareness of the material and energetic flows between abiotic (e.g., soil, rocks, air) elements and biotic (e.g., humans, birds, trees) inhabitants of the land in the context of Nyoongar (Southwest of Western Australia) cosmology. Just as the tree has a body so too does the soil have a heart—a turn-of-phrase that is not intended by the writer as a symbolic flourish or metaphysical abstraction, but as a spiritual and ecological reality.

However, the relatively harmonious, even Romantic, biotic portrait educed by Davis in the poem's first four lines shifts abruptly in ensuing lines toward forlorn reflection on the forest giant as a lone survivor—a living relic and stark reminder—of the anthropogenic ravages carried out in the name of industrial capitalism. Davis insinuates that the forest's recent history of Anglo-European exploitation intersects with the colonial history of Aboriginal abuse, suffering, discrimination, and incarceration since the arrival of the First Fleet. Thus, environmental and cultural histories intertwine: "High on the hill, you missed/the faller's axe and saw/But they destroyed the others/down the slope/and on the valley floor/Now you and I/bleed in sorrow and in silence/for what once had been" ([38], p. 63, ll. 5–12). By virtue of its physical inaccessibility, the forest giant became an ecological refugee—a survivor gesturing, in its corporeal presence, defiantly against the technological authority that erased its human and nonhuman kin: "the others". Set against the rendering of historical desolation, interspecies empathy and solidarity emerges between the poet and the sentient tree, both bleeding, both silent (and *silenced*), both mourning their losses. The three concluding lines amplify the portrait of injustice by likening deforestation to one of the most invasive and nefarious acts that can be committed against the human body. The neo-colonial, techno-industrial, state-sponsored apparatus perpetrates the crime while the land itself remains sanctified: "while the rapists still/stride across/and desecrate the land" ([38], p. 63, ll. 13–15).

Davis' poem "Forest Giant" embodies the traditional Nyoongar (especially the Wilman, Wardandi, Bibbulmun, Kaneang, and Minang groups') view of forests as animate and ancestral places. Cliff Humphries, a Nyoongar man born in 1910, eloquently articulates the cultural resonance of forests that is palpable in the poem. People would ask forest spirits for food or healing and were thus in active dialogue with the arboreal environment, not as a mere resource but an intelligent fellow being.

"Before the coming of the Wadjalla [white people], our forests played an important part in our spiritual well-being, identity and survival. The spirits of our dead were placed inside both dead and living trees [. . .] The destruction of these very sacred places will destroy links to our ancestors which in turn will eliminate our capacity to remain spiritually healthy" ([44], p. 71). Although not referring expressly to forests, Mary Graham explicates the relationship of the land to the Dreaming. The sacrosanct view of the natural world, as espoused by Aboriginal people for millennia, is often at odds with the techno-capitalist, materialist paradigm of land use propounded by settler culture. This tension has permeated Aboriginal-settler relations since "first contact", Graham states, "the land is a sacred entity, not property or real estate; it is the great mother of all humanity [. . .] all meaning comes from land" ([5], Section "A Brief Description of the Two Axioms").

The disjunction between Aboriginal cultural meaning, land use and perception, and colonialist technology resurfaces in the poem "Lost" from *The First-born* ([37], p. 29). This twenty-line lyric poem employs a melodic ABAB rhyme scheme arranged around five quatrains. The harmonious rhetorical structure parallels the poet's idyllic rumination on nature in the first, third, and fourth quatrains, which is then subverted abruptly by a volta—or dramatic turn—in the final stanza. The second quatrain foreshadows the volta's shift to the dread, loss, and desolation precipitated by modern technological interference. In order to heighten the emotional registers of Aboriginal cultural disintegration, Davis makes use of the literary technique anaphora, in which phrases are repeated at the beginning of lines, for instance, "I have watched the changing weather" (first line of third quatrain) and "I have watched a thin moon rinse a valley in its new light" (first line of fourth quatrain) ([37], p. 29, ll. 9, 13).

"Lost" begins with an image of a plant—in its growth, the expression of *poiesis* (making) and *physis* (nature), and, in its use, the basis of traditional Aboriginal sustenance. The opening quatrain conveys, through the dynamism of nature imprinted in the poet's memory, a resounding tenor of hopefulness, rejuvenation, and ecological equilibrium: "I have seen the plant grow,/Seed burst and the blanket of earth/Slip back to show/The white-green stem of new birth" ([37], p. 29, ll. 1–4). The buoyant Romanticism begins to deteriorate in the second quatrain with an allusion to the ringbarking (or girdling) of wandoo (*Eucalyptus wandoo*), a medium-sized gum tree endemic to the Southwest region of WA. Ringbarking entails stripping bark from the circumference of the tree trunk, leading to slow decline and death. Western Australian settlers used this practice widely to clear land for pasture [45]. The dead wandoo appears to long for its afterlife, "As if she begged a rendezvous/With dead friends in the sky" ([37], p. 29, ll. 7–8).

The third and fourth quatrains resume meditation on the weather, clouds, emus, the moon, tiger snakes, dugites, and other lizards, but the volta of the fifth quatrain

brings these evocations to a rather abrupt halt: "All I hear now are machine-made sounds./Lost is the life that quickened me./Telephone, paper-clip, convention abounds. Your civilization has sickened me!" ([37], p. 29, ll. 17–20). The flowing open-endedness of commas, semi-colons, colons, and unpunctuated line endings in the first four quatrains is replaced by the definitiveness of the three periods, followed by the exclamation point, of the concluding stanza's lines. For Davis, the "sickness" of Western technology can be read in the distortion of the soundscape. Indeed, the adverse affects of technology on natural sounds—birds singing, reptiles moving, water soughing, leaves fluttering—has been the subject of numerous studies in environmental acoustics [46]. For Davis, these ecologically-resonate sights, sounds, and memories comprise a heritage endangered by the brash intrusions of modern technology in ancestral places, such as forests.

4. Oodgeroo Noonuccal and the Displacement of Aboriginal Technologies

Born in 1920 on North Stradbroke Island in south-east Queensland, Oodgeroo Noonuccal (or Oodgeroo of the Noonuccal, born Kathleen Ruska and known formerly as Kath Walker) was the first Aboriginal Australian woman to publish a book of poetry, *We Are Going*, and later became a prominent activist, spokesperson, and educator. Her father, Edward Ruska, belonged to the Noonuccal—the indigenous people of Minjerribah (North Stradbroke Island). His campaigning for improved conditions, including increased wages, for local Aboriginal laborers left a strong and enduring impression on his daughter. Often in connection with poet Judith Wright (1915–2000), with whom she shared a long friendship, Noonuccal dedicated herself to land-related rights more overtly than we see in Jack Davis' principally socio-political activism rooted in Perth. The cross-cultural friendship between Wright and Noonuccal began in 1963, shortly before Wright recommended the publication of Noonuccal's first poetry collection [47]. Both women benefitted considerably from their association, with Noonuccal fostered in her literary development and Wright gaining personal knowledge of Aboriginal culture that would "challenge her own white-settler privilege [and enable her] to posit an ecological alternative to what she sees, in more general terms, as a destructively technocratic world" ([48], pp. 93–94).

The appearance of *We Are Going* coincided with the birth of the Aboriginal civil rights movement marked by successions of protests across Australia in the build up to the 1967 referendum ([42], pp. 181–82; [49], p. 61). Although initially receiving a mixed reception by (predominantly non-Aboriginal) literary critics, the book would go on to catalyze the positive perception of Aboriginal cultures by white Australians as it circulated throughout literary and activist networks, especially those connected to union movements ([49], p. 64). However, Noonuccal's activism predated this patently political era in Australian history. In the 1940s, she embraced the Communist Party for its rejection of the "White Australia"

policies that privileged immigrants from English-speaking countries (and white Australian society more broadly) and encoded racist attitudes to others, not only Aboriginal people ([50], p. 148). Although she ran unsuccessfully for political office in Queensland in 1969 and 1983, she went on to join the struggle for land rights and protested the 1988 Australian Bicentenary—marking 200 years since the arrival of the First Fleet—by changing her name from the Europeanized Kath Walker to her ancestral appellation, Oodgeroo Noonuccal ([50], p. 149). She also was a founding member of the Federal Council for the Advancement of Aborigines and Torres Strait Islanders (FCAATSI) and served as an Executive Member of the Queensland chapter of the Aboriginal Advancement League, established in 1957 and the oldest organization of its kind in Australia ([47], p. 5). In her later years, Noonuccal devoted herself less to direct political engagements and, instead, returned to her country—Minjerribah—to dedicate time to the development of environmental and cultural education programs while also touring internationally as a writer and spokesperson.

As a core feature of her later activism in the 1970s, Noonuccal founded the Noonuccal-Nughie Education and Cultural Centre at Moongalba (meaning "sitting down place" in the local Aboriginal language) on North Stradbroke Island. Wright describes Moongalba as a refuge within modern Australian techno-industrial society, "away from the hostile and critical eyes of white people, in a place Aborigines can feel is their own. The far-off lights of Brisbane are muted by the trees, and people can be themselves" ([51], p. 7). Focusing on coastal Queensland, Wright and Noonuccal held in common a concern for environmental protection and the respectful, judicious use of natural resources. Moongalba came to epitomize these concerns as well as Wright and Noonuccal's endorsement of a form of "pragmatic idealism" marked by the dedication to enlisting public engagement in achieving conservation aims ([48], p. 88). Noonuccal's charisma—her rare constellation of leadership, educational focus, and "performative" ability [52]—contributed significantly to their shared vision. Moongalba concretized their ecocultural "idealism" by providing a place for Aboriginal and non-Aboriginal audiences alike to experience culture and nature directly, outside of the urbanized strictures of the metropole.

After the success of *We Are Going*, Noonuccal produced several other poetry collections, including *The Dawn is at Hand* (1992) [53] and *My People* (2008) [54]—both originally published in 1970—as well the illustrated children's books *Stradbroke Dreamtime* (1972) [55], *The Rainbow Serpent* (1988) [56], and others. Her later work, corresponding to her return to Minjerribah, consists principally of prose about her country and its cultural stories ([57], p. 92). Literary critics have argued that Noonuccal's early poetic style capitalizes on the "ironic resources of elegy" in subverting "white assumptions of Aboriginal confusion and defeatism" ([48], p. 94). Devised and delivered as performance with traditional oral underpinnings, her

poetry embodies what Huggan and Tiffin term "*counter-mimicry* [italics in original]" or "an ironic version, which is also an inversion, of the white ventriloquism of Aboriginal loss" ([48], p. 95). The performativity of Noonuccal's verse sets the pastoral elegy convention in juxtaposition to Aboriginal Australian orality, consequently exposing the cultural impacts of Anglo-European colonization. As Brewster observes, "storytelling and song are oral modes and traces of orality inform the different genres Noonuccal used" ([57], p. 93). The tension between traditions (Aboriginal and settler, oral and written, elegiac pastoral and ironic counter-defeatist) plays out in the eponymous poem "We Are Going" in which "Notice of estate agent reads: 'Rubbish May Be Tipped Here'./Now it half covers the traces of the old bora ring./They sit and are confused, they cannot say their thoughts:/'We are strangers here now, but the white tribe are the strangers'" ([47], p. 25, ll. 6–9).

In the same way, the poem "Aboriginal Charter of Rights" from *We Are Going*, for Anne Brewster, constitutes an "energetic and rousing manifesto whose iambic tetrameter invokes the marching rhythm of protest rallies" ([57], p. 94). However, Noonuccal's general shunning of linguistic experimentation in favor of traditional rhyme patterns, simple line structures, and accessible diction (often incorporating bureaucratic terminology) facilitates rapport between poet and audience. In this light, the critic Mudrooroo proposes the term *poetemics*—hybridizing poetry and polemics—to underscore that message (over traditional aesthetic concerns) is essential to appreciating her work [58]. For Mudrooroo, the broad characterization of Noonuccal's early writing as "protest poetry" neglects the centrality of her imperative to convey political, cultural, and environmental meaning: "In such verse there may be a deliberate repudiation of aesthetic concerns in order to produce an alienation effect" ([58], p. 58). I argue that, because a dimension of this "alienation effect" is the dispossession of Aboriginal people from country, an ecocritical framework can offer insight into the environmental discourses surrounding Noonuccal's poetry. In particular, the depiction of spiritual bonds to country in poetry constitutes a riposte to the techno-industrial paradigm that disrupts cultural relations to land and impinges upon long-standing "lo-technological" paradigms.

The melodic poem "No More Boomerang" from *The Dawn is at Hand* enunciates these kinds of ecocultural themes and sharply critiques (while also ventriloquizing) the marginalization of Aboriginal technologies by their modern analogues ([59], pp. 162, 165–66). Noonuccal pits numerous technologies (boomerangs, spears, firesticks, message sticks, *gunya* or a kind of shelter, *woomera* or a spear thrower, *waddy* or a hunting club) against their mechanized and culturally catastrophic equivalents (electricity, bungalows, television, cinema, atomic energy, and the infrastructure of Western settler society more broadly). The poem comprises thirteen quatrains, each based on an ABCB rhyme scheme with short lines of four to six syllables. Like Davis, Noonuccal implements anaphoric repetition for dramatic

impact. While the singsong tenor of the poem belies an undercurrent of pathos, we are left wondering if Noonuccal's counter-mimicry, in fact, seeks to affirm the endurance of Aboriginal technologies and the eventual self-destruction of their environmentally dubious substitutes. The first two quatrains read, "No more boomerang/No more spear;/Now all civilized—/Colour bar and beer./No more corroboree,/Gay dance and din./Now we got movies,/And pay to go in" ([53], p. 54, ll. 1–8). Here, passive consumption of Western goods (beer, television, movies) displaces active engagement with cultural technologies and practices (boomerangs, spears, corroborees). Monetized structures implicated with industrial capitalism supersede social systems based on forms of exchange—whether convivial or otherwise.

The poem continues with "No more firesticks/That made the whites scoff./Now all electric,/And no better off" ([53], p. 54, ll. 29–32). Noonuccal alludes to firestick burning and firestick farming, terms devised in the 1960s by the archaeologist Rhys Jones to account for the active management of ecosystems by Aboriginal communities through burning intended to encourage more desirable species of flora and fauna [60]. More recent ethnoecological studies call into question the actual extent of environmental impacts triggered by Aboriginal fire regimes, challenging the idea that intensive burning precipitated the decline of late Pleistocene fauna around 11,000 years ago [61]. In contrast, the system of patch-mosaic firing (local-scale, temporally distributed burns), in conjunction with small-game hunting, appears to have fostered the maintenance of biodiversity over time. Despite the purposefulness of the practice, some commentators during the colonial history of Australia regarded firestick practices as indiscriminate and disorganized. For instance, in the 1790s, the naturalist Archibald Menzies "scoffs" (to re-invoke Noonuccal's verb) in his journal about the "busy capricious disposition of the natives who are fond of kindling frequent fires round their huts", as quoted in Hallam's study ([25], p. 17). Additionally in this quatrain, Noonuccal underscores an issue of environmental and social justice. The electrical systems (for heating, lighting, cooking, *etc.*) that have largely supplanted the firestick have not been distributed equitably. Astonishingly, access to adequate water, sewerage, and electricity services remains a concern for some indigenous communities in the twenty-first century, despite the considerable national revenue derived from country through the resources sector ([62], p. 13).

"No More Boomerang" concludes with the following quatrain: "Lay down the woomera,/Lay down the waddy./Now we got atom-bomb,/End *every*body (italics in original)" ([53], p. 56, ll. 49–52). The performative use of the verb *got* involves a semantic nuance in which the possession of technology (*i.e.*, nuclear energy) is coterminous with the usurpation of freedom, the jeopardization of health, and the potential disintegration of the future for humans and country. This accretion (and acceleration) of meaning at the poem's end is evident graphically in the italicization of *every* in the final line. In other words, "got atom-bomb" connotes authoritative control

over all Australians' lives through modern fear-inducing technological behemoths, such as nuclear armaments. Noonuccal's perception of nuclear technology as perilous and unruly subtly inverts (and mocks) the opinions of Menzies and others who considered burning practices as lacking rational application or, worse yet, who altogether denied Aboriginal people as bearers of technology in the first place. Mudrooroo notes the absence of similes, metaphors, and other Western poetic conventions in "No More Boomerang". Instead, "the poem proceeds by invoking oppositions between the old ways of life the Aboriginal people and the newly-arrived civilised ways [...] her style is proverbial, or aphoristic instead of image-based" ([58], p. 61).

The elegiac "Then and Now" from *We Are Going* is another instance of Noonuccal's thematization of displaced Aboriginal technologies and practices. Consisting of three stanzas but eschewing a predictable rhyme scheme, the poem has a more overtly urban setting than "No More Boomerang". The opening stanza establishes an opposition between the cultural reverie of the poet-flâneur and the alienation induced by "rushing car,/By grinding tram and hissing train" ([47], p. 18, ll. 3–4). The modifier *teeming*, used to characterize the urban environs, is deliberately ambiguous and contradictory. While the Aboriginal poet experiences isolation, the place teems—but with what? Mechanical sounds? The progeny of colonizers? Dreams that adumbrate country that once was? The unsettling relationship between Dreaming/dreaming and the urban edifice intensifies in the second stanza. "I have seen corroboree/Where that factory belches smoke;/Here where they have memorial park/One time lubras dug for yams" ([47], p. 18, ll. 7–10). In her use of *lubra*, an Aboriginal term appropriated by imperialist society to denigrate Aboriginal woman, Noonuccal restores language to its original meaning by purging the negative colonialist connotations of the term.

It is well-known that women traditionally gathered "yams"—a variety of plants with starchy underground tubers—as an indispensable economic complement to hunting large game ([30], p. 106). In reference to Western Australia, Sylvia Hallam argues that "gathering yams (*Dioscorea*) was anything but a random process, whether in northern Australia or further south; it was certainly not a matter of digging out a root here and there, but of regularly returning to extensively used tracts" ([25], p. 12). For Noonuccal, the harvesting of yams constitutes an economy and technology displaced by "Offices now, neon lights now,/Bank and shop and advertisement now,/Traffic and trade of the busy town" ([47], p. 18, ll. 15–17). The third stanza begins with an unusual instance of anaphoric intertextuality in the line "No more woomera, no more boomerang" ([47], p. 18, l. 18), mirroring the poem "No More Boomerang", discussed previously in this section. Furthermore, the "clocks hurrying crowds to toil" ([47], p. 18, l. 21) stand in for the disjunction between Aboriginal and Western temporalities. Rather than a linear phenomenon progressing from past to

present to future and measured by a mechanical instrument, time is a circular pattern reflecting the rhythms of country and community [63].

5. Lionel Fogarty's Anti-Pastoral Realism

Born in 1958, poet and activist Lionel Fogarty is of Murri ancestry—the Aboriginal group whose country roughly encompasses present-day Queensland. His grandfather, Roy Fogarty, was of the Yoogum Yoogum tribe of the Beaudesert area on the Queensland and New South Wales border [64]. He also traces his heritage to the Kudjela and Wakka Wakka tribes of the Murri. Fogarty grew up at Barambah Mission, now Cherbourg Aboriginal Reserve, about 150 miles north of Brisbane in Queensland. Established in 1901 and coming under government management by 1905, Barambah originated in the Queensland *Aboriginals Protection and Restriction of the Sale of Opium Act* of 1897, which aimed to improve living conditions for Aboriginal people through the creation of reserves [65]. However, the strictly controlled "apartheid system" of the mission drove Fogarty to seek refuge in the local environment and through cultural and family relations: "The only thing on my mind was to run away and go down the bush, go fishing or hunting, just get away completely" [66]. Early experiences of sanctuary in the bush around Barambah provoked his development of a distinctive poetic style and subject matter, which also draw from the orality of Murri culture: "Stories that were told around the fire or stories that were told when I used to go hunting with my grandfathers and grandmothers and aunties and uncles, these were of significance to me" [66]. In this interview with Australian literary critic Philip Mead, Fogarty continues, "my poetry was going down to the township of Mergon and in the park areas there or in the outskirts of Mergon, or even in Cherbourg, just sitting down with young folks as well as old folks and just listening to their gossip, rumours, yarns, storytelling—that was poetry to me" [66].

Fogarty's verse is notable for hybridizing the orality of song traditions and the configurations of literary modernism, thereby enlarging the boundaries of Australian poetry and the English language ([6], p. 90; [67], p. 191). In extensively injecting Aboriginal dialects and vernacular, his poetry disrupts standard English and deviates markedly from Davis and Noonuccal's use of "correct English accessible to everyone to tell of the genocidal destruction which has befallen the Aboriginal people" ([68], p. 47). Colin Johnson (later known as Mudrooroo) extols Fogarty's poetry as "seizing the language of the invader and turning it into an anti-language of experience" that defies accepted grammatical structures and meanings ([68], p. 49). The flattened rhythms, abrupt transitions, and linguistic density of Fogarty's verse align him, in a Western context, with experimental and modernist poetics and, to some extent, with the avant garde Language poets of the late 1960s and 1970s in the United States. However, like Davis and Noonuccal before him, Fogarty is very much a poet-activist, speaking on behalf of Aboriginal people and resisting the

language of colonization while translating oral traditions to the written medium. Poet and critic John Kinsella observes that Fogarty "has effectively managed to confront the persistent attacks by imperialist language, and (still) colonial culture/s, on his people's voice, by preserving its identity" ([67], p. 191).

While Fogarty's activism, indigeneity, and poetics are undoubtedly essential to his standing as one of the leading Aboriginal writers today, this article investigates the environmental dimensions of his poetry and, in particular, his dramatization of anthropogenic ecological change induced by technological mechanisms and impacts. "Weather Comes" from *New and Selected Poems* develops an apocalyptic view of ecosystemic collapse where once-familiar country turns alien. With no stanza structure, minimal punctuation, and deliberate grammatical inversions (including run-on sentences), the elegiac poem depicts ecological loss as a chain of assaults on the senses and on nonhuman life. In the first two lines of the following quotation, Fogarty employs the dramatic technique known as epistrophe, involving repetitions of phrases at the ends of lines: "Trees grow old no more/Fruits grow wilder no more/Raw uncleaned smelling/air goes in the plants soils" ([69], p. 38, ll. 11–14). In the manner of the "anti-pastoral", as critic Terry Gifford understands it, ([70], pp. 116–45), Fogarty narrates the life of an abused and fragmented landscape no longer supporting the essential physiological processes of flora and fauna. Symbiotic interrelation between people and plants is inferred through the smell of noxious air and its permeation of both skin and soil. The perverse registers of the anti-pastoral setting persist as "Ochres shows colours unseen./Sand dirt mud soot all look/different, touch different,/smell funny./We can't hardly believe this/was once our dreamtime home" ([69], p. 38, ll. 15–20). Resonant of the alienation of Noonuccal's "Then and Now", the poem communicates the trauma of sensory disorientation for Aboriginal people, in which the very materiality of earth becomes strange, "unseen", and "funny". In short, home becomes *unheimlich*—unhomely and uncanny—to borrow Freud's terminology, an effect considered at length in Ken Gelder and Jane Margaret Jacobs' *Uncanny Australia* in relation to traditional Aboriginal views of sacredness and the emergence of postcolonial identities in Australia [71].

Not only is the ground underfoot rendered unfamiliar in the poem, so too is the sky overhead: "The sky turns strangler and/clouds hide behind smoked/ pollutions" ([69], p. 38, ll. 21–23). For Aboriginal societies, stories of the sky and knowledge of astronomy are culturally salient; and many creation beings have some affinity with the heavens [72]. It comes as no surprise, then, that the turning of the sky to strangler has far-reaching metaphysical consequences in which the life-giving firmament mutates into a death-dealing monster. As the poem progresses, the escalating effects of pollution come to disrupt the seasonal rhythms of country, the terrene basis of subsistence livelihoods: "Our respects for seasons for/hunting and gathering is/untogether mixed up" ([69], p. 38, ll. 32–34). By the poem's

end, ecosystemic decline through the polluting impacts of technology is a febrile condition that penetrates human bodies and the earth body similarly: "Feelings of/heat rushes sweat all over bodies/hurting/Feelings of cold shivers blood/veins frozen./The weather is changed" ([69], p. 38, ll. 34–39). Interestingly, rather than the line structure "the weather has changed", Fogarty's passive declarative "the weather is changed" implies the strong hand of late modernist technological infrastructure in the perturbation of ecology and country. In voicing the impacts of pollution on the homelands of Aboriginal people, Fogarty constructs the industrialized landscape as a dystopian nightmare. At the same time, he invites readers to consider the particular effects of climate change on Indigenous people worldwide who depend on their environments for physical, cultural, and spiritual needs [73].

"Ringbarking—The Contract Killers" from *Kargun* (1980) [69] is evocative of Davis' "Forest Giant", discussed previously in this article, both poems using direct address to a tree for narrative function and ethical inflection. Embodying an animist understanding of vegetal life, the tree is percipient and performative—"this singing tree"—and moreover has the capacity to engage in verbal intercourse with humans. The poem constitutes a dialogue between poet and tree, as both consider the carrying out of ringbarking by an underpaid Aboriginal worker: "The Murri shot some poison/from his back pack he carried/to slowly kill a plant/around the Sister Tree" ([69], p. 138, ll. 13–16). Although itself spared from direct poisoning, the sentient tree reproaches the Murri worker (presumably Fogarty himself, who was briefly employed as a ringbarker) for targeting its relatives and communicates an ecological lesson to the naive human speaker: "'That's where you're wrong/for if you kill me, or the grass/the pain is the same'" ([69], p. 138, ll. 31–33). Here, the pain is held in common between forms of vegetal life, regardless of the human categorizations that posit some as weeds to eradicate and others as kin to preserve. The worker goes on to explain his precarious social (and financial) status to the tree, as an Aboriginal person trying to make a living for his family. He declares to the tree that "we are both in the same position./Lined up for POISONING" ([69], p. 138, ll. 46–47), aligning the fate and well-being of Aboriginal society to the natural world, to country. The poem resolves epiphanously with the narrator rejecting the modern implements of the forest industry and insensitive approaches ("I will not cut you again/except to give you strength") in favor of Aboriginal practices that used technology with care and required listening to the nonhuman world before inescapably causing pain ([69], p. 138, ll. 55–56).

6. Conclusions: Environments and Technologies in Aboriginal Poetry

In addition to concretizing themes of indigeneity, activism, and community in Aboriginal Australia, these poetic excerpts from Fogarty, Noonuccal, and Davis also foreground the collision between traditional and modern technologies.

Whereas traditional "lo-technological" manifestations (for example, as related to land management, food procurement, and housing construction) largely support continuity and well-being, modern ones—applied without due restraint or proper consideration—tend to result in disintegration of both culture and country. Additionally, in their poetry, technology is not homogenous but has manifested in different ways through time, in various environments, and with myriad societal consequences. Re-invoking Don Ihde's contention, technology is culturally dependent and always brings about the modification of an environment as a resource base. Nevertheless, it is important to conceptualize technology as a plurality and a continuum spanning pre-industrial societies and hypermodern contexts alike. Their poetry reminds us of this, while affirming that the transformation of country through the technology of the colonizers and its associated effects is a serious concern shared by Aboriginal people today.

What can Aboriginal poetry—as opposed to fiction and other forms of creative writing—enable in relation to technologically-induced change and environmental degradation? The work of Fogarty, Noonuccal, and Davis is characterized by the hybridization of Western and Indigenous traditions—of print-based typography and the orality of song poetry. The personal, focused, and often condensed style of the contemporary Aboriginal lyric becomes a potent vessel for conveying ecological concerns and for public recitation. Indeed, many poet-activists, such as Noonuccal, read their poetry publicly in order to animate their audiences' spirits, lift their hearts, and inform their minds about the issues facing Aboriginal people in Australia today. Despite their obvious stylistic differences—Davis' elegy, Oodgeroo's irony, and Fogarty's radicalism—the three writers employ poetry as a mechanism to express their concern for country. In adopting poetry for this purpose, the writers also bring ancient culture and contemporary context persuasively to the fore.

In concluding, this article does not mean to suggest that Fogarty, Noonuccal, and Davis reject Western technology altogether and, instead, embrace a version of neo-Luddism or an isolationist pre-modern idyllism. In fact, writers like Fogarty have acknowledged their indebtedness to Western forms of writing and technology, including the Internet, for making possible the hybridic literary positions they occupy [6]. Their common position, as this article has shown, is more nuanced than mere technology-hating or technology-bashing. To the contrary, the three poets endeavor to coalesce critical attention around the particular impacts of late modernist technologies on Aboriginal people and country in Australia. Such impacts might not register in the minds, hearts, and bodies of Anglo-European individuals exerting a utilitarianist framework on the natural world—for whom a tree is not a sentient being but a resource to be managed or exploited, or an imposition to be cleared. Such impacts might also not register for settler society that lacks the temporally deep ancestral bonds to country found in Indigenous cultures.

In addition to its socio-political aspects, their poetry is an invitation to reconsider old—and courageously imagine new—forms of technology with fewer deleterious and heart-breaking consequences for country and culture. Their poetry brings into focus the Aboriginal technologies that sustained (and, in places, still sustain) people in reciprocal relation to country, for past millennia and for many more years to come [74]. Thinking critically about technologies and their complex relationships to culture and country, as these poems enable us to do, is key both to the contemporary sustainability movement and to ecocritical thinking today.

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