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Jonathan Clapperton

Indigenous Ecological Knowledge and the Politics of Postcolonial Writing

Environmental sustainability and human relationships with the natural world have been dominant topics within the international political and cultural landscape in the last few decades. Everyone, it seems, has an opinion on this subject, and each person bases her or his argument on a range of both academic and non-academic authorities. For scholars, evaluating these contesting discourses is never easy; it is made even more difficult when Indigenous peoples and the politics of (post)colonialism are involved. Academics, as well as the lay public, must negotiate knowledge situated within cultures that can sometimes seem vastly different from their own, and that can sometimes deviate from commonly held beliefs about the natural world. Consequently, a number of important methodological and theoretical questions arise. How does a scholar, as an authority in her or his own right, decide between competing Indigenous and non-Indigenous interpretations of the environment? What are the consequences of making those decisions? What role does culture play in our assumptions about environmental knowledge? To what extent do historians themselves shape the larger narrative? How do these narratives benefit or disadvantage the peoples they are about?

In an attempt to begin a discussion around these questions, I examine the different narrative arcs that measure Indigenous and non-Indigenous claims to know the environment, as trodden by scholars and activists. I also use my own work with an Indigenous community in Canada, the Tla'amin First Nation, to evaluate the effectiveness of these various narrative frameworks. I demonstrate that the Tla'amin's history can adequately fit within a multitude of quite different—even oppositional—narrative structures, each with its own advantages. However, I also suggest that a commonality across these frameworks is that they rely on salvage conceptions of Indigenous knowledge and culture, which constrains Indigenous peoples' identities and political power. That is, there is a prominent tendency to restrict Indigenous knowledge of the environment by emphasizing an authenticity that is devoid of scientific knowledge. I end my discussion by suggesting that this binary is much more porous than commonly portrayed. But rather than merely dismissing the existing frameworks, which all have their merits and which all seek to empower Indigenous peoples, they need only be infused with some theoretical tools used in other areas of culture studies.

The first narrative framework for judging Indigenous and non-Indigenous claims to environmental authority is to argue that Indigenous ecological knowledge is structurally superior to Western scientific knowledge. This position is defended in a number of ways. “Science”¹ is likened to a religion rather than an academic discipline, and in particular to one that has maintained power through domination, intimidation, and gatekeeping, not through any real claim to better know an objective, material reality. Indigenous knowledge, in contrast, is described as holistic and as a means of empowerment through various cultural processes, such as maintaining the integrity of oral traditions and designating individuals as keepers of specialized and sacred information for the well-being of the community, both the living and the ancestors. Indigenous knowledge of the environment is also deemed superior because cutting-edge science has only recently “discovered” environmental facts that Indigenous people have long known—such as the curative properties of certain plants, or the interconnectedness among species—but which were, until recently, suppressed by Western authorities as either superstitions or evidence of primitivism. Finally, Indigenous knowledge is considered superior because, unlike Western science, it does not impose itself onto other ways of “seeing” the world and allows for many other modes of knowledge to exist alongside it. According to this framework, this furthers, rather than constrains, our overall understanding of the world around us.²

This position fragments the hegemonic hold scientific knowledge has maintained over other forms of knowledge in the West, reveals scientists as integral actors in colonial projects, and reaffirms the authority of local, Indigenous knowledge. Moreover, this framework could certainly be applied to the Tla’amin’s history. They have suffered from—and continue to be subjected to—environmental colonialism, whereby federal, provincial and municipal governments use environmental science to “manage” resources such as fisheries and forests in Tla’amin traditional territory, often without their consent or participation. Environmental scientists working for Canada’s Department of Fisheries and Oceans (DFO),

1 While “science,” or even “Western science,” is certainly not unified, in this framework the binary between science and Indigenous knowledge works to reify each.

2 See for examples Marie Battiste and James (Sa’ke’j) Henderson, *Protecting Indigenous Knowledge and Heritage: A Global Challenge* (Saskatoon, SK: Purich Publishing, 2000); Vine Deloria Jr. and Gregory Cajete, “Western Science and the Loss of Natural Creativity,” in *Unlearning the Language of Conquest: Scholars Expose the Anti-Indianism in America*, ed. Wahinkpe Topa (Four Arrows) a.k.a Don Trent Jacobs (Austin: University of Texas Press, 2006), 247–59; George J. Sefa Dei, Budd L. Hall, and Dorothy Goldin Rosenberg, “Introduction,” in *Indigenous Knowledges in Global Contexts: Multiple Readings of Our World* (Toronto: University of Toronto Press, 2000); Jerry Mander, *In the Absence of the Sacred: The Failure of Technology & the Survival of the Indian Nations* (San Francisco: Sierra Club Books, 1992); and Rik Scarce, *Fishy Business: Salmon, Biology, and the Social Construction of Nature* (Philadelphia: Temple University Press, 2000).

among other ministries, have also seriously misread environmental warning signs which the Tla'amin have noted, such as the damage industrial fishing causes to fish stocks. At the same time as this framework deconstructs and empowers, however, it has drawbacks. Notably, it leans towards a one-dimensional view of Indigenous identity in which Indigenous peoples are romanticized as all-knowing ecologists. Shepard Krech, among many others, has pointed out the problems with this stereotype, while the Tla'amin acknowledge that they too can misread and mismanage the environment. Furthermore, while this view recognizes the power imbalances between Indigenous people and Westerners, it does not do the same for power imbalances within Indigenous communities.

The second narrative framework, often labeled “knowledge integration,” essentially involves intertwining Indigenous and scientific knowledge to create a more complete and accurate understanding of the environment.³ Indigenous and scientific knowledge are thus used to corroborate and interrogate each other. Further, “knowledge integration” prescribes that while Indigenous and scientific explanations may sound quite different, they often actually refer to the same processes but are conceptualized using different metaphors. For example, Indigenous claims to kinship with the natural world can be thought of as similar to recent data from the Human Genome Project, which has found that humans share an incredible number of identical genes with animals and plants.

“Knowledge integration” is particularly important because it is the discourse that dominates co-management agreements between Indigenous peoples and government environmental agencies or university researchers in North America; it is also the position that environmentalists most often espouse. Proponents of this view argue that the framework increases Indigenous peoples’ control over their traditional territories and provides opportunities for economic growth and the cultural reconstruction of knowledge that has been lost or suppressed through colonialism. Again, the Tla'amin First Nation could be situated within this narrative without much effort. For example, Tla'amin elders and individuals at the treaty and band offices have been heavily involved in the co-management

3 Scholars who subscribe to “knowledge integration” from a variety of perspectives include: Peter Knudtson and David Suzuki, *Wisdom of the Elders: Native and Scientific Ways of Knowing about Nature* (Vancouver: Greystone Books, 2006); Nancy J. Turner, *The Earth's Blanket: Traditional Teachings for Sustainable Living* (Seattle: University of Washington Press, 2005); Bronislaw Malinowski, *Magic, Science, and Religion and Other Essays* (Garden City, NY: Doubleday Anchor Books, 1954); Bryan McKinley Jones Brayboy and Angelina E. Castagno, “How Might Native Science Inform ‘Informal Science Learning,’” *Cultural Studies of Science Education* 3 (2008): 731–50; Milton M. R. Freeman, “The Nature and Utility of Traditional Ecological Knowledge,” in *Consuming Canada: Readings in Environmental History*, ed. Chad Gaffield and Pam Gaffield (Toronto: Copp Clark, 1995), 39–46.

of recreational park areas, where they have succeeded in protecting important cultural and ecological sites that have been overlooked by non-Indigenous park managers. The Tla'amin have also established partnerships with archaeologists, combining the resulting scientific data with their oral traditions to strengthen their position in treaty negotiations, or to legally protect certain places from commercial or residential development.

Yet there is an inequality in the “knowledge integration” paradigm in that the Indigenous discourse of traditional ecological knowledge (TEK) is recognized as inherently political (which it is), but scientific discourse is portrayed as objective (which it is not). Consequently, not all scholars agree that the integration approach is useful for Indigenous people. Anthropologist Paul Nadasdy writes, “Knowledge integration takes for granted existing power relations between Aboriginals and state by assuming that [TEK] is simply a new form of ‘data’ to be incorporated into existing management bureaucracies and acted upon by scientists and resource managers.”⁴ Furthermore, environmental scientists generally only accept Indigenous knowledge as valid if it can be corroborated by scientific data. In other words, science—and by extension usually the non-Indigenous government structure—is still the final authority when it comes to interpreting, and making decisions about managing, the environment. Indeed, many Tla'amin individuals have complained about these very inequalities and how they shape an ongoing colonial hierarchy. Critics further contend that even if these structural imbalances were solved, there remains no agreement on how, or even if, Indigenous knowledge can be effectively used and integrated with modern science. It is this last criticism of incommensurability that forms the core of the third framework.

The third and final narrative contends that environmental science and Indigenous knowledge are incommensurable. One can neither mesh together knowledge structures that originate within two very different cultural contexts, nor judge them by the other's standards.⁵ Any attempt to do so will only result in the continuation of colonialism and

4 Paul Nadasdy, *Hunters and Bureaucrats: Power, Knowledge, and Aboriginal-State Relations in the Southwest Yukon* (Vancouver: University of British Columbia Press, 2003), 25. See also Julie Cruikshank, *Do Glaciers Listen: Local Knowledge, Colonial Encounters, and Social Imagination* (Vancouver: University of British Columbia Press, 2005), 257.

5 See for examples: Nadasdy, *Hunters and Bureaucrats*; Leanne R. Simpson, “The Construction of Traditional Ecological Knowledge: Issues, Implications and Insights,” (PhD Diss., University of Manitoba, 1999); Charbel Niño El-Hani and Fábio Pedro Souza de Ferreira Bandeira, “Valuing Indigenous Knowledge: To Call It ‘Science’ Will Not Help,” *Cultural Studies of Science Education* 3 (2008): 751–79. Interestingly, none of these authors discuss the concept of incommensurability as used by Jean-Francois Lyotard in his notion of the *differend*, where a dispute arises when each party employs a form of language (or discourse) incommensurable with the other, and where such a dispute is irresolvable except that one party can use its greater power to enforce its will on the other.

the growth of the settler-colonial state at the expense of Indigenous cultures. Instead, the only apt solution is to give Indigenous peoples total authority over the environment—and thus over its narrative—within their traditional territories. This is not because Indigenous knowledge is inherently superior or more accurate, but because it is the morally and politically superior outcome. This position thus asks us to base environmental authority upon postcolonial principles.

There are certainly Tla'amin individuals who feel that their people should have full control over their traditional territory. These individuals further state that certain non-Tla'amin government mechanisms of control—such as environmental policies—cause them extra work and headaches when they already have their own systems of environmental resource management that work just as well as, if not better than, those of outsider bureaucracies. There are also some who have mentioned that government environmental agencies have forced them to exist in boxes that constrict and delegitimize Tla'amin culture. Furthermore, many have expressed a great concern about opening the community to outside researchers, including me, for fear that the information gathered would be used inappropriately in ways that would harm the community.

Nonetheless, the narrative of incommensurability is entangled in an essentialist, salvage, and romantic view of Indigenous identity, one that ahistorically rejects the process of transculturation whereby Indigenous people have increasingly adopted and learned “science.” It also ignores the fact that Indigenous people themselves have chosen to redeploy science for their own anti-colonial purposes. In my research I have not come across anyone espousing the view that combining scientific methods with traditional knowledge is inherently problematic—only that doing so has often been implemented in incorrect or disempowering, colonizing ways. In fact, I found that this attempted integration is a common and accepted occurrence, and the Tla'amin use any available evidence to bolster their authority when it comes to dealing with the government and outsiders, or those within the community.

Overall, the three narratives outlined above, which seek to address the dilemma of how to write about and conceptualize competing interpretations of the environment, all have many strengths; moreover, each could be applied to the Tla'amin First Nation or myriad other Indigenous communities. But I would like to end my discussion by suggesting a means of framing this debate that engages with the tightly intertwined issues of historical interpretation, authority over the environment, and Indigenous cultural identity.

In all the above discussions about Indigenous knowledge and the environment, scholars overtly or covertly trace rigid boundaries between Indigenous and Western ways of knowing. Consequently, those Indigenous people who actually cross these boundaries rarely, if ever, receive much attention if they are “doing” science. Yet, in my discussions with Tla’amin individuals and forays into the archives, there are many instances where Tla’amin members have crossed this Indigenous-scientific boundary and do so on a regular—indeed, daily—basis. This is most apparent at the Tla’amin-run fish hatchery, where staff rely solely on “scientific” means of regulating salmon stocks and influence how the DFO operates other hatcheries. This is also the case for independent Tla’amin contractors who conduct land use studies and environmental monitoring activities throughout their traditional territories. Yet none of the above frameworks provide a space for this boundary crossing and creative knowledge production because it is seen as non-Indigenous; in such narratives, it is Westerners who “do” science, though Indigenous peoples sometimes help with data collection, and it is Indigenous peoples who have traditional knowledge of the environment, though Westerners can learn from this. Indeed, the above narratives have focused so much on recovering disempowered knowledge that they have kept the salvage paradigm alive and well.

Researchers and government agents still focus primarily on Indigenous knowledge of the environment that has been passed down for generations, is considered unscientific, has been misunderstood by cultural outsiders, and is in danger of disappearing or being overwhelmed. Though this type of knowledge is incredibly important to Indigenous people and no doubt should be valued, this narrow focus heavily restricts the knowledge over which Indigenous peoples can be considered a prime authority and a creative force, and it is one reason why science’s hegemony can hold sway when the “knowledge integration” framework is used, analytically or practically. Instead, what is needed is the recognition of a fluid, rather than a largely static and all-encompassing, definition of Indigenous environmental knowledge—one that views scientific knowledge created by Indigenous peoples as being just as authentic, authoritative, culturally important, and “Indigenous” as other types of knowledge, while still recognizing claims to “traditional” knowledge as legitimate. This idea is partly inspired by Deborah McGregor, who explains that Indigenous knowledge “must be viewed as a circle and as a process of re-generation and re-creation. It must not be constrained by linear thinking.”⁶

6 Deborah McGregor, “Coming Full Circle: Indigenous Knowledge, Environment, and Our Future,” *American Indian Quarterly* 28, no. 3/4 (Summer/Fall 2004): 404.

In other words, I contend that the umbrella under which we define Indigenous ecological knowledge needs to be significantly enlarged. Doing so would still allow traditional Indigenous ecological knowledge to be esteemed and critiques of colonial disempowerment to exist. But it would also force a reconsideration of the extent to which Indigenous peoples have been involved in influencing, and are primary agents of, knowledge construction typically seen as non-Indigenous. It could also provide Indigenous peoples with another set of discursive tools with which to attack the structure wherein their traditional ecological knowledge is sought, yet their expertise and understanding are often ignored or discredited when they deploy what is regarded as Western scientific, modern, or technical knowledge. Indeed, my experiences with the Tla'amin have shown that they are just as capable of and comfortable working within a scientific paradigm as any other; any narrative that writes them out of this position of authority is necessarily, and at best, incomplete, and at worst serves to entrench a colonial structure.

Suggested Further Reading

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