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## What Can Traditional Indigenous Knowledge Teach Us About Changing Our Approach to Human Activity and Environmental Stewardship in Order to Reduce the Severity of Climate Change?

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# What Can Traditional Indigenous Knowledge Teach Us About Changing Our Approach to Human Activity and Environmental Stewardship in Order to Reduce the Severity of Climate Change?

## **Abstract**

Many Indigenous communities living on traditional lands have not contributed significantly to harmful climate change. Yet, they are the most likely to be impacted by climate change. This article discusses environmental stewardship in relation to Indigenous experiences and worldviews. Indigenous knowledge teaches us about environmental stewardship. It speaks of reducing the severity of climate change and of continued sustainable development. The methodology that directs this research is premised on the notion that the wisdom of the Elders holds much significance for addressing the harmful impacts of climate change in the present day. This article's fundamental assumption is that Indigenous knowledge offers practical and theoretical recommendations to current approaches to human activity and environmental issues. We share findings from interviews with Cree Elders who discussed their worldviews and knowledge systems. Findings revealed that Indigenous knowledge offers a philosophy and practice that serve to reduce the severity of climate change.

## **Keywords**

Indigenous knowledge, Elders, traditional teachings, land-based education, climate change, environmental stewardship

## **Acknowledgments**

To the Elders of the Swampy Cree Territory of Northern Manitoba.

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## **What Can Traditional Indigenous Knowledge Teach Us About Changing Our Approach to Human Activity and Environmental Stewardship in Order to Reduce the Severity of Climate Change?**

Many people around the world have become materialistic and money orientated. However, a Cree worldview teaches us that the resources of the world are gifts from Manitou (The Creator) and that we must respect these gifts (Antsanen & Hansen, 2012; Champagne, 2015; Ermine, 1995; Hansen & Calihoo, 2014; Truth and Reconciliation Commission of Canada [TRC], 2015). Indigenous knowledge has sustained Indigenous lands for thousands of years, and it promotes values that compel people to have a reciprocal relationship with the environment. Such a reciprocal relationship with the natural world challenges the prevailing overexploitation of resources. The purpose of the article is to discuss the knowledge of Cree Elders indigenous to Northern Manitoba as it relates to climate change. More specifically, we will discuss the worldview of Cree Elders from Northern Manitoba in order to avoid presenting a homogenous Indigenous worldview. The major postulation of this study is that Indigenous Peoples have crucial traditional knowledge, important values, and culture, which provide a model for environmental stewardship that can serve to reduce the severity of climate change.

### **Relevant Literature**

The literature on climate change and Indigenous people is both cultural and traditional. Indigenous people are perceived as the "stewards of the land." The West colonizes, develops, progresses, modernizes. The Indigenous world resists colonization and assimilation. Instead of embracing colonization, some Indigenous communities attempted to retain their social and cultural way of life (Adams, 2000; Antsanen, 2014; Blaut, 1993; Champagne, 2015; Hansen & Antsanen, 2015). Many Elders have stressed the importance of maintaining Indigenous culture and knowledge, and they advocate for the reproduction of Indigenous culture and values. This resistance to colonialism has been a major factor in the preservation of traditional Indigenous knowledge and culture (Antsanen, 2014; Champagne, 2015; Hall et al., 2015; Hansen, 2015; Michell & Akienehead, 2008).

Harmful climate change has become a crucial issue. With the increased intensity of storms and natural disasters, and in the midst of intensified droughts, the Indigenous world is now actively inserting itself very firmly in climate change consciousness (Hansen, 2015; Ishaya & Abaje, 2008; Michell & Akienehead, 2008). Indigenous knowledge, in its relation to an Indigenous worldview, provides us with a model for environmental stewardship in order to reduce the severity of climate change. Ishaya and Abaje (2008) observe that Indigenous Peoples "are vital and active parts of many ecosystems may help to enhance the resilience of these ecosystems. Their livelihoods depend on natural resources that are directly affected by climate change" (pp. 137-138). Indigenous knowledge is considered a major factor in challenging climate change even though some parts of Indigenous knowledge have been eroded or lost through colonization. However, its most basic tenets remain in existence, and so the knowledge as a whole has not been wiped out or destroyed by colonization.

Although there are many distinctions between Indigenous nations and their epistemological systems, there are also significant similarities such as the respect for the Elders and the land (Antsanen, 2014; Aikenhead & Michell, 2011; Cajete, 1994; Charlton & Hansen, 2016; Charlton & Hansen, 2017; Ermine, 1995; Hansen, 2009). Indigenous communities and their cultures recognize that the Elders are knowledge keepers (Champagne, 2015; Hansen & Antsanen, 2015; TRC, 2015). The old Cree people

teach the importance of environmental stewardship through respect for the land, water, animals, and plants.

### **Articulate How and Why Indigenous Knowledge and Culture Can Address Climate Change**

Indigenous knowledge has much to offer for changing human activity and promoting environmental stewardship. Yet, the approach often used by government and industry is to compensate Indigenous Peoples for damage to their lands and resources as a result of economic activity. Compensating, in part for the exploitation of the natural world, is counter to Indigenous culture, values, and ideas, consisting of traditional teachings, reciprocity, relationships with nature, spirituality, and so on. It could be argued that nothing could completely compensate Indigenous Peoples for damage to lands and resources, so the exploitation of the Indigenous world should not be excused.

As Furgal and Seguin (2006) noted, “all over the world, including across Canada, Indigenous and local peoples have noted recent changes in weather patterns and have observed their effects on species’ life cycles, productivity and interrelationships” (p.180). Such changes in weather patterns are noticed by Indigenous communities, which have also experienced a disproportionate amount of hazardous dumping in or near the communities they live; it is, in other words, environmental racism, “the idea that non-whites are disproportionately exposed to pollution” (Pulido, 2000, p. 532). Champagne (2015) concurred that during “the 1960s many environmental activists and scholars became aware that a disproportionate amount of waste, poor water and bad air were found in minority and poor communities” (p.100). These environmental hazards have harmed Indigenous communities. As Wright and White (2012) advised, “the development of oil and gas resources can also lead to economic inequality, inflation, social upheaval, displacement, housing shortages, social tensions, loss of traditional lifestyles, and significant environmental damage” (p. 1). However, Indigenous knowledge holds hope and optimism for coping with loss and may even be much needed in the struggle to reduce the severity of climate change.

The response of Indigenous Peoples to the harmful effects of climate change is perhaps the primary display of Indigenous people’s connection with the environment. Ishaya and Abaje (2008) noted that Indigenous Peoples tend to “interpret and react to climate change impacts in creative ways, drawing on traditional knowledge as well as new technologies to find solutions, which may help society at large to cope with the impending changes” (pp.137-138). Although Indigenous societies did not contribute much to climate change, they are impacted by it immensely (Green & Raygorodetsky, 2010; Wright & White, 2012). According to Green and Raygorodetsky (2010), “Indigenous people living on their traditional lands bear little responsibility for current and future projected consequences of a changing climate. Despite this, they are likely to suffer the most from direct and indirect climate change due to their close connection to the natural world and their reduced social–ecological resilience—consequence of centuries of oppressive policies imposed on them by dominant non-Indigenous societies” (p. 239). Although Indigenous people have been exploited in many parts of the world, they must be credited for adapting to forced changes brought on by colonization and using these adaptations to develop resiliency against harmful and destructive climate change.

## Worldview

In colonial societies, the West exploited the Indigenous world: Indigenous people, their lands and resources. However, Indigenous knowledge is now receiving significant attention as a result of climate change, and, in this context, they are receiving recognition as stewards of the land (Champagne, 2015; Ermine, 1995; Hansen & Antsanen, 2016). Yet, even when a peoples' culture and worldviews are oppressed, there are still other ways of interpreting the world. Champagne (2015) noted that the "worldview of Indigenous peoples includes relations with plants, animals, and cosmic powers of the universe" (p. 127). Such worldviews compel people to respect human and non-human life, including the land, plants, and water. Champagne (2015) wrote: "Traditional worldviews do not see tribal governments or nations of humans as the central force or beings of the universe, but as beings who share the universe with other powers and nations of human and non-human beings" (p. 127). Therefore, Indigenous worldviews teach that humans are not above nature. Instead, they see themselves (humankind) as a humble part of nature.

Indigenous languages are significant to Indigenous knowledges because they embody crucial understanding of worldviews, cultures, and identities. Cajete (1994) has discussed the connection between language and spirituality:

Language is an expression of the spirit because it contains the power to move people and to express human thought and feeling. It is also the breath along with water and thought that connects all living things in direct relationship. (p.42).

In the language of the Cree, *Ininew* was the original name for the people, but that name was changed to "Cree" by the colonizers. Smith (1999) observed that reclaiming language and naming the world in accordance with Indigenous languages is important for decolonization. Naming "is about retaining as much control over meanings as possible . . . [by naming the world] . . . people name their realities" (p. 30). Smith (1999) has discussed the significance of decolonization as it relates to recovering Indigenous interpretations of the past and centering Indigenous worldviews. She wrote, "part of this exercise is about recovering our own stories of the past . . . centering our concerns and worldviews and then coming to know and understand theory and research from our own perspectives and for our own purposes" (p. 39). Ermine (1995) has discussed the Cree worldview as a basis for holism; he noted that for the Cree, the "fundamental insight was that existence was all connected and that the whole enmeshed the being in its inclusiveness" (p. 103). Ermine further explained that negative effects occur when we fail to look at things holistically: "We see the wretchedness and world despair that Western science has produced based on this fragmentary worldview" (pp. 102-103). Herman (2015) concurs that colonization has functioned to reduce Indigenous ways of knowing to caricatures and gross distortions.

Spiritual ceremonies long considered the main avenues for developing and reinforcing our worldview and passing on our Indigenous knowledge systems, were legally banned in Canada . . . Early colonizers and priests often made a mockery of Indigenous ways of knowing and being which led people to begin questioning their own healers and spiritual leaders (Michell, 2015, p. 90).

However, in terms of reconnecting with traditional teachings, Cajete (1994) noted that the idea of "breath—consciously formed and activated through language, thought, prayer, chanting, ritual, dance,

sport, work, story, play, and art—comprised the parameters of communication in Tribal education” (p. 43). We would have to see that Indigenous people valued the spiritual power of spoken words in the sense that words can help one heal.

An important concept that Elders often emphasize is the value of reciprocity. It is important to be reciprocal in our relationships with the land and the natural world. As Cajete (1994) advised, “thinking the highest thought means thinking of one’s self, one’s community, and one’s environment richly” (p. 46). Thinking the highest thought also includes thinking of the environment because without a healthy environment there cannot be a healthy community.

For Indigenous people the land is paramount, and this cultural significance is reflected in the notion of Indigenous people’s deep-rooted connection to the land (Antsanen, 2014; Cajete, 1994; Champagne, 2015; Ermine, 1995; Wotherspoon & Hansen, 2013).

What these cultures have done, however, is to forge through time and ritual a relationship to the earth that is based not only of deep attachment to the land but also on far more subtle intuition—the idea that the land itself is breathed into being by human consciousness. Mountain, rivers, and forest are not only perceived as being inanimate, as mere props on a stage upon which the human drama unfolds. For these societies, the land is alive, dynamic force to be embraced and transformed by the human imagination (Davis, 2009, pp. 123-124).

The old people teach us that the land is alive, and that it is important to respect the land that sustains us. As Michell (2005) noted, “it is often said the earth feels the pull of her hair when plants are picked. Strict protocols are used to ensure ethical conduct and reforestation of balance” (p. 6). Therefore, Indigenous environmental stewardship is holistically interrelated with cultural, environmental, and social ways of life.

### **The Elders**

The search for knowledge in the Indigenous world necessitates visiting the old people and listening to their words. How were Elders selected? The Elders were selected due to the development of a relationship between the researcher and the Elders that spanned many years. These Elders had been instrumental in teaching the researcher valuable lessons about life; in particular, Sylvia Hansen who is the first teacher and mother of the researcher (John Hansen). We wish to express deep thanks to the Elders: Stella Neff, Sylvia Hansen, John Martin, William G. Lathlin, Dennis Thorne, and Jack (pseudonym) for participating in this study. Since the researcher developed a personal relationship with the Elders while living in the North, they were selected to participate in this study.

### **Method**

This study applies qualitative research methods. Creswell (1998) instructed that qualitative research is appropriate when the research question asks how (p. 17). In this research, the Elders were asked how they see the world. As Creswell (1998) goes on to say, in qualitative research, “the researcher builds a complex, holistic picture, analyzes words, reports detailed views of informants, and conducts the study in a natural setting” (p. 15). This study also utilized Indigenous research methodologies. As with many other Indigenous cultures, the Cree have a custom to respect the Elders and often turn to them in the

search for knowledge (Ermine, 1995; Hansen, 2013). In this study to ensure the interviews were culturally appropriate and followed Indigenous protocols, the Elders were offered tobacco, sweetgrass, coffee, and a meal. These offerings acknowledge the Elders for sharing their knowledge and is a reflection of the cultural value of reciprocity.

### **Data Collection and Analysis**

Data was collected through open-ended interviewing, field notes, and general observations. The aim of the research was explained to the Elders before they were interviewed. The interviews were done at a time and place chosen by the Elders, which enabled the Elders to express their perspectives and knowledge. The interviews were audio recorded. The researcher (the first author) transcribed the interviews in order to develop a solid understanding of the data. The collected data were analyzed for themes from which we drew conclusions. This study was approved by the Research and Ethics Board at the University of Regina.

### **The Elders Views of the World**

When asked, “In your view, are there differences in your way of life and the way you see the world as compared to mainstream Canada?,” John replied:

Yes, we know that the way we see ourselves as a Native person or an Aboriginal person is that there are two laws, the law of nature with the creator and the law of manmade. Anything that has to do with nature we know we have to be careful in how we conduct ourselves, how we treat people, anything like that in how we treat it . . . You see in life, in our way, which we are as a person, I am a Cree they say, but for me the word Cree doesn't mean anything to me. Being Inninew, I am a four directions person. That's what it means, Inninew it means four, I have my mind, my body, and also I have a spiritual being, I have feelings. (John)

This response by John illustrates the way he perceives himself and understands the world is reflected in the language of the Inninew (Cree people). The word for a Cree person, Inninew, connotes much deeper understanding than the Anglo term Aboriginal. In conceptualizing his Cree identity, John defines the term Inninew, as “a four directions person.” The language of the Omushkegowuk<sup>1</sup> people, therefore, provides valuable conceptualizations into our worldview. Inninew is, in other words, an interpretation of holism and identity from an Indigenous point of view.

Much like John, Stella responded to the opening question in accordance with a worldview difference. She states:

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<sup>1</sup> The Omushkegowuk are known as the Swampy Cree (Omushkegowuk means “people of the muskeg”). They are the section of the Cree people who live in swampy areas throughout northern Ontario and northern Manitoba (along James Bay and Hudson's Bay). They speak the n-dialect of the Cree language and the Omushkegowuk people are also called Inninew, which means “the people.” The study took place on Opaskwayak territory, which is an Omushkegowuk, Swampy Cree community some 600 highway kilometers northwest of Winnipeg near the Saskatchewan border.

Yes there are definite differences in my way of life especially in my past way of life and the way I look at the place where I lived which was Mosakahiken Grand Rapids very different in the way I was raised because up until my teenage years there was no highway into Grand Rapids, there was no hydro damn and there was no RCMP and no nursing station. People relied on their own systems for nursing and for justice and also for living because there was only one little store that had the supplies. As soon as Manitoba Hydro brought in the road they built the beer parlor and brought liquor into the community. And as soon as the beer parlor came in, the police came in, and the nursing station was built and that was the beginning of the sickness of the people in Grand Rapids and also the destruction of the way of life that the people had. We had no electricity but life was better, we had no plumbing, but life was better, and we had no TV, no radio, but we still, I still say that life was better for us as Cree people because we didn't rely on the stores that we do now and the TV for entertainment and all the other things that Manitoba Hydro brought into the community . . . I see my world especially Grand Rapids my land differently. When people think of housing they think this is my house. Well I think of all the trapping areas, the sacred areas, all the areas that are sacred to me just like it is part of my house, and I look after it because that's the way it is supposed to be for us to look after the land because it has sustained us for thousands of years . . . I look at my land at our land differently compared to the people that moved in there and just think about logging and cutting down trees and flooding. They have flooded the rest of the area and now they are coming in and just totally cutting down all the trees and just destroying the land destroying the wildlife and I feel very protective of the land and yet I feel so very helpless. (Stella)

Stella indicates that the land holds sacred purpose and meaning, but that the exploitation of the natural world brings sickness to the people. Certain places where the land and wildlife were destroyed are no longer in existence. Stella feels very protective of the land, which shows respect for the gifts. For Stella, life was better before modernization, and the exploitation of the land is very much connected to emotional attachment. Stella states, "I feel so very helpless," which is indication of Indigenous people's marginalization.

However, Sylvia's response to the question is seemingly indirect probably because she interpreted the question in the context of differences in the Western education system in the past and the present. Sylvia states:

Well, when I was in the boarding school those schools were so different than compared to the schools now. It was pretty strict but, at the same time the kids were more behaved, there behavior was much better than the ones I see now . . . [pause] . . . But that was the same thing in the day schools, on the reserve they were the same kind, like my father he had a teacher her name was Mrs. Macmillan, at the Big Eddy day school. And that teacher would go to church and if she sees that one of the children was not there she would ask them the next day on Monday why they were not there in church. That's how; I guess she was a very strict that way. (Sylvia)

Sylvia's response demonstrates the ways in which Indigenous worldviews were colonized by the Church and government run residential schools. Sylvia state later that:



... there used to be lots of old people who would talk to young people and tell them to ... They used to advise kids about things ... A lot of the old people at that time used to tell the girls to watch for themselves at that time so that they don't get in trouble like to go and get pregnant. Those people used to tell that to the kids. But that's the same thing with the boys, they were told to behave. (Sylvia)

Sylvia's statement reflects the culture of the Cree in the sense that the Elders' guided younger people into the realm of knowledge and passed on the values and traditional teachings. Similarly, William responded to the question by stating:

There are many differences in my language, the food that I eat the preparation of my food and those have an impact on my health right now because I sort of changed my ways. Rather than preparing my own food I buy it at the store. In the old way, to me, it was the best way to prepare the food. Those kinds of things and also the home life are kind of different too. Like before there were harmony and peace and all of that growing up as a child and now there is not that with my kids. I don't have the communication that's supposed to be there with my children because I lost that somewhere. And that's one of the basic teachings of our people is to be able to communicate with yourself and your surroundings and everything in your environment actually. And that I guess is the way of life that is our culture. To me, culture is the way you live it's not just your language, your music, food and all that, it's the way you live. And that's something that has slowly been eroded by what's been going on in today's society. The education system and I guess the colonial things that came with it. When they said that our language was no good, and what we did and the way we speak was no good, and the English language was the best. And that's something that I've found to be in conflict with me as a person. (William)

William expresses his worldview in which one must show respect for the gift of resources from the environment, particularly the food it provides, and he speaks of environmental stewardship: gather your food, prepare it, know it, and appreciate it. Similarly, Dennis tell us that environmental stewardship is part of the teachings from the Creator:

... When the Creator first put the Indigenous people on this Earth no matter what nation or what country they were given laws to live by. According to the Cree and the First Nations in Canada they were given a way of life they were given instructions on how to live they were given responsibilities on how to look after the land, the animals, and the water. You may hear some Elders say that they were stewards of the land. What they mean is they made an agreement with the animals a long time ago. In the time when they could communicate with the animals they spoke the same language and the animals said that they would give their lives to us to eat if we respected them and looked after them. To give something back, the first hunt the first kill, whether it was animals or fish, the four legged to give something back in order to respect the life that they gave. (Dennis)

This statement by Dennis refers to environmental stewardship: "they were given laws to live by" is a reference to taking care of the land, the animals, and the environment. Dennis points out the responsibility to "look after the land, the animals, and the water," and he also illustrates the value of reciprocity. As Dennis explains, the animals "give their lives to us to eat if we respected them and looked

after them.” For Dennis, the animal offers itself so that the people can live, and that humans must respect and nurture the gift. Dennis states later:

Today is a big issue about environment. There wasn't from our thinking that the environment turned out the way it did. It was from another way of looking at life and other worldview that is not ours so today we all have to suffer. And if we take another look at our laws I think we can help them understand that our laws are not based on greed . . . Ours is based on good health, help, understanding and happiness. Our laws are for those four things only, for the survival of the people, for the survival of medicines, the survival of animals, the winged ones. So these laws are not only to protect the Earth, but all humans all life. (Dennis)

Within the context of environmental stewardship, Dennis explains that we must continue to respect the gifts of the Creator. If we do not respect the gifts, as Dennis puts it, "we all have to suffer." Therefore, respect for the land is a theme that emerges in their conceptions of worldview. Dennis states:

Natural laws travel in a circle or a cycle. When you put out something it's gonna come back whether it's positive or negative. You put out a positive that's what will come back, you put out a negative that's what will come back, either to you, your family or intergenerational, the effect will come back. It will keep going unless you restore it to balance and harmony in a good way. We had ceremonies to put an end to a negative cycle whether it was grieving or conflict, whether it was between families, individuals, between communities or between nations. We had a way of restoring balance and harmony and the pipe was used to restore peace and harmony. (Dennis)

Dennis expresses that the cycles and patterns in nature function in harmony with environmental stewardship. You should not exploit the land because it is negative and, by instilling negative relations, it comes back as negative effects, which can be interpreted as harmful climate change as a result of negative human activity that does not respect the gifts.

When asked, “Is there a connection to the land in terms of peacemaking methods?” John responded:

Well that's part of it. They say the natural law is how you understand my culture, land, and language. And our young people, having their own minds developing and to develop the mind, we need to know this is the way we have to do it. And we have to use our own ways, our mind that comes from the spirit, the spirit world, the Creator, the clans, the four directions, that's the way we have to develop that understanding. (John)

This passage illustrates that John draws a connection between culture and language, and between the mind and the spirit. The connection is holism. Such a connection reflects the importance of Indigenous spirituality. Thus, there is a spiritual connection to the land and harmonizes with environmental stewardship. In her response to the same question, Stella explains:

When you're so dependent on the land like we were then the land had to be a part of every decision because that's what sustained us, so protecting the land and protecting the hunting areas, the trapping areas, and all of the water areas, it had to be above all protected from any damage. So I think that if there was any conflict in these areas it was considered very serious, especially if there was any kind of environmental damage done by the wrongdoer and I am

specifically thinking about setting fire or things like that could destroy so much land and sometimes they talk about it where they are just as some people on an island my brother went there for three or four days on an island because he was drinking too much and so my father just dropped them off there. So that was something he could think about for a few days later but he never forgot that experience, he never forgets it because he saw himself there when you start getting hungry and when you start seeing visions and when you start seeing himself he became scared and so that's one lesson we used to go and see visions. (Stella)

In Stella's answer, it is interesting to observe the spiritual connection to the land, which is reflected in Cree traditional practices that sought the vision quest, which helps us find purpose and meaning in life. Thus, the land was used for teaching values for life. In his response to the question, William stresses the connection to the land and feelings of peace.

There has to be that connection because if there isn't, to me, then it's all hostile. There is no peace, if you go out into the bush by yourself it is so peaceful, and you can hear the bugs on the floor or on the grass and the trees. (William)

William's response emphasizes the importance of the land and as the traditional way of life upon which our society was structured. It appears to me that the Elders demonstrate the significance of maintaining a reciprocal relationship with the land.

### Summary of the Elders' Worldview

In the context of worldview, the Elders identified factors that promote Indigenous knowledge as well as factors that obstruct Indigenous knowledge (Table 1). The themes are summarized in Table 2.

**Table 1. Factors Affecting Indigenous Knowledge by Participant**

| Participant     | Promote Indigenous Knowledge  | Obstruct Indigenous Knowledge   |
|-----------------|---|---|
| Stella Neff     | Elders teachings, ceremonies, vision quest, connection to the land, stories, counseling from the old people             | Disconnection from the land, residential school experience  |
| Sylvia Hansen   | Elders teachings, spirituality  | Residential school experience   |
| John Martin     | Language, spirituality, connection to the land, ceremonies, sweat lodge, healing circles, vision quest, the old people, | Mainstream justice system, exclusion of spirituality in the courts, exclusion of community in the justice process |
| William Lathlin | Elders, connection to the land, language, ceremonies  | Disconnection from the land   |
| Dennis Thorne   | Traditional teachings, ceremonies, sweat lodge  | Erosion or loss of traditional knowledge  |

**Table 2. Identifying the Themes in the Worldview**

| <b>Factors That Promote Indigenous Knowledge</b> | <b>Factors That Obstruct Indigenous Knowledge</b> |
|--|---|
| Traditional teachings                            | Disconnection from the land                       |
| Ceremonies (sweat lodge, vision quests)          | Residential school experience                     |
| Spiritual connection to the land                 |   |

### **Discussion Contextualize the Interviews with the Elders**

#### **What Does Climate Change Look Like From Their Personal, Cultural, and Geographic Perspective?**

The Elders had a consciousness rooted in traditional knowledge that harmonizes with efforts to challenge harmful climate change. The Elders said that the traditional teachings they have experienced or witnessed in their time are primarily concerned with respecting the environment and teaching appropriate conduct in order to promote respect for the natural world. However, the Elders expressed that Western colonialism had changed relationships in their communities and with the natural world. The Elders expressed that colonial education, that is, residential schools, were instrumental in shaping negative perceptions of Indigenous identity and culture that weakened the people. The Old One's expressed that restoring Indigenous knowledge would play an important role in healing the people from colonialism.

The thematic healing factors identified by the participants were, traditional teachings, Indigenous knowledge, the value of reciprocity and a spiritual connection to the land. The Elders tend to think holistically in terms of their worldviews on environmental stewardship. The notion that Indigenous worldviews are holistic is reflected in the Elders responses including the need to perpetuate Indigenous knowledge. In the problem that concerns us most, that of reducing the severity of climate change, the teachings put forward by the Elders are in harmony with Indigenous knowledge reflecting the stewards of the land theory. We have discussed some of the cultural reasons why Elders remain committed to reproducing Indigenous knowledge as valuable teachings for protecting the environment.

### **Conclusions**

This study discussed Indigenous knowledge as a model that can teach lessons for environmental stewardship in a Cree context. In recent years, there has been an outpouring of research that strongly encourage changing our approach to human activity in order to reduce the severity of climate change. Upholding the Indigenous stewards of the land theory in the Cree context, we have discussed the Elders' worldviews as it relates to the environment, the effects of colonialism, and the importance of Indigenous knowledge to the well-being of people and the environment. New stories (or revised forms of old

stories) are put forward about the reasons for or significance of traditional Indigenous knowledge and there are discussed in relation to environmental stewardship. The Cree Elders provided teachings that promote respect for the environment.

### **Recommendations**

This study recommends enhancing and supporting Indigenous knowledge in the public schools, community colleges, and universities in Canada and in other countries around the world. Integrating Indigenous knowledge into schools will contribute to conscious awareness of the reality that Indigenous knowledge supports sustainable development, with the implication that the land is to be protected and preserved for future generations. Therefore, it is our hope that integrating Indigenous knowledge into schools and teaching the issue of climate change and environmental stewardship in schools will serve to improve environmental practices in Canada and other parts of the world.

Indigenous knowledge needs to be incorporated into training programs related to disaster planning, land-use development, environmental preservation, and strategies for sustainable development. Indigenous knowledge holders are dedicated to raising awareness about climate change because without social change harmful climate effects will continue to develop to the detriment of all people throughout the world.

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