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DOI | 10.21307/borderlands-2021-007

borderlands

Vol 20 | No 1 2021

Terrain

De/centring Environmental Management with Indigenous Peoples' Leadership

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Abstract

Indigenous leaders and scholars demand greater respect for their governance and knowledge authority, with one priority the de/centring of the environmental management research-praxis arising out of natural science traditions (Latulippe and Klenk, 2020). That is, to de-centre colonial privilege and centre Indigenous authority. Who can do this and how involves conceptual, political and cultural expertise; yet, natural science disciplinary practices prioritise invisibilizing power, culture and perspective (Latulippe and Klenk, 2020; Vásquez-Fernández and Ahenakew, 2020). This article is an intervention into this context. As a non-Indigenous scholar, I introduce the analytical tools I use to unpack two core assumptions that confounded my ability to hear what Indigenous mentors were saying about environmental management. With two demonstrations–Xaxli'p (Canada) and Gunditjmara (Australia)–I also show how Indigenous leaders do not just present their own approaches, but re-constitute environmental management itself with their meanings, practices, and priorities, whilst environmental management also influences Indigenous knowledge and governance. My focus is with how knowledge is formed and re-formed within and between diverse knowledge holders, including my work as a reflexive modern scholar. Significantly, this article is not purely for edification: this is justice work–in support of both Indigenous people and nature.

Keywords: Indigenous, environmental management, justice, reflexivity, decolonial

Introduction

The governance of land has always involved power moves about whose priorities matter, with environmental management no exception; yet, environmental management is often presented as an uncontroversial approach based on scientific methods and results, offering practical help with environmental problems (Allison and Hobbs, 2006; Prasad and Elmes, 1995). For decades many Indigenous scholars and leaders have critiqued this, including asking what is meant by the 'environment' and 'management', and who benefits from these meanings (Todd, 2016; Watts, 2013; Latulippe and Klenk, 2020; Smith, 2005; Langton, 1995; Whyte, 2013, 2018a, 2018b). Many Indigenous scholars and leaders present another understanding based on human-nature relationality and the importance of the Land (Watts, 2013) or Country in Australia (Kwaymullina, 2016). The most important relationships are between people and the Land, and, after this, relationships between people (Graham, 2008). This is not just a different view of the environment, but the basis of 'ontology (being), epistemology (knowing), methodology (doing), and axiology (accounting; ethics)' (Latulippe and Klenk, 2020, p. 8). Nor is it a messy holism, but differentiated relationships that are weak/strong, in/significant and so on. For example, as Andrea Vásquez-Fernández and Cash Ahenakew write:

> Respectful inter-being-relationality is not like 'sustainability;' it is something else, it is more, and it overflows current conceptions of sustainability. It is the constant tension and negotiations between all persons (human, non-human, more-than-human, other-than-human) who could be our kin.

And:

> These relationships are very complex; they are fluid, contradictory, and contentious, as are relationships with our parents, siblings, partners, and friends. However, the aim is taking care of those relationships and nurture them; when we do not take care of them, repercussions occur. (2020, p. 68)

Significantly, the critiques raised by Indigenous leaders that I have drawn on for this article, identify that this is a justice agenda for both nature and peoples. Both Indigenous peoples and nature have experienced terrible discrimination and abuse as a result of historic and contemporary imperialism and colonialism. In response, and across a suite of concerns, Indigenous leaders have called for the centring of Indigenous peoples' priorities and the de-centring of unjust imperial and colonial structures and processes—often called Indigenous and decolonial work respectively (McGregor, 2017; Cusicanqui, 2012). For scholars who are new to this work, there is so much to learn from existing literature, with clear steps to immediately change environmental management research-praxis (e.g. Latulippe and Klenk, 2020; McGregor, 2017; Reo et al., 2017).

Understanding how to hold nature and humans in close relation was not something that came naturally to me as a non-Indigenous social justice doctoral student, albeit someone interested in environmental issues and politics. However, in studying Indigenous water rights with Indigenous leaders, they helped me to re-think 'water' and its 'management' to understand: first, that there are no rights—economic, Indigenous, domestic or otherwise—from a dead river; and, second, that water is inseparable from our histories, geographies, economies and more (Weir, 2009). This involved making two significant reframing moves: placing humans within nature; and, nature within cultural and ethical domains (Plumwood, 2002).

Shifting the frame is a meta-move—it shifts what matters. As this article will show, these two reframing moves require identifying and overturning core assumptions welded onto much environmental research-praxis, revealing all kinds of new ways of working. However, engaging with Indigenous leadership requires more. There needs to be careful consideration of the racial logics that

distort Indigenous and non-Indigenous relations (McGregor, 2017). This includes how the term 'Indigenous' is constituted to enable and constrain what Indigenous people can say about environmental issues (Rose, 2014). Indigenous peoples' priorities with environmental issues always concern: law, sovereignty and self-determination (Kwaymullina, 2016; TallBear, 2019; Todd, 2016); family, self, wellbeing and healing (Krieg, 2009; Cavanagh, 2021); economy and agriculture (Pascoe, 2014); spiritual beliefs and practices that are embedded in the very ground Indigenous people walk upon (Yorta Yorta man Lee Joachim cited in Weir, 2009); and, much more. To repeat, this is a very different way of knowing the environment compared with the important work of the natural sciences.

In this time of environmental crisis, it is critical to find productive points of connection that nurture life; however, I am arguing that this requires investigating the meanings behind the key terms used and their consequences. Clearly, I have a deep appreciation for how discriminatory epistemological practices are also always material concerns. This article covers the knowledge work I think is needed to re-think the environment and its management in line with Indigenous leadership. It reflects what I have found insightful and is limited by what I find easiest and most interesting to hear and understand. This knowledge work is not purely for edification; it is motivated by establishing more just terms for both nature and peoples. To cite Aymara and European scholar-activist Silvia Rivera Cusicanqui, decolonizing knowledge decolonizes 'our gestures and acts and the language with which we name the world' (2012, p. 105-6).

The article is set around six sections. First, a scene setting section about the terrain. Second, I establish what I mean by environmental management, and then I introduce and demonstrate the relevance of the analytical tools of reflexivity and positionality. Third, I briefly set out key elements of the modern frame, and how these relate to who has knowledge authority and how reflexivity is constrained by unreflexive modern logics. Fourth, I illustrate how nature and Indigenous peoples have distinctly confounding and discriminating experiences with certain modern knowledge frames, including the flashpoint of traditional ecological knowledge. Fifth, I cite the work of Indigenous scholars about Indigenous knowledge, noting that Indigenous knowledge is, of course,

cited and drawn on throughout the article and is not confined to this section. Lastly, I present two First Nation demonstrations: Xaxli'p in southwest Canada, and Gunditjmara in southern Australia. Some readers may prefer to read this last section first for context. Many elements of the middle four sections cover familiar ground to Indigenous/decolonial and humanities scholars, but are presented here to introduce them to a wider audience. Specifically, those social and natural science scholars that do not use, or only have a limited use of, reflexivity and positionality.

My audience includes non-Indigenous scholars who have a keen sense that something is wrong, are willing to do the work to meet with Indigenous peoples on better terms, but who have not been trained to analyse knowledge practices or are trained but scope out their colonial and imperial privilege. I also write in response to responsibilities formed over two-decades of mentoring by Indigenous leaders, colleagues and friends. Australia is the context I write from.

Terrain

The language of environmental management is the language of whose perspectives are considered valid and authoritative, and, thus, whose priorities matter, why, and what might be done about them. Significantly, Indigenous people are not another interest group in environmental management. In Australia, and many other nation-states, Indigenous peoples have territories and societies which are legal and political entities whose authority pre-dates the nation-states they are now co-located with (Simpson, 2014). Indigenous people do not need to ask, nor offer something useful, in order to be involved in environmental management on their own territory. Indigenous peoples are also not here to save the world for the rest of humanity (Whyte, 2018a). The word terrain in this article's title specifically locates and weights this conversation in this earthy politics between humans.

As Indigenous leaders repeat, their concerns with environmental management are not just matters of meaning and perspective, these are also matters of power, including decision-making authority, land justice and other pathways of redress (Cusicanqui, 2012; Coulthard, 2014; Latulippe and Klenk, 2020). Indigenous people have experienced histories and geographies of extractive,

violent and dismissive relationships with non-Indigenous people and institutions on their own Land, that continue to be perpetuated in settler-colonial acts of recognition and reconciliation (Coulthard, 2014). This includes the harming of spiritual relationships that inform one's place in the cosmos, as known through sacred places, totemic plants and animals, the presence of ancestral beings in the landscape, and more. Unsurprisingly, there can be a lack of trust amongst Indigenous people about entering into environmental collaborations, including with the state and universities (Arsenault et al., 2019; Hemming et al., 2010). Refusal to work with non-Indigenous individuals and institutions is important feedback about the persistence of disrespectful terms and Indigenous sovereign authority (Tuck and Yang, 2014; see also Woelfle-Erskine in Weir et al., 2019).

I use the demarcated Indigenous/non-Indigenous binary with intention and care, acknowledging difference and similarity in and amongst shared intercultural lives, and sometimes shared identities (Cusicanqui, 2012). This article is both constrained and charged by my standpoint as a white descendent of imperial invaders, beneficiary of unceded Indigenous lands, and working with systems that privilege me and undermine my Indigenous colleagues and friends. I reference Black scholar Franz Fanon's decolonisation which centres an ethical commitment to dignity for all humanity, including myself; however, this does not excuse complicitly in colonial and imperial violence (Fanon, 2004 (1961)). This includes how notions of destiny and superiority normalise my white colonial privilege and position Indigenous peoples' self-determination as illegitimate (Pascoe, 2014; Whyte, 2018a). Terms such as 'we' and 'our' are always loaded by this context. For example: the ethnocentric 'we' that dominates much scholarly discourse erases Indigenous peoples' sovereign presence; and, the ornamental multiculturalism of liberal society that repositions Indigenous peoples as one cultural group among many (Cusicanqui, 2012, 97-8).

Nonetheless, there are many Indigenous scholars who embrace that we must find better grounds to be together, as part of the inter-being relationality within which we all live (Vásquez-Fernández and Ahenakew, 2020; see also McGregor, 2017; Nakata et al., 2012). This includes strategically reconstituting what is involved in environmental management, and documenting this work in the academic literature, including working with allied

non-Indigenous scholars (e.g., Rose et al., 2016; Diver, 2016; Morgan, 2016). Indigenous scholars have described collaborating with others as uncomfortable (TallBear, 2019), celebratory (Louis, 2007) and enriching (Bawaka Country, 2015). I argue that it is unavoidable. We live together amongst a morass of distorted relations (after McGregor, 2017) and discriminatory logics, that do not just affect Indigenous and non-Indigenous relations, but, as I have been taught, disrespect humanity's binds with nature. And this is the larger meaning of terrain that I am also referencing: Country or the Land.

Environmental management, reflexivity and positionality

I define environmental management as those research-practices arising out of the natural science tradition to manage nature for biodiversity and natural resource outcomes (Moon et al., 2019; Phillips, 2020; Robin, 2018). For example, this might be in relation to habitat management, waste management, environmental restoration, minimising pollutants, and river regulation. This definition reflects the pre-dominant approach to environmental management with its focus on human decision making with natural science knowledge about natural systems (Allison and Hobbs, 2006; Prasad and Elmes, 1995). Clearly, there is a broader research-praxis that is also labelled as environmental management; however, this scoped definition is a heuristic to highlight the influence of certain knowledge traditions. It is a simplification to navigate complexity after Ang's 'cultural intelligence' (2011). The conceit is necessary because the pre-dominant approach routinely erases and misunderstands Indigenous peoples. With this definition, I can more succinctly identify how matters that are often dismissed as esoteric, such as epistemology, or already settled, such as nation-states, are fundamental to the material and discursive labour of environmental management, labour that also perpetuates discriminatory and abusive relations with Indigenous peoples and nature.

Critically, for non-Indigenous people this Indigenous/decolonial agenda requires not just listening to Indigenous people, but also unpacking one's own assumptions about humans, nature, and Indigenous people. Humanities scholars use reflexivity and positionality to do this. Reflexivity investigates *how* people think and the consequences, not just *what* people think (which is reflection). This scholarship examines epistemological, ontological, and ethical

domains so as to be 'attentive to how differences get made and what the effects of these differences are' (Bozalek et al., 2017, p. 112; Barad, 2014). Positionality is a combination of your lens as well as who you are. Positionality foregrounds the different accountabilities, legitimacies, and authorities of differently positioned individuals and institutions (Hemming et al., 2010; Nakata et al., 2012).

For example, in the de/centring moves of Indigenous and decolonial scholarship respectively, Indigenous people have the authority to do both, and non-Indigenous people only the latter and then with qualification (Tuck and Yang, 2012). Only Indigenous people are able to centre their academic scholarship as Indigenous, all others are commentators, analysts, discussants and so on. Non-Indigenous people cannot generate an Indigenous article, presentation, event, project, nor institution. They can, however, take responsibility for reducing the violences of colonial and imperial privilege, and work to amplify Indigenous peoples' voices and secure their priorities. As reflexivity involves making decisions about what to be reflexive about, it does not guarantee reducing the inscription and re-inscription of colonial and imperial privilege (Todd, 2016). For example, decolonial literature is critiqued for documenting injustice without making material change to address it, whilst nonetheless, through the production of research, journal articles, teaching, and so on, benefiting colonial and imperial academic careers and institutions (Tuck and Yang, 2012). Taking reflexivity further requires non-Indigenous people to let go of power, to make mistakes and be vulnerable, and, to not just step back but to also step up (Maclean et al., 2019; Smith et al., 2016). It requires finding scholarly ways to know, be and do that are less harmful.

With environmental scholarship, the natural science focus on nature as separate to humans sets up several challenges. For example: it has little capacity to engage with inter-being-relationality; it does not require expertise in language and interpretation; and, indeed, institutional norms and disciplinary practices prioritise invisibilizing power, culture, and perspective (Latulippe and Klenk, 2020; Vásquez-Fernández and Ahenakew, 2020). Participatory approaches seek to address this limitation, including those pitched around joint and collaborative endeavours with Indigenous peoples; yet, without reframing, such participatory approaches expect Indigenous people to

accept terms that are neither joint nor collaborative (Diver, 2017; Reo et al., 2017).

As introduced above, through learning about freshwater I found that I held assumptions that I was not aware of but prevailed so substantively that I could not hear what was being said (Weir in Weir et al., 2019). These assumptions arise out of two knowledge traditions that were taken for granted in almost all of my social science and science education prior to my doctorate. First, the hyper-separation of nature and humans, such that they are not just different but incommensurate (Latour, 1994; Plumwood, 2002). This includes the hierarchical move to elevate and foreground humans, whilst backgrounding a subordinate nature (Plumwood, 2002). This puts human beings in the position of managing the environment. Second, that there is a singular world which we can get to know (approximately) through the accumulation of (approximate) scientific facts (Pielke, 2007). The two assumptions arise out of and inform the iconic scientific methodologies of hypothesis, observation, and experimentation, which were a Euro-American response to the influence of religious authority and superstition in the eighteenth and nineteenth centuries (Latour, 1994; Rigney et al., 2015; Watts, 2013). In the twentieth century, these two assumptions became so influential as to be taken for granted in much environmental management scholarship (Robin, 2018).

For example, their influence is evident in the assumption that natural science research does not require human ethics clearance, because studying nature is presumed to not involve politics or power. Indeed, the positing of environmental management as a practical contribution to societal problems is a distancing move from power and politics, to purportedly take the pragmatic middle road of collaboration and compromise (Prasad and Elmes, 1995). It is revealing when environmental management approaches are designed to de-politicize contentious environmental issues by not providing processes to negotiate competing values and interests (Neale, 2017). The two assumptions are so normalised that 'the environment' goes unquestioned and unnoticed; it is simply naming what is (Mitchell, 2000b, p. 19). Through language, meaning and assumption, power and knowledge are exercised to identify and consolidate understandings that, through time and repetition, become self-evident (Mitchell, 2002b).

Fundamentally, knowledge is formed by knowledge holders, by and through knowledge communities, that also interact with other knowledge holders and communities, always forming new knowledge in the present (Zwarteveen, 2010). I take a reflexive modern position, and this is also what I am seeking to explain. This is not a post-modernist 'all is discourse' scholarship that cannot engage with the real world. Rather, it is the understanding that modern knowledge is part of the 'dialectics of continuity-and-discontinuity' of all knowledge; it reconstitutes and does not replace prior forms of knowing, which live on in the new (James, 2015, p. 53). My intention is to re-constitute environmental management by unpacking and re-organising pre-dominant modern assumptions (often described as western and/or white), as motivated by decolonial ethics to support both natures and peoples. Such that, the term environmental management will come to be understood as something quite different, especially for non-Indigenous people and institutions. Indigenous people also have their own terms in their own languages, as well as those developed with and for collaborative contexts—such as 'ecosystem-based planning' (cited in Diver 2017), 'cultural and environmental management' (cited in Weir et al., 2013, p. 201) and 'Caring for Country' (cited in Kerins 2012).

This article does not to simply 'interrogate 'the western' and 'uphold the Indigenous'', but to think about how knowledge is used and created in and amongst power asymmetries and cultural difference (Nakata et al., 2012, p. 132). Significantly, this terrain is not bounded by the case study locales of environmental collaborations, but encompasses the work of the academy, the public sector, political-legal norms, and more. It goes to what it means to be human, and how we understand ourselves in the universe. From Northern Australia, Bakawa Country and co-authors, which are an Indigenous and non-Indigenous collective writing with the Land, describe this dynamic work:

> In discussing what it means to see humans as one small part of a broader cosmos populated by diverse beings and diverse ways of being, including animals, winds, dirt, sunsets, songs and troop carriers, we argue for a way of knowing/doing which recognises that 'things' can only come into 'being' through an ongoing process of be(com)ing together. They are never static, fixed, complete, but are continually emerging in an entangled togetherness. (2013, p.

185)

Unfortunately, in academic institutions it is more common to 'other' Indigenous peoples and their knowledge as the case-study, instead of being open to dialogue about epistemology, methodology and more (Smith et al., 2016). To take seriously Indigenous peoples' relational knowing/being/doing is derided by parts of the academy as 'going native' (Todd, 2016, p. 10). In part, this is because the two knowledge traditions introduced above profoundly inform academic notions of subjectivity and objectivity. It also relates to discriminatory understandings of Indigenous people that were promulgated globally in the Age of Empire and continue today.

Modern framing

The modern frame is a term used to describe a set of knowledge practices, sometimes called grand narratives, that are broadly understood to be definitively modern, although the modern frame is neither fixed in time or place. Modern knowledge is diverse, used in markedly different ways, constitutes, and re-constitutes itself with other knowledges, and is now pre-dominant in many places across the globe as an influential layer of knowing/being/doing but not a totalizing homogenizing force (James, 2015, p. 34-5). It can be discriminatory, just, instrumental, reflexive and more. My focus here is setting out these knowledge practices in order to draw out the consequences for Indigenous peoples, nature, and environmental management.

Through new conceptual and material approaches, most emblematically the scientific method, modern knowledge has generated extraordinary information about how human bodies work, energy flows in nature, and space-time-matter combinations. It is often described as promulgated during eighteenth and nineteenth century Enlightenment debates by Euro-American scholars. In these debates, science, reason and rationality were established as the foundations of generating a universal modern knowledge, whereas religion, intuition and emotion were excluded for being subjective. Modern knowledge was to be objective knowledge–the realm of truth with a small 't' (that truth that needs to be defended). Theologians were either marginalised through the creation of scientific institutions and professions that distanced themselves from the church

(Harrison, 2006) or found themselves using modern analytical logic to defend an ontologically different claim to Truth, with a capital 'T' (that Truth that does not need to be defended). From the viewpoint of modern knowledge, proponents were replacing the study of the divine in nature, with biology and geology (Harrison, 2006, p. 87).

Modern knowledge has at its heart the self-conscious analysis of knowledge as making sense of the world (James, 2015, p. 38-9). It frames its own knowledge as objective, singular and universal, and, at the same time, positions itself as distinctly different to other forms of knowledge which it frames as traditional, subjective, plural and local (Haraway, 1988; Latour, 1994; Mitchell, 2000b; Moreton-Robinson, 2015; Plumwood, 2002; Rigney et al., 2015; Smith et al., 2016; Watts, 2013). This has extraordinary consequences for the legitimacy and authority of knowledge practices that are considered otherwise. It is why critiquing modern knowledge has formed such an important part of Indigenous/decolonial scholarship, with calls for reflexivity to be taught across campus (Coombes et al. 2014; Kerr 2014).

The self-referential objective logic described above is both confident and progressional. It is 'the certainty of human reason freed from particular traditions, or of technological power freed from the constraints of the natural world' (Mitchell, 2000a: xi). This perspective is affirmed by the singular universal narrative of history: developmental progression. From traditional to modern, primitive to civilized, custom to rationality, or pre-modern to modern—all people or organised as undeveloped, developing, or developed (James, 2015; Sahlins, 1999). With secularization at its centre, humanity moves from the ''metaphysical stage' to the higher scientific or 'positive' level of development' (Harrison, 2006, p. 89, citing Comte). It is as inevitable as it is beneficial (Coulthard, 2014). Indigenous people are patronisingly placed by modern proponents at the very beginning and as beneficiaries of modernity for their own 'betterment' (Rigney et al., 2015: 337). Another dimension of this self-referential logic is the notion that to be modern is to be western. This is based on the assumption that Euro-American Enlightenment scholars created modern knowledge and then disseminated it globally as an outwards movement from the 'west to the rest' through Imperialism and colonialism (Mitchell, 2000b).

Scientific methods generate falsifiable truths through methods that are objective in the sense that any person of any culture could replicate them, but nonetheless are subjective as devised and practised from a viewpoint (Pickering, 2008). Science is very diverse with different degrees of certainty, but our concern here is how *all* science knowledge is simplistically represented as facts that have universal application, usually, but not exclusively, by non-scientists (Collins et al., 2020; Pielke, 2007; Weir et al., 2021). By claiming universal objectivity, modern knowledge proponents establish the ideological ground to judge the authoritative merit of all other knowledge, whilst simultaneously presenting their own knowledge claims as objective. The presumption of being epistemologically dominant over other knowledges means that this layer of knowing/being/doing itself is often accepted without interrogation, or even awareness that there is something to interrogate (Marlor, 2010). Through repetition modern categories of the world are seen by many as self-evident truths; even in post-modern critiques of the subjectivity of modern knowledge, this scholarship continues to accept the modern content of categories 'human', 'nature', 'nation', 'economy' and so on (James, 2017; Mitchell, 2000b, p. 20).

The successes of the scientific and industrial revolutions have shored up the logics of the modern frame—and vice versa—but those who claim or gloss small-t 'truth' as unpolitical and indisputable have played into the hands of the post-truth politics of elite populists (Collins et al., 2020). More than post-modernism is required to navigate out of the binds generated by so-called universal objectivity, including to reduce discrimination for both natures and Indigenous peoples (discussed further below). What is needed are nuanced and robust approaches to knowledge practices, embracing knowledge partiality, knowledge plurality and knowledge politics. At the same time, the racial logics of influential modern frames need to be understood. Being modern does not require being western (and white), and modern knowledge is not exclusively western. Modern knowledge was created in other parts of the globe prior to and at the same time as the European Enlightenment, with global interactions being central to the creation of what are now presumed to be western modern knowledge objects, practices, and meanings (James, 2015; Mitchell, 2000b). Indigenous scholars write about how they work with and through modern knowledge, leveraging, adopting, and transforming it (Watson, 2017;

Cusicanqui, 2012).

In this article, modern knowledge is resituated into the dynamics of knowledge constitution and co-constitution within which it already is. It is understood as a form of local knowledge, in that it comes from somewhere, but this does not mean that it is without value and influence; indeed, it has found purchase globally in many differently sited and connected knowledge communities, such that elements can be called universal in these qualified terms. Returning people—and their values, politics and more—to knowledge generation does not derail the pursuit of knowledge about the world, but to understand that it is partial, situated and plural. This is a move from monologue to dialogue (Tully, 1995).

With the intensification of globalization, modern knowledge is constituting and re-constituting itself through its objects, practices and meanings globally, including with other knowledges, objects, practices and meanings. Modern knowledge is here to stay. It is not a rupture with the past, but an influential and meaningful knowledge practice that is generated and maintained for diverse purposes by diverse people. With this understanding of the dialectics of continuity and change, biology and geology do not replace natural theology, a break from the prior form of knowledge, but reconstitute it—albeit in a distinctly different form.

Modern nature and modern Indigenous peoples

There are particular aspects of modern framing that have discriminatory consequences for nature, Indigenous peoples, and how Indigenous people, nature and environmental issues are understood to relate (Rose, 2014; Watts, 2013).

The diverse natural sciences have as their central intellectual tradition the abstraction of nature from humans, which may be helpful in studying the ecology and history of the phenomena quantified, but it has separated nature from its cultures and histories, enabling an instrumental view of nature that is open to misuse (Vásquez-Fernández and Ahenakew, 2020; Watts, 2013). Trees and water can become lumber and gigalitres and can then be secured as resources for the nation, to be allocated and managed by centralised

institutions (Scott, 1998, p. 12-13; e.g., Arsenault et al., 2018); whilst also erasing Indigenous peoples' property rights (Weir, 2012). This instrumental view of nature—nature for human use—requires ongoing labour in human exceptionalism to maintain it. Human exceptionalism works to position the human and the natural as discontinuous with each other—with nature the lower order, lacking any real continuity with humans, including its own agency, meaning and ability to communicate (Plumwood 2002, p. 11). Another example of the abstraction of nature is wilderness, whereby elimination and preservation is used to re-make nature to protect it as people-free places, imagined as remote from human influence (Deloria, 2001).

The term Indigenous accompanied the rise of nation states in the twentieth century, themselves a modern response to imperialism and colonialism. International institutions found the term useful in grouping those people they saw as vulnerable within the new nations, because they were not yet integrated into these societies (Rowse, 2008, p. 414). Indigenous people were presumed to be living at the very beginning of civilization, remote in time and space from contemporary society (Deloria, 2001). Following this theory of hierarchical civilizations and the logic of developmental progression, it was anticipated that Indigenous people would lose their culture as they became assimilated within the broader national society (Morten-Robinson, 2015; Sahlins, 1999). These notions of superior western (and white) civilization were and are used to justify the possession of Indigenous lands through the Doctrine of Discovery, including *terra nullius* (Australia) and Manifest Destiny (North America) (Coulthard, 2014; Moreton-Robinson, 2015). These were 'unconcealed, unilateral and coercive' activities of Empire and colonialism (Coulthard, 2014, p. 4). In Australia, it was not until the 1960s that governments conceded that the expected trajectory of Aboriginal people dying out or being assimilated, was not going to happen (Nakata, 2012, p. 136).

Discriminatory modern frames continue to be used to avoid naming Indigenous people as contemporary people, with contemporary culture, knowledge and so on. For example, Indigenous peoples' presence can be allowed for as part of living museums, remote from contemporary society, so long as Indigenous people express their traditions and cultures as pre-colonial. This is evident when ethno-tourism and eco-tourism 'draw on a theatricalization of the 'originary'

condition of a people rooted in the past and unable to make their own destiny' (Cusicanqui, 2012, 98). Another option to avoid naming Indigenous people as contemporary people is to collapse Indigenous people as primitives into a pre-modern nature remote from the modern world (Rose, 2014). This can also involve being attributed the role of 'ecological saviour'. As Koyungkawi poet Linda Noel comments, 'I don't mind being 'close to nature.' But I know what *they* mean when they say that, and it's not what I mean' (italicised in the original, cited in Noel et al., 2014, p. 159). By not being contemporary people, Indigenous people are positioned as a certain kind of human whose knowing, being and doing does not grow. They are outside the realms of time, and outside the realms of usefulness. They can only offer knowledge from the past, and, if not, then they are no longer considered authentically Indigenous.

The work of racially discriminatory logics is not always so obvious. The flashpoint of traditional ecological knowledge illustrates how the two assumptions—the hyper-separation of humans and nature, and a singular knowable world through science—discriminate against Indigenous peoples' knowing/being/doing. The majority of this literature is based on progressing scientific knowledge, with Indigenous peoples contributing primarily as holders of useful environmental knowledge (Diver, 2017). This requires scoping out less useful knowledge, such as inter-generational ethics, multi-species kin, ancestors in the landscape and ceremony (Reo et al., 2017; Latulippe and Klenk, 2020). Once translated, stripped of its context and meaning, the now scientific knowledge can inform environmental management decisions, and, consequently these decision making fora do not need to involve the knowledge holders (Latulippe and Klenk, 2020). Thus collaborations set around traditional ecological knowledge, whether good faith or not, run a high risk of appropriating Indigenous people's knowledge.

By not aligning with what is not questioned—the norms of environmental management research-praxis—Indigenous peoples are placed in unenviable positions of being type-cast as irrelevant, out of step, unreasonable and difficult (Hemming et al., 2010; Morgan, 2005/06). Instead of understanding the entwined fates of all beings, Indigenous peoples' relational ethics are dismissed as the fetishization of animism, a projection of the noble savage, and, or misplaced aspirations as ecological saviours (Latulippe and Klenk, 2020). This

is not just misrepresentation. There are so many layers of *dispossession* in the modern work to separate, erase, assimilate, eliminate, substitute, essentialise and destroy nature and Indigenous peoples. As Sisseton-Wahpeton Oyate scholar Kim TallBear writes from North America, also known as Great Turtle Island:

> These forms of disruption—both the appropriation of our social representations and the undercutting of our social relations of all kinds—with other-than-human relations, with place, with one another: these aggressive, persistent disruptions are *ownership* claims. They aid non-Indigenous people in their desire to belong to this land. (italics in original)

And:

> … the issue is not only that material dispossession of land and 'resources' builds the settler state but also that 'dispossession' undercuts co-constitutive relations between beings. Property literally undercuts Indigenous kinship and attempts to replace it. It objectifies the land and water and other-than-human beings as potentially owned resources. (2019, p. 32, drawing on Moreton-Robinson, 2015)

Indigenous peoples' knowing/being/doing

The modern project was meant to be complete, a singular universal objective knowledge of the world which all people were inevitably going to join and benefit from materially, through the logic of developmental progression; however, Indigenous peoples' ongoing presence disrupts this viewpoint, and so too do environmental limits and environmental crisis. So how else can the environment and its management be thought about?

Iconically, and as introduced earlier, Indigenous people hold understandings of being human that connect deeply with Land and Country, such that humans cannot be understood in isolation from nature. As TallBear describes, Indigenous people 'arose *as peoples, as humans* in relationships with particular places' (original emphasis 2013, p. 514). Indigenous knowledge is not universal knowledge from nowhere but is known through and generated by specific knowledge holders in relation to specific places (Latulippe and Klenk, 2020, p. 7). It is, nonetheless, shared in regional, national, and global forums,

making sense across contexts as a 'sticky universal'—universals that arise out of places and find meaning in many others (Tsing, 2009). Indigenous peoples also mutually recognise each other globally, for example, as Amazonian, Inuit and Hawaiian, but not Catalonian nor Scot (Clifford, 2001, p. 472). Critically, inter-being-relationality does not exclude instrumental approaches to nature, but re-positions them as part of lives lived in connection. Thus, fresh water is for agriculture and human consumption, but it is also so much more than that (Morgan, 2005/06). At least, this is my understanding.

From North America, Anishinaabe and Haudenosaunee scholar Vanessa Watts writes about the ethics of humans and nature in society together:

> …habitats and ecosystems are better understood as societies from an Indigenous point of view; meaning that they have ethical structures, inter-species treaties and agreements, and further their ability to interpret, understand and implement. Non-human beings are active members of society. Not only are they active, they also directly influence how humans organize themselves into that society. The very existence of clan systems evidences these many historical agreements between humans and non-humans. Clan systems vary from community to community and are largely dependent on the surrounding landscape. For example, whale clans are not present amongst Indigenous nations where there is no access to seawater (2013, p. 23).

From North America, Potawatomi scholar Kyle Whyte writes about the 'governance value' of Indigenous knowledge (Whyte, 2018b), including in the context of adapting to change:

> For Anishinaabe peoples, our oldest stories and political systems speak to a key philosophical challenge: how can societies be organized to be as adaptive as possible to seasonal and interannual changes? … The practical and philosophical traditions emerging from these stories focus on understanding how the fabric of relational qualities in a society can guarantee the coordination needed to adapt as best as possible to constant change. Conceptions of society are inclusive of diverse beings and entities beyond humans such as plants or water, who also participate in the relational qualities. Humans are often faulted for believing that they can achieve sustainability through violating consent, trust, accountability, or reciprocity, among other qualities, toward diverse beings and entities (2020, p. 5).

These knowing/doing/being logics inform contemporary everyday life. For example, in planning to establish an acorn harvesting enterprise in North America, Noel and co-authors ask:

> Will we harvest with reverence if we produce at this scale? Will we know the individual trees and how much and when they produce, when they need trimming or protecting from parasites, when they need to rest and recover from our attentions? We hope that expansion will bring more tribal people and others into relationships with oaks and acorns but in a way that strengthens older tribal ways of being in the world, harvesting modestly and mindfully, rather than bringing oaks and acorns into a commercial exchange that ravages the oaks and creates more spiritual distance between us and our ancestors (2014, p. 162).

In another harvest in Northern Australia, Datiwuy Elder Laklak Burarrwanga writes about hunting turtles *as* protection:

> The *miyapunu* [turtles] are special animals to us. We have gathered them in this way for as long as this world has existed. We know how to make sure that we don't take too much. We respect those *miyapunu* and their own lives. We see that their wellbeing and our wellbeing are connected. That is part of the great pattern of kinship . . . We care for them and they for us. We sustain them, and they sustain us. We also sing their songs, dance and cry. The most significant for us, the one with the songline, is *dhalwat'pu,* the green turtle (Bawaka Country et al. 2013, p. 191).

As humans and acorns/turtles have interdependent fates, decisions that affect the treatment and survival of acorns/turtles are taken very seriously. In this, acorns/turtles are kin: similar but not the same as human family, as known through *differentiated* inter-being-relationality. However, when making such statements to others, those aligning with human/nature incommensurability often raise critiques of anthropomorphism, or simply politely wait to get back to the real work of environmental managment.

In the quote above the colloquial Australian term songline is introduced. It signifies the very long song arrangements recited by Aboriginal people to affirm and share knowledge about ancestors and Country. Songlines may be

simply appreciated as songs about landscapes that are properly known through science; or, as a rich dynamic relationality that ties people and places together, down the generations, through their spiritual beliefs, and evidenced-based knowledge systems. This is not simply an instrumental view of nature for human use, but a viewpoint that embeds humans within Country in complex and powerful ways. One of the most well known songlines is the Seven Sisters, which criss-crosses the Australian continent as the sisters flee from a relentless sorcerer. This pursuit manifests in 'a landscape that seethes and ripples', with evidence of their travels where they are still present, such as in rock formations and water holes (Mahood 2017, p. 33).

Throughout this dynamic differentiated relationality, Indigenous scholars make clear that this is also always about knowledge formation and what it means to know. From Tasmania, Palyku woman Ambelin Kwaymullina writes:

> Indigenous systems tend to be holistic and animate, in that they assume everything is alive and everything is connected (related). In animate realities, where everything lives and therefore is in a constant state of movement, the process of knowing inevitably involves locating the self within the networks of relationships that comprise the world, and that also comprise the self. Within such a system, it is not possible for any one person—or any one way of knowing— to explain the entirety of existence, whether the existence of human beings or other shapes of life. An individual's knowledge is at once informed and limited by position, and no one can 'know' what it is to experience the web of relationships that is the world from a position they do not hold (2016, p. 441).

Thus, understanding where one is, is also understanding how one knows, as this is always in relation, and is always becoming known. This does not mean that Indigenous knowledge is bounded to a single distinct group and place. Nor that it is a contradiction for an Indigenous person to draw on both unique place-based inheritences and modern knowledge forms. Not only do Indigenous peoples not live in isolation from modern knowledge, but they operationalise it as part of their self-determination (Cusicanqui, 2012). This includes through the new terms of Country, Land and songlines. Indigenous scholars and leaders bring their different inheritance into dialogue with non-Indigenous institutions and individuals, to create new knowledge, and new understandings and ways of knowing/being/doing, as each generation

understands their existence in relation to their circumstances. Indigenous peoples' traditions need to be understood on these terms, and not discriminatory terms that limit Indigenous people, and their knowledge, to the past, to the local, and to the remote.

In relation to the academy, Māori woman Linda Tuhiwai Smith and co-authors write that Indigenous knowledges:

> are theories, practices, and protocols for being in the world, ideas about what it means to know something and how knowledge is organised, about classification systems, about what counts as reality or truth, about education, about power and about how experts are trained and validated. These ideas traverse western philosophical concepts of metaphysical, ontological, and epistemological ways of knowing (2016, p. 134-5).

This includes constantly re-iterating that Indigenous peoples understand their existence, past and future, in relation to their present circumstances:

> Indigenous knowledge exists as indigenous understandings of who we have become, who we are now, as much as who we once may have been (2016, p. 136-5).

These articulations about Indigenous knowledge are at one level definitively modern. Establishing a knowledge formation by articulating difference around basic categories of existence—time, space, embodiment, performance and knowing— is the self-conscious knowledge work that modern knowledge has trail blazed (James, 2015, p. 47). At the same time, it is knowledge centred on ancestors and the Land or Country and known through bodies within inter-being-relationality (Kwaymullina, 2016; Todd, 2016). Thus, when nature is conceptually abstracted from humans—whether as resources or wilderness—not only are Indigenous peoples' territorial and self-governance rights denied, but so too are their bodies: it is a transgression of Land, bodies and kin (Kwaymullina, 2016; TallBear, 2019; Todd, 2016; Watts, 2013).

In terms of generating pathways forward that are meaningful to Indigenous peoples, TallBear proposes making kin as an alternative to the erasures and discriminatory power moves of liberal multiculturalism:

> Making or creating kin can call non-Indigenous people (including those who do

> not fit well into the 'settler' category) to be more accountable to Indigenous lifeways long constituted in intimate relation with this place. Kinship might inspire change, new ways of organizing and standing together in the face of state violence against both humans and the land (2019, p. 38).

Yet, in the context of environmental crisis, Indigenous peoples are criticised for raising their justice matters, which are incorrectly assumed to be human-only concerns, when so many other-than-human lives are at stake (Whyte, 2020, 2018a). Again, this fails to understand that justice for Indigenous peoples is bound with justice for nature. It also fails to understand what Indigenous people have already gone through. As Whyte writes:

> the hardships many non-Indigenous people dread most of the climate crisis are ones that Indigenous peoples have endured already due to different forms of colonialism: ecosystem collapse, species loss, economic crash, drastic relocation, and cultural disintegration (Whyte, 2018a, p. 226).

The Indigenous leaders drawn on in this article clearly articulate the connected violences wielded against nature and peoples in the name of progress. Their experiences confirm the logics of inter-being-relationality; the twin fates of humans and land tied together through differentiated relationality. Care for both is needed. To recognise nature as kin is only uncomfortable for people with similar educational backgrounds to my own, in which nature and humans are not just different but incommensurate. By shifting frames, it becomes possible to better understand terms used by Indigenous leaders, such as inter-being-relationality. It also becomes possible to give familiar words a different meaning. As this collective of Indigenous and non-Indigenous co-authors writes:

> … to think differently about wealth, not as a short-term thing resulting from damaging extractive processes, but a wealth that is intergenerational, encompassing people, culture and Country that will sustain them all into deep futures (Green et al., 2020).

Two demonstrations: the Xaxli'p and Gunditjmara peoples

This article has shown how specific, but immensely influential, modern frames work against Indigenous people and nature, and that significant work is required to rethink 'the environment' and its 'management' with Indigenous

peoples' leadership. For people steeped in the two assumptions this article has grappled with, that is, the hyper-separation of humans and nature, and a singular knowable world through science, it requires rethinking what it means to be human and embracing the partiality of knowledge. Alongside, it requires addressing discriminatory racial logics—those that are obvious, and those that are less so. It involves the structures and processes of institutions, and the labour by many who had not understood the relevance of what Indigenous leaders are saying. The framing of what is at hand needs to be re-cast, to understand and address distorted relations between nature and peoples.

This knowledge work is not easy for those trained and educated otherwise; to help, I respectfully draw on two demonstrations: the work of the Xaxli'p and Gunditjmara peoples. These were chosen because I have a small connection with each, and can draw on publicly available scholarship that has ethical clearance. First, the brief discussion here about Xaxli'p is based on the analysis arising out of their research partnership with Sibyl Diver (2016, 2017), a non-Indigenous scholar who is a colleague and friend and conducted her doctoral research with Xaxli'p mentoring. Second, I have had the great privilege to spend a little time learning about Gunditjmara Country—the centre of the universe; including working with them to document their native title determination (Weir, 2009b). I repeat the constraints of my writing position as a non-Indigenous scholar.

The Xaxli'p and Gunditjmara peoples are repopulating the environmental management they receive from others with their own meanings and adopting and adapting the environmental management norms of others through their own practices. At the same time, the practices and forms of environmental management are influencing Xaxli'p and Gunditjmara knowledge and governance norms—whether through strategic moves or as part of the dynamics of continuity and change in all societies. It is not coincidental that negotiations about Indigenous rights were occurring alongside, and as part of, this work to re-constitute environmental management and assert Indigenous self-determination. That is, their specific rights as Xaxli'p and Gunditjmara, as well as Indigenous rights matters in provincial/state and national forums. Their authority as rights holders was critical to getting government officials to take their leadership seriously and to negotiate outcomes.

The Xaxli'p commonly refer to their homelands as Xaxli'p Survival Territory, these being the vertical chasms and churning rivers of the mountainous southwest Canada, and Xaxli'p tell legends of the Transformers, early beings who created much of this landscape (Diver, 2016, 2017). The Xaxli'p have worked for decades to source government support and funding to do land and water management their way. In the late 1990s, the Xaxli'p were frustrated with government negotiations about their Indigenous rights, and the impasse over the management of state forests situated on their survival territory, so they initiated their own land-use planning process. They produced two documents setting out their 'eco-cultural restoration' priorities. The first document reported on their customary uses, including mapping hunting places and trails, gathering places for food and medicines, and identifying Xaxli'p place names. The second document was based on 'ecosystem-based planning' and mapped sensitive cultural and ecological areas at multiple scales, establishing connecting corridors, with remaining land evaluated for sustainable restoration forestry (Diver, 2017, p. 5-6).

The maps were the key persuasive information for the government to approve substantial environmental management policy shifts, including rezoning logging territory from 70% to 30% (Diver, 2017, p. 6, 8, 1). This was achieved without providing the sensitive maps to the government, instead submitting written policy documents, and only sharing the maps within meetings so as to avoid the potential misuse of this fine-grained information (Diver, 2017, p. 7). Throughout, Xaxli'p prioritised holding meetings on their own territory, with their Elders present to share their knowledge and explain its importance (Diver, 2017, p. 6). Workshops, fieldtrips and meetings with government and scientists produced 'strategic convergences' across Xaxli'p and government knowledge. In 2011, after Ministerial intervention, the Xaxli'p Community Forest was established.

Xaxli'p community member Pauline Michell foregrounds the importance of people meeting together and talking through different and similar viewpoints:

> When you talk to someone who is easily able to move to another place—they don't have that connection. And so when they heard about the stories of the Transformers, for them it was like, 'Wow, you are talking about a fairy tale or a myth. How can you say that this is how you live?' So that was the challenge. It

> was getting them to just begin to understand us as people living off the land, and why it was so important. (Michell cited in Diver, 2016, p. 87)

And:

> Having the elders at the table gave us the knowledge and the understanding. … they were able to put it down in the understanding of the government officials. And by doing it that way, the other party gets to understand a little more of the culture, customs, and traditions, and why some things are so important. … [The Elders] were always bringing ourselves and whoever we were negotiating with back to what was instilled in them growing up off the land. (Michell cited in Diver, 2016, p. 91)

The second demonstration is from Gunditjmara Country, in the far west of Victoria and southeast of South Australia, on fertile soils in southern Australia. About 30,000 years ago an ancestral creation being revealed himself in the centre of this landscape, and his forehead is the mountain Budj Bim, which is the source of the Tyrendarra lava flow. Here, the Gunditjmara people have led the restoration of their 6,000-year-old migratory eel and fish aquaculture system, which is built largely out of volcanic rocks, and involves engineered channels, holding ponds, chases and wetlands (Rose et al., 2016: Weir, 2009b; Wettenhall, 2010). This system was drained to create land for European-derived farming in the nineteenth and twentieth century.

In 2002, the local Aboriginal corporation founded the Lake Condah Restoration Project to guide the restoration process and 'provide the impetus for engagement, reconciliation and healing for Indigenous and non-Indigenous communities in the region' (Rose et al., 2016, p. 595). Chaired by Gunditjmara, this body brought together Aboriginal people, government officers, researchers, business, private land holders and others, to embark on this socially and logistically complex undertaking (Rose et al., 2016). They also recruited expertise to produce key documents: business plan, hydrological feasibility study, eel harvesting capacity study, aquatic biodiversity assessments, environmental flow study, cultural heritage management plan, and a conservation management plan that devised a community action plan for implementation (Rose et al., 2016, p. 596). Throughout, Gunditjmara provided knowledge of their homelands and the aquaculture system, to inform and complement the natural science expertise. This information sharing also

worked in the other direction, such as when natural science methods affirmed that hollow trees had been long used by Gunditjmara to smoke eels for trading. In 2010, the weir was constructed to restore the lake and reactivate many of the fish traps (Rose et al., 2016). In 2018 the aquaculture system was listed as World Heritage by UNESCO.

The time invested in relationships, and the support of the different documents, were considered critical to the success of this work, as Gunditjmara man Damien Bell has written:

> Today, the restoration of Lake Condah features all the relationships we have had to develop, resolve, and maintain not only with ourselves, but with other Aboriginal groups and the broader non-Aboriginal community, institutions, and governments. These relationships will be required when we commence the continuation of our aquaculture for our mob to harvest a feed of eel and fish and for our commercial trading with the rest of the world. ... The intricate relationships that our ancestors had within Gunditjmara clans and with other traditional groups are comparable to the relationships that we have developed today through the restoration project and other activities. (Bell in McNivan and Bell 2010, p. 90-1).

In these two brief demonstrations, I have sought to show how the Xaxli'p and Gunditjmara lead by:

- convincing government and other parties to accept, respect, fund and legislate the Xaxli'p and Gunditjmara land use values, including re-defining approaches to nature away from natural resource and environmental management and towards natural-cultural restoration (Diver, 2017: 9, Rose et al., 2016 599); and,
- operationalising their own governance processes to create new Indigenous knowledge as well as purchase a greater say in environmental management, including: documenting and quantifying specific elements of their knowledge on their own terms; mobilising scientific knowledge and knowledge holders to identify strategic alignments; and re-constituting their knowledge to fit with broader policy objectives (Diver, 2017; Rose et al., 2016).

There are many de/centering decolonial/Indigenous moves, and collaborations across different Indigenous and non-Indigenous positions, to generate outcomes for both nature and peoples. These are site-specific case

studies, but it is knowing/doing/being that has meaning across contexts.

Clearly, it is possible for governments and others to embrace the logics of making kin, of inter-being-relationality, of land-based thinking, of specific knowledge in the land, and how this is all part of a dialogue about justice for both nature and people. This is the Indigenous leadership that is teaching people like me how to identify modern knowledge and navigate it better so as to live together with more care. It is possible to be reflexive about modern knowledge and develop reflexive modern knowledge that centres living together on more just terms.

Conclusion

This article unpicks and re-does some of the knowledge and power binds that have generated an exclusive and exclusionary monologue on environmental management, as critiqued, documented and theorised by Indigenous leaders and scholars. This work shows how Indigenous peoples' knowledge and governance authority is disrespected, and relationships with nature have been diminished. By setting out the knowledge assumptions behind environmental management, I have sought to make these matters less opaque and thus more open to traction and utility, for those for whom these assumptions are taken for granted. I have also sought to show ways of working differently, always learning from Indigenous leaders. However, this article is not purely for the edification of non-Indigenous scholars. It is motivated by supporting the material change necessary to establish more just terms for both nature and peoples.

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Acknowledgements

I would like to thank Sibyl Diver, Kate Harriden, Paul James, and Tim Rowse for feedback on a much earlier version of this article. I also thank the Anthropocene Working Group, University of Washington, Seattle for hosting a work-in-progress seminar in February 2020, providing feedback on an early draft, as organised by Cleo Woelfle-Erskine, and co-sponsored by the School of Marine and Environmental Affairs, the Program on the Environment, EarthLab, and the Simpson Center for the Humanities. I thank the peer reviewers for their comments, especially the Indigenous peer reviewer for their thoughtful and generous feedback. I thank the editors for accepting this article within this *Borderlands* special issue, even though I was not part of the Sydney Environment Institute event. I thank my Indigenous friends and mentors for their leadership. All errors and omissions remain my responsibility.

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