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### **Moving Beyond Widdowson and Howard: Traditional Knowledge as an Approach to Knowledge<sup>1</sup>**

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#### **Abstract**

Traditional Indigenous knowledge is increasingly recognised and incorporated both in and beyond the university. In Canada's Northwest Territories, this recognition has been manifest as policy mandating that scientists incorporate the knowledge of elders and hunters into their environmental and climate change research. However, the recognition of traditional knowledge has not always been met with acceptance and understanding. This article analyses the book *Disrobing the Aboriginal Industry* by Francis Widdowson and Albert Howard (2008), which is highly critical of traditional knowledge. Widdowson and Howard advocate for cultural assimilation by arguing that traditional knowledge is incompatible with, and inferior to, modern Western science. In their line of reasoning, the current application of traditional knowledge transplants 'neolithic' culture into modernity and stunts the ability of Aboriginal peoples to participate in modern Canadian (and dominant Western) culture. While other critics argue against the racialised and inflammatory discourse, I try to salvage insight from the authors' misunderstandings; Widdowson and Howard's failed grasp on traditional knowledge actually illuminates a fundamental problem. The problem is not in meshing Indigenous and scientific knowledge; rather, the problem is in bridging the gap between Indigenous and scientific ways of knowing. I engage the work of A. Irving Halowell, Tim Ingold and scholars of Dene knowledge and traditional lifeways to discuss how Indigenous religion and worldview create a unique approach to knowledge.

In 1993, the government of Canada's Northwest Territories developed an unprecedented Traditional Knowledge Policy designed to incorporate traditional Indigenous knowledge into all government programs and services.<sup>2</sup> Originally tested in a BHP Inc. diamond mine proposal, this policy has since had larger impact in environmental studies of the subarctic areas of the Northwest Territories, where scientists have incorporated the knowledge of elders and hunters into their research on climate change. In *Disrobing the Aboriginal Industry: The Deception Behind Indigenous Cultural Preservation* (2008), Francis Widdowson and Albert Howard are highly critical of what is called traditional knowledge. The authors argue that traditional knowledge is incompatible with, and inferior to, Western natural science. To offer an alternative to Widdowson and Howard, I engage the work of scholars of Northern First Nations peoples to discuss how Indigenous religion and worldview is predicated on specific notions of personhood and ecology. Far from inferior to Western science, this worldview creates a unique and viable approach to knowledge which has persisted for millennia.<sup>3</sup>

The Yamozha K'ue Society, previously known as the Dene Cultural Center, and the government of the Northwest Territories define traditional knowledge as 'knowledge and values, which have been acquired through experience, observation, from the land or from spiritual teachings, and handed down from one generation to another' (Government of the Northwest Territories 2005). This definition incorporates the realm of modern natural sciences, which attain knowledge through observation. It also includes Indigenous cosmology, ethics, oral tradition and religion. Perhaps most importantly, the definition suggests that the process for acquiring knowledge itself must be part of the equation. Deborah McGregor (Anishinabe) (2004, 391) states that traditional knowledge is a process of 'coming to know'. Widdowson and Howard (2008, 234), however, critique definitions of traditional knowledge, suggesting that they 'include elements that are distinct from knowledge, such as values, beliefs, and practices'.

I turn now to critiques of *Disrobing the Aboriginal Industry*. Many of these critiques caution against further public analysis of the book. However, a deconstruction of the cosmological misunderstandings of the text will illuminate differences in both Western scientific and traditional knowledge ways of knowing and elucidate a more efficacious approach to traditional knowledge, the benefits of which outweigh any further undue attention that is brought to the book.

There have been numerous critiques written of Widdowson and Howard's book since its publication. Most of the critiques focus on the authors' language and writing style, which takes what could be a productive conversation on policy and turns it into an attack on First Nation cultures. Gerald Taiaiake Alfred (Mohawk) (2009) calls the book a 'collection of distortions, omissions, and exaggerations' that is nothing more than 'derogatory and unsubstantiated attacks' on 'indigenous peoples and their allies'. Phil Fontaine (Ojibwa) (2009), former national chief of the Assembly of First Nations, states, 'It is simply shoddy scholarship' and that the authors' solution of cultural assimilation 'has been the dominant agenda for more than 100 years. It is how we got us into this mess. It is not the answer. It is the problem'. In addition, it is suggested that Widdowson and Howard present 'not facts, but ideologies masquerading as scientific theories that can neither be invalidated nor seriously debated because of their complete divorce from anything resembling empirical reality' (Buddle 2009).

Widdowson and Howard's basic assumption of social evolution and cultural superiority is called into question, as Simpson (2010, 105) reveals that they use 'disproven and outdated anthropological theory', pointing to the irony in Widdowson and Howard's use of evolutionary arguments, while the theory cited within their book is itself outdated and 'neolithic' anthropological theory. Simpson (2010, 106) makes a poignant connection between their use of outdated anthropological theory, their ignorance of Aboriginal scholarly work demonstrating benefits of traditional knowledge, and a colonial project. She states:

the basic theoretical foundation of this book, the one that permeates every chapter, is a full-hearted belief in euro-centrism, diffusionism, and universality — all which stem from a 19th century epistemological framework that provided the intellectual justification for colonialism in the first place.

Simpson (2010, 105) claims that the 'anti-intellectualism that marks this racist rhetoric is also applied here when the authors categorically ignore every serious Indigenous scholar in Canada and the United States'.

Alfred (2009) makes a similar point, asking 'Where is the analysis of Canada as a colonial regime and the broad consideration of Indigenous-state relations and the history of imperialism that forms the backdrop to any serious discussion of Canadian history and of Indigenous issues?'. Decoste and Friedland (2010, 68) suggest that instead of the evolutionary 'stages of cultural history', contemporary Aboriginal issues must be understood within a 'real history', stating, 'The root cause of the social and economic circumstances of Aboriginal peoples in Canada is to be found not in anthropological speculation, but in the responsible review of a lived history that reveals wide-ranging and debilitating injustice'.

There has been some positive response to *Disrobing the Aboriginal Industry*, particularly among politically conservative pundits in Canada. An article in the *National Post* stated 'Disrobing the Aboriginal Industry makes a powerful case that the aboriginal culture must die so that aboriginal people may live' (Foster 2009). Decoste and Friedland (2010, 76) point out that the *National Post* 'ran lengthy excerpts on February 4, 5, and 6, 2009 and has otherwise installed Widdowson as its go-to expert on Aboriginal affairs'. The Toronto-based newspaper *The Globe and Mail*, also maintains an online collection of book excerpts (Decoste and Friedland 2010, 76). *Disrobing the Aboriginal Industry* even won a position on the short list for the Donner Prize in best books in Canadian public policy for 2009, netting an award of CDN \$5000. Yet despite this support, the response by scholars and people associated with traditional knowledge has been overwhelmingly critical.

Many authors also note that further academic discussion of *Disrobing the Aboriginal Industry* is itself unwarranted, unproductive and perhaps insulting. 'It would take volumes to address the mirage of weird and unsubstantiated claims the authors make. Spending that time gives the book more credence than it is worth, and it distracts us from the real work and agendas of our communities and nations' (Simpson 2010, 107).

Alfred (2009) states that ‘serious engagement with the substance of such insulting slanders would dignify their book’, and Buddle (2009) suggests Widdowson and Howard’s “argument” is so fatally flawed as to defy serious treatment’.

While I find value in these critiques, I seek to offer an alternative critique which can be useful to an academic study of traditional knowledge and cross-cultural, or cross-religious worldview, communication and collaboration. As Decoste and Friedland (2010, 76) state, critiquing the values Widdowson and Howard use to judge traditional knowledge:

The value of traditional knowledge does not lie in whether or not similar knowledge can be obtained through other sources, whether it is completely compatible with the scientific-rationalist tradition, or whether it immediately solves the current social dysfunction in many Aboriginal communities.

Instead, they suggest that, ‘Its value resides, rather, in a commitment to reasoned dialogue over force and fiat’ (76). While this may be a value of including traditional knowledge in political, as well as broader, non-Native discourses, I am interested in elucidating the value of traditional knowledge as it stands for Native peoples and within Aboriginal worldviews, thus both differentiating my critique from other critiques of *Disrobing the Aboriginal Industry* and declining to have the conversation Widdowson and Howard propose (or more aptly provoke). I want to ignore Widdowson and Howard’s inflammatory and derogatory discourse, and examine instead the basic misunderstandings presented in their text.

What we see in their discourse is a fundamental disconnect. They fail to grasp the radically different conceptualisation of knowledge that is articulated by traditional knowledge-holders. At the same time, they fail to grasp how their own knowledge system is itself culturally situated. As Leroy Little Bear (in Cajete 2000, ix) states:

Science has been and can be defined many different ways depending on who is doing the defining. But one thing that is certain is that ‘science’ is culturally relative. In other words, what is considered science is dependent on the culture/worldview/paradigm of the definer.

A myth of modern, Western, secular ideology is that its scientific knowledge was freed from the corruptive influences of culture and religion with the enlightenment (Styers 2004, 59–63, 149–50). Gregory Cajete (Tewa) (2000, 3) states, ‘Some Western scientists insist that science must be objective to qualify as science, that it is culturally neutral and somehow exists outside of culture and is thus not affected by culture’. Rather, Cajete insists, ‘Nothing people do is divorced from culture, including systems of knowledge, technology, and education’.

The myth itself of science as divorced from culture carries cultural value, granting science an authority which can be articulated when it supports cultural arguments. I use the term ‘myth’ here purposively, not necessarily to connote ‘false’, but rather in reference to those stories and tropes which structure cultural understanding, and to place this myth of Western science on the same, level, playing field with the culturally significant myths of traditional knowledge.

Widdowson and Howard employ this myth of science in a cultural argument to discredit traditional knowledge, attacking one culture via the tropes of another. But, what is revealed in Widdowson and Howard’s attempt to discredit traditional knowledge as myth, is what is, ironically, glossed over by many supporters of the traditional knowledge policy. What is glossed over is that a fundamental problem of miscommunication will exist as long as Indigenous knowledge is taken out of its cultural context and understood within the context of modern Western science. The problem presented in a deconstruction of *Disrobing the Aboriginal Industry* is not a problem of meshing Indigenous and scientific knowledge, rather, the problem is in the gap between Indigenous and scientific ways of knowing, as different worldviews result in fundamentally different approaches to knowledge. Through deciphering the misunderstandings presented in *Disrobing the Aboriginal Industry* with an emphasis on worldview, I suggest a means toward more meaningful engagement with traditional knowledge, and a way to move beyond Widdowson and Howard.

### **Widdowson and Howard — disrobing what, exactly?**

Frances Widdowson, a professor of policy studies, and Albert Howard, a government consultant, open their book with a description of the 1996 Federal Review of the BHP Inc. proposed diamond mine in Yellowknife, Northwest Territories. This review was the first major test of the traditional knowledge policy. They state that:

No one at the session seemed to be able to identify what traditional knowledge was, let alone how it could be applied. Instead, BHP's anthropological consultants spent a great deal of time explaining that it had been difficult for them to obtain traditional knowledge because it could not be separated from its 'cultural context' (2008, 4).

From the frustration of their own ignorance, Widdowson and Howard actually bring to light that the other members of this debate, the anthropologists and scholars in favour of the policy, themselves are hindered by a lack of sufficient explanation of the differences between traditional knowledge and Western science/knowledge. Widdowson and Howard (2008, 4) go on to state that although:

a great deal of concern was expressed about combining traditional knowledge with scientific studies ... there was no attempt to elucidate how the different 'knowledge systems' or 'worldviews' could be incorporated to more fully understand ecological processes.

There is, however, a large body of literature on traditional knowledge which Widdowson and Howard ignore. Some scholars have addressed socio-political benefits and ramifications of traditional knowledge policies from an anthropological perspective (Biewlaski 2004; Nadasdy 1999, 2005; Legat 1994). Many Indigenous studies scholars have focused on the importance of traditional knowledge for sovereignty and decolonisation (Doxtater 2004; McGregor 2004; Semail & Kincheloe 1999) and others have begun incorporating traditional knowledge into the research process (McGregor, Bayha, Simmons 2010). Some scholars have approached traditional knowledge from a cosmology or worldview perspective toward ecology (Berkes 1999; Cruikshank 2005; Legat 2007), and there are a variety of more recent studies on the implementation of traditional knowledge that take into account worldview and different approaches to knowledge (Charles Menzies and contributors 2006), all of which could have addressed Widdowson and Howard's confusion.

Yet, despite this rich scholarship, Widdowson and Howard point to a lack in the literature of scholars sufficiently addressing questions of collaboration across worldview. They begin their book with this frustration to then justify their critique of the policy of traditional knowledge, and of Aboriginal religion and worldview. I too begin with their frustration, but suggest that it stems both from their own misunderstandings of traditional knowledge and the inability of anthropologists, scientists and knowledge-holders to adequately bridge the divide between these two different approaches to knowledge. A major factor in Widdowson and Howard's inability to bridge the divide is their commitments to modern Western science and society as the culmination of world history.

They state that the 'spiritual nature' of traditional knowledge makes it 'incompatible with modern research, since scientific methodology attempts to verify hypotheses by using evidence that is open to evaluation' (6). But Widdowson and Howard are not simply pointing out incompatible differences, the language they use implies a judgment against the validity of Indigenous ways of knowing.

In fact, their hard-line, anti-relativity, anti-contextual approach to knowledge demands that Native knowledge be incorrect in order for their specific brand of modern-Western secular scientific knowledge to be correct. Of course, to make these claims they also must completely ignore branches of modern-Western-science that do question objectivist approaches to understanding the natural world.

To argue against traditional knowledge, Widdowson and Howard turn to social evolution, suggesting that Aboriginal culture is 'Neolithic' culture (12–13). Difference is essentialised and universalised in terms of 'savagery, barbarism, and civilization' (12). They (219) state:

What is promoted as a spiritual connection to the land is actually a result of the absence of ecological understanding. Animistic beliefs are a reflection of the Neolithic period's lack of technological development and a lower capacity to control nature.

Here, they rely on discourses of secularisation which legitimate secular rule over the religious under the guise of 'progress'. This is not a simple religion/secular distinction; rather, religion itself is seen as evolutionary, projecting contemporary religions into some sort of timeline which ends with Protestantism and finally gives way to secularism, but begins with Indigenous religions. An Aboriginal religion, although articulated in contemporary settings, is understood as neolithic. Western science and ideology, although articulated in the same contemporary settings, is said to have had 'hundreds of years of civilization' (13).

The difference between traditional knowledge and Western science is not put forth as a different way of approaching knowledge, but as a less developed way. This line of reasoning allows the authors to state that they are actually the only ones working in the interests of Native peoples. They claim that 'liberals' who advocate traditional knowledge and its incorporation into scientific assessments, are mistakenly keeping Indigenous culture in a less evolved state. For these reasons the book has been championed among some conservatives across Canada.

### **An Indigenous ontology**

Deborah McGregor (2004, 386) states: 'In my view, to understand where (traditional ecological knowledge) comes from one must start with Indigenous people and our own understanding of the world'. Hallowell (1975) and Ingold's (2000) work on Indigenous conceptions of 'personhood' offer a way for scholars to approach traditional knowledge which elucidates this world. Anthropologist Irving Hallowell conducted fieldwork among the Ojibwe of Northern Ontario in the 1920s. Later, he would expand his field experiences into a plethora of articles examining Ojibwe ontology. Two themes of inquiry and insight would carry through these articles: the errors of an objective/subjective or mind/body distinction, and the culture-specific conception of 'personhood'.

Hallowell noticed that his Ojibwe informants did not rely on the same modern-Western distinctions between human actors and natural objects. Rather, the 'natural' world is full of beings possessing agency and power who can interact and have relationships with human-beings.<sup>i</sup> These human-beings are not important in a hierarchal position of power over nature, but rather their importance lays in their ability to have dynamic interactions with other ecological beings and to invoke their power to aid human communities (Hallowell 1975). These other beings are not to be understood as abstract spiritual entities, as Widdowson and Howard often imply, but rather as tangible, social beings in the ecological landscape.<sup>ii</sup> Helm (1994, 70) clarifies this point in her research with the Dene, stating that 'Whether an animal comes to a human being in its own form or in human guise, it is the actual animal-being that is there and is speaking'.

In an effort to displace objectivist understandings of nature, Hallowell (1975) dubbed these other actors found in the ecological landscape (such as animals, rocks, lightning, trees, wind, and what could be put under the general rubric of 'spirits') as 'other-than-human-beings' or even 'other-than-human-persons'.

Hallowell demonstrates in Ojibwe ontologies an absence of the human/nature divide and hierarchy which philosopher René Descartes introduced and which greatly informs modern-Western science. The equivalent religious hierarchy of human/god is equally non-applicable to Ojibwe, and, I would suggest, most Native American worldviews and religions (Morrison 2002a). Hallowell (1975, 98) noted that non-human actors in the Ojibwe cosmos are not abstract, other-worldly or, 'spiritual entities in the sense of being perceptually intangible beings dwelling in a spatial region remote from man', but rather they are, 'inhabitants of the same terrestrial region as men and belong to the same class of perceptually apprehensible objects as a moose, a tree, or a man'.

Tim Ingold (2000), following Hallowell, shows that non-Cartesian conceptions of personhood in the local environment are informative to Native American cosmologies.<sup>iii</sup> Ingold sets out to establish an alternative to Western enlightenment science, to account for connections, rather than areas of separation, between humans, animals and the environment.

Ingold (2000, 109) finds that Cartesian assumptions of Western science hinder one's understanding of the world. He wishes to understand, 'the continuity of the relations between human beings and all the other inhabitants of the earth'. He begins by questioning the phrases 'human being' and 'living thing' (89). That plants and animals are referred to as 'living things' establishes that they are objective organisms, while 'human being' suggests people that are knowing subjects.

That is, thing is objective while human is subjective, and living is to organism as being is to knowing. Ingold then asks, are humans not also organisms? To which science has chosen to answer in the affirmative, objectifying ourselves. Then, in a more radical maneuver for Western thought, Ingold derives from Hallowell the question, could not plants and animals be beings, subjective knowers? And, if personhood is 'to exist as a knowing subject' (90), then would not those plant and animal beings be non-human persons? This worldview distinction has radical implications for ways of knowing. Morrison (2000b, 31) notes, 'As one would expect in a cosmos constituted by persons, the Ojibwa think precisely in relational, rather than objective, terms'. Many scholars working with the Dene in particular have noted a relational conceptualisation of knowledge.

David M. Smith (1998) also engages Hallowell. He concludes from his field work with the Chipewyan Dene that to be a successful hunter one must have a, 'supraempirically derived knowledge — [called] *inkonze* — that, while never separated by the Chipewyan from pragmatic everyday knowledge, comes as a gift from animal persons', and that this knowledge 'comes only to those individuals who display respectful attitudes and actions toward human and animal persons' (413). There are two key points to take from this which I will address separately. The first is that knowledge is a gift rather than something that is discovered. It is not found out there, but rather is attained subjectively through a relationship with the giver. It is situational, personal and powerful. Ridington (1990, xiv) states about the Dunne-ze, or Beaver Dene of British Columbia, 'Knowledge, the elders say, empowers a person to live in this world with intelligence and understanding ... they recognize knowledge as a form of power'. June Helm (1994, 70) makes note of the Tlicho Dene word '*ink'on*', which is equivalent to the Chipewyan '*inkonze*', but which she translates predominantly as 'power'. This knowledge power is not abstract or objective but rather relational. *Ink'on* can denote 'a human being who is powerful, an other-than-human being that is powerful, and a powerfulness itself' (Helm 1994, 70).

The second point to take from Smith's view of *inkonze* is that knowledge is a gift which requires a respectful attitude and behavior. Nelson (1983, 226) states about the Koyukon, an Athaspaskan people in Eastern Alaska, 'the environment is like a second society in which people live, governed by elaborate rules of behavior and etiquette, capable of rewarding those who follow these rules and punishing those who do not'. I do not take this to mean that behaviour is simply judged as right or wrong, but rather, that animals are understood to be in a social relationship with humans (Goulet 1998, 63). If a person treats them poorly, they will get angry and will not want to share with that person. Ridington (1990, 89) states, 'Animals were believed to know when people behaved badly toward one another and to withdraw from contact with them'. This sharing or gifting constitutes a reciprocal relationship between humans and their ecological world. The relationship is maintained through gifting, a trade of respect from humans, while animals in turn offer their lives as sustenance (Morrison 2002a). According to Smith, this reciprocal relationship is also maintained through a trading of knowledge. Knowledge, then, becomes as much a process as a goal, which is wholly different from knowledge in Widdowson and Howard's understanding of the term.

Dene knowledge is personal and powerful, and therefore may be guarded (Goulet 1998). Yet, knowledge is also social and is shared between Dene in culturally appropriate manners. Ridington (1990, 112) states, 'people in subarctic Indian communities share knowledge about these beings as part of communicating what they know about the resource potential of an environment they hold in common'. This sharing of pertinent environmental information, he suggests, is articulated within 'the mythic language of oral traditions'. Here we see an intimate connection between power, knowledge, oral tradition and direct ecological experience. This combination creates a discursive cultural space within which the 'resource potential of an environment' may be discussed, analysed and understood.

It is precisely in this moment where traditional knowledge and western science seek to meet, a moment which proves elusive to Widdowson and Howard.

### **Widdowson, Howard, and Indigenous ways of knowing**

Examining specific moments in *Disrobing the Aboriginal Industry* lends insight into Widdowson and Howard's misunderstandings. One such example is a conversation the authors had with Francois Paulette, a Dene representative, at the BHP diamond mine assessment previously mentioned. When they asked Paulette to explain traditional knowledge he stated that, 'a man was incapable of "holding" traditional knowledge if he was abusing alcohol, using drugs, gambling, or "messing around on his wife"' (Widdowson and Howard 2008, 6). Widdowson and Howard dismiss the meaning of this statement

simply saying, ‘all that is explained is that it is impossible for certain people — those who ‘mess around’ on their wives, for example — to have this “knowledge” (6). Here, the authors flippantly make an erroneous assumption. By understanding the statement to be about ‘certain people’, they interpret this as a statement about identity, as in the type of people who cheat on their spouses.

Rather, this is a moral statement, as in, people who make poor moral decisions jeopardise their access to knowledge. Although Paulette’s quote does not demonstrate a reciprocal relationship with non-humans, we can assume the implication that animals would be leery of entering into a relationship with someone who abuses their other relationships.

Widdowson and Howard also give examples of Innu (Montagnais) people blaming poor beaver hunting on their having given beaver bones to dogs rather than putting them back in the water, and Ojibwe people blaming poor hunting on someone speaking ill of the beaver. Both of these examples suggest a reciprocal engagement with wildlife. In the first example, the Innu broke a reciprocal relationship, the beaver gave themselves to be eaten and expect their bones to be respectfully given back. The humans did not honour their end of the bargain, and the beaver presumably decided to no longer give themselves in the hunt. The second example hinges on a notion of reciprocal relationships; the beaver can communicate with humans, and in this case can even hear what the humans say of them. By speaking ill of the beaver, these Ojibwe upset the beaver listening, upsetting the delicate balance of a reciprocal relationship, and the beaver decided not to give themselves in the hunt. These two seemingly simple examples rely on a complicated ontology which is similar in the Innu, Ojibwe and Dene cases, but which is drastically different from the modern-Western-science point-of-view held by Widdowson and Howard.

Widdowson and Howard use these two examples, out of context and without explanation, to articulate that, ‘it is such taboos and rituals that are referred to when anthropologists maintain that aboriginal peoples are respectful toward animals’ (219). By describing the examples as ‘taboos’ and ‘rituals’ they portray these instances as unevolved superstition. They foreclose any recognition of the relational reciprocity displayed in the examples, and they do not allow them be utilised in articulating a different way of knowing.

In order to discount the validity of different ways of knowing, Widdowson and Howard turn to theories of evolution, suggesting that difference denotes a less evolved position, and arguing that Western science is evolutionarily superior to all other forms. The question never arises, however, as to whether Widdowson and Howard’s version of Western science is the final stage in an evolution of knowledge, or whether a new, better way of knowledge will inevitably and necessarily replace modern Western science. Gregory Cajete (2000) addresses the possibility of ushering in a new approach to knowledge and science which would be superior to Western science, one that is necessarily ecological. This new approach would not come from modern Western paradigms, as Widdowson and Howard would have it, but rather as an Indigenous response to the errors of these paradigms. Cajete (2000, 298) states that, ‘Western science appears to have no limits, no ways to be held accountable even to the people they propose to benefit’. Alternatively, Cajete’s (287) approach, ‘will not result from more, or more clever, political, technological, and scientific interventions, because these systems are founded on an inherently flawed understanding and practice of interaction with nature. It can only result from a life-sustaining cosmology, an eco-cosmology that gives rise to an eco-philosophy’. This advanced system of thought, founded on the traditional knowledge principles of an animate, social, and reciprocal world, would be, as the title of Cajete’s book suggests, a ‘Native Science’.

## **Conclusion**

Traditional knowledge differs from modern-secular-Western science in its very approach to knowledge. Rather than seeking to examine an objective world of ‘things’, it seeks to engage a relational world of other-than-human-beings. As Kenneth Morrison (2002b, 31) states about the Ojibwa: ‘As one would expect in a cosmos constituted by (human and non-human) persons, the Ojibwa think precisely in relational, rather than objective, terms’.

Rather than illuminating these differences in approaches to knowledge, Widdowson and Howard attempt to translate traditional knowledge into their own framework, and then critique the contradictions. Gerald Taiaiake Akfred (2009) states, ‘Their method here, clearly, is to try to generate an understanding of Indigenous knowledge that has little relation to actual Indigenous beliefs and which serves their own

critical purpose'. This approach leads them to assert that Aboriginal leaders have no answers to environmental problems that 'make sense in the modern context' (Widdowson and Howard 2008, 78). Widdowson and Howard understand 'modern' to be an era constituted by secular, Western science and culture, that is, their own framework. Anything religious or non-Western, especially Aboriginal culture, is not of the 'modern'. To say that Aboriginal approaches do not make sense in the modern context, is to say that they are of a different context (an Indigenous worldview) and therefore do not translate between cultures. Putting aside the question of whether or not they can be translated, the book *Disrobing the Aboriginal Industry* demonstrates that, in the understanding of at least two non-Native scholars, the attempt to translate has not been successful.

Widdowson and Howard acknowledge the problem of translation in Western scientist/traditional knowledge holder collaboration. They state that, 'scientific methods must be used to determine if traditional knowledge claims are accurate' (239). With the word 'must' they assert that Western science is required to determine accuracy. On this point I agree with them. However, their 'must' also implies 'rightly so', while I understand 'must' to imply that Western scientific methods are employed as the primary method of translation from traditional knowledge. In either case we are both raising questions about the efficacy of these collaborations. Widdowson and Howard perhaps overstate this point when they state that it is 'argued in the traditional knowledge literature, in fact, that government researchers and industry are merely paying lip service to aboriginal people's worldviews rather than giving them a significant role in the policy process' (245). Although I disagree with Widdowson and Howard's conclusion that 'government researchers and industry' should not take into consideration Aboriginal worldviews, the question remains, can and are these researchers adequately engaging a different kind of knowledge?

This article begins to approach the question of effective collaboration across worldviews. This question must start with a discussion of the differences in traditional Indigenous and Western scientific worldviews.<sup>iv</sup> In this article, I have sought to offer a starting point for this discussion, through the work of Widdowson and Howard, whose criticisms of traditional knowledge present an example of the errors of approaching traditional knowledge through a Western-scientific ideological framework. But their example represents the worst of this problem, and therefore ought to be only the beginning of this study. This article, then, is in part a call for more study of the differences in ontological, cosmological and religious worldview between modern, secularized, Western science and traditional knowledge.

It is also a call for more study on the conversations between non-Native researchers in Canada's Northwest Territories (climate change scientists, scholars working on issues of natural resource extraction, or critics such as Widdowson and Howard), and traditional knowledge holders. What is needed now is to move beyond divisive, dismissive and neocolonial rhetoric which offers no viable solutions to modern ecological and social issues affecting Indigenous communities. What is needed instead is a collaborative environment which allows for traditional knowledge to be articulated, and heard, within its own cosmological worldview. Perhaps then all knowledge holders, Indigenous and Western alike, can begin to move beyond Widdowson and Howard.

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<sup>i</sup> For more on Indigenous cosmology, ecology and relationships with non-human beings see: Astor-Aguilera 2010, specifically chapter 7 on Native American relational worldviews; Morrison 2002a, 2002b; Shorter 2010; Swanson 2009.

<sup>ii</sup> I use the term 'ecological landscape' rather than 'natural environment' to denote an intimate, subjective knowledge and relationship with 'nature'. The term 'ecology' offers an understanding of ones environmental surroundings more congruent with Hallowell's description than 'nature'.

<sup>iii</sup> Other scholars working specifically with the Ojibwa and traditional ecological knowledge have turned to Hallowell's work as well. Baird and Nelson, *American Indian Environmental Ethics: An Ojibwa Case Study* (2004), focus on worldview in their exploration of what Indigenous thinking can offer modern discussions of environmental ethics.

<sup>iv</sup> By focusing entirely on difference I do not intend to imply that there are no similarities. A study of similarities which takes seriously fundamental cosmological differences would be an important next step in addressing meaningful collaborative work.