Research as Reciprocity: Northern Cree Community-Based and Community-Engaged Research on Wild Food Contamination in Alberta's Oil Sands Region

Janelle Baker

ABSTRACT   In this paper I suggest that it is possible to participate in research as an act of reciprocity; when a community asks a researcher for help on a specific topic, the application of that researcher's skills can be one of the ways they show appreciation for being welcomed into a place. I also argue that a researcher needs to be sensitive to, and participate in, systems of respect and reciprocity belonging to the people, ancestors, and sentient landscape of the place they are doing research. I critique the extraction of traditional knowledge in the traditional land use consultation industry in Alberta, Canada that is used in place of the Federal Government's duty to consult First Nations regarding their Treaty rights. As an alternative to traditional land use assessments I provide a description of the methods used in projects that test Fort McKay First Nation and Bigstone Cree First Nation's wild foods for contaminants resulting from oil sands activities in northern Alberta's Treaty No. 8 region.

KEYWORDS   community-based monitoring; oil sands; Treaty No. 8; pollution; traditional land use

It was a life-changing coincidence. I defended my Master of Art's thesis in anthropology at the University of Alberta the same year that the Mikisew Cree Nation defended their Treaty rights to be consulted regarding the impacts of industrial development on harvesting from their traditional territory (S. C. o. Canada, 2005). At the time, I was only vaguely aware of the case and its implications, since I had been working with a Wixárika (Huichol) community in Mexico for my Master of Arts research. This research in ethnoecology and environmental anthropology coincidentally prepared me for employment in Alberta at a time when government agencies and natural resource extraction companies grappled with the ramifications of the Mikisew Cree Supreme Court ruling. I was hired almost immediately after completing my degree to work for a small consulting firm to assist in traditional land use assessments and studies. These assessments, based on methods from earlier traditional land use and occupancy studies (Tanner & Rigney, 2003; Tobias, 2000), are designed to predict the future impacts (Westman, 2013b) proposed projects will have on First Nation's Treaty rights. Government and companies use traditional land use assessments in place of consultation and roll them into the environmental impact assessment application process. Both the Alberta and Federal Governments have drafted

guidelines for traditional land use consultation (Alberta, 2007, 2013; Government of Canada, 2011) that transfer their duty to consult to "third parties" (meaning project proponents) and a consultation industry has grown out of these requirements.

While I criticize this replacement of the duty to consult with traditional land use assessments in more detail elsewhere (Baker and Westman, forthcoming), as do other scholars (Laidlaw, 2014; Passelac-Ross, 2007; Reddekopp, 2013; Westman, 2006, 2013a, 2013b)2014; Passelac-Ross, 2007; Reddekopp, 2013; Westman, 2006, 2013a, 2013b, it is worth noting here that the Provincial and Federal governments are in clear violation of the Treaties signed in the region (G. o. Canada, 1899)and the United Nations Declaration on the Rights of Indigenous People, especially the right to free, prior, informed consent (Council, 2015; United Nations, 2008). In my job at the consulting firm, I quickly realized that traditional land use assessments are not truly consultation, but are instead an unchallenging hurdle for companies to pass over in the approvals process. Traditional land use assessments are a part of the science-for-hire processes that enable companies to develop on First Nations' traditional territories unfettered, by claiming that their projects will have "no significant impact." Consequently, in just over a year I left the firm and became an independent consultant for First Nations on a contract basis to assist with the unending influx of requests for consultation First Nations receive from project proponents, with impossibly short deadlines.

After about six years of doing applied research, I was frustrated with the imbalance in power in the northern Alberta oil sands region, and I wanted to respond to the concerns from First Nations that I was hearing repeatedly, concerns that are being whitewashed through the environmental impact assessment process. I knew that I needed to reciprocate within the personal relationships that had come to me through traditional land use fieldwork and to reciprocate for all of the knowledge I had extracted to put into reports. Not only had people helped me go out on the land and complete my work, but they continue to share with me and have ongoing conversations with me in ways that are meant to teach me specifically (Cruikshank, 1998). I enrolled in doctoral studies at McGill University in anthropology with the idea that it was the best way to gather resources and dedicate my skills towards the concerns that people had shared with me but that were not being addressed: mainly, those of contamination of the landscape and wild food sources.

In this paper, I suggest that it is possible to participate in research as an act of reciprocity; when a community asks a researcher for help on a specific topic, the application of that researcher's skills can be one of the ways they show appreciation for being welcomed into a place. I also argue that a researcher needs to be sensitive to, and participate in, systems of respect and reciprocity belonging to the people, ancestors, and sentient landscape of the place in which they are doing research. I am by no means suggesting that all communities should expect or be grateful for the work academics do, nor am I trying to justify the colonial structures that exist in academia (Todd, 2016b). Rather, I am encouraging research that communities find useful and research that functions within the community's systems of respect and reciprocity (Wilson, 2008). As Zoe Todd explains, "Indigenous thinking must be seen as not just a well of ideas to draw from but a body of thinking that is living and practiced by peoples with whom we

all share reciprocal duties as citizens of shared territories (be they physical or the ephemeral)" (2016a, 17). I will describe two community-based and community-engaged projects that I support with my research skills as an intended act of reciprocity through relations to the communities and their territories who host and care for me.

"Why Bother?"

Many people with whom I have worked have a profound sense of frustration and helplessness in regard to development in their traditional territories. Too often I have heard people lament, "Why bother, they're just going to go ahead anyway" during traditional land use research. People are tired of being asked the same questions over and over again and being asked to identify impacts of industrial development on sacred landscapes without any action coming from their responses and concerns since no one responds or listens in a meaningful way. I often hear consultants refer to the concept of "Elder fatigue," meaning that certain Elders get invited to so many consultation meetings and assessments that they get worn out from it. I understand the comment "why bother" and the idea of Elder fatigue as acts of refusal (A. Simpson, 2007, 2014) and resistance from community members towards the consultation and research process. Too often consultants and "social responsibility" representatives from companies interpret acts of refusal as proof for the ever-pervasive assimilation myth (see King, 2012). Likewise, when an Elder or knowledge holder claims,"I don't know," they are more likely saying that it is inappropriate for them to speak about a certain topic at that time or that they are subtly refusing to share that information with the consultant. Company representatives assume this means that Elders are "fatigued" or have been assimilated and that they should just go ahead with the work without asking too many questions.

Working as a consultant, or doing research for money, on traditional land use assessments is full of contradictions. It is fun and exciting to be on the land with Elders and Knowledge Holders; meanwhile it is depressing and sickening to know that the places you are visiting and recording are likely to be mined or dramatically altered by industrial development. While you are establishing a record of impacts and perhaps even protecting certain sacred sites and landscapes, you realize that companies just want locations on a map that they can avoid or "mitigate." Mitigation in this context means that the company will argue that while the site in question will be damaged or destroyed, there are similar sites within the First Nation's territory, so they are having "no significant impact." Ultimately I came to see my work at best as a way of providing resources and income to people to go on the land and share knowledge with one another, and at worst as a form of knowledge extraction (Wheeler, 2005) an act of aggressively taking knowledge from people for profit to be filed away into documents that have no effect on the trajectory of industrial development of First Nations territories. Traditional land use assessments in place of consultation are extractive in that they take knowledge from communities without giving back; violating (in this case) Cree expectations of respect and reciprocity.

Leanne Betasamosake Simpson writes about the irony that after years of discounting Indigenous knowledge, colonial powers are now interested in collecting and "integrating" it,

especially the more "practical" types of knowledge that fall under the umbrella of traditional environmental knowledge (TEK) (2004). The irony lies in the fact that the knowledge of interest is that which is most similar to science and can provide answers and solutions to environmental problems resulting from the activities of colonizing societies (L. R. Simpson, 2004, 373). Meanwhile, the spiritual foundations of this knowledge are not used in science and governance because they present opposing ideas to those of the dominant regimes. The problem for Simpson is that, "[r]emoving Indigenous Knowledge from a political sphere only reinforces the denial of the holocaust of the Americas and trains a generation of scientists to see contemporary Indigenous Peoples and Indigenous Knowledge as separate from our colonial past, as an untapped contemporary resource for their own exploitation and use" (ibid., 376). Our governments facilitate the environmental destruction of traditional territories by enabling corporations to impede Indigenous peoples from living their knowledge (ibid., 378). The relationships Indigenous peoples foster with nature are encoded in indigenous language and political and spiritual systems and "without ecosystems, Indigenous Peoples cannot nurture these relationships' (ibid.).

Hugh Brody published his book *Maps and Dreams* in 1981 about an occupancy and land use study he prepared for Moberly Lake First Nation in northern British Columbia, and very little has changed since this time. Reminiscent of my own research in Alberta, he observes, "I was haunted by a thought that must have bothered many researchers: you might find out five or ten years later whom you were really working for" (Brody, 2004[1981], xxiii). Brody suggests that it is a blessing for a First Nation to be neglected by scientists, explaining that what he calls the accumulation of knowledge and what I perhaps more harshly call knowledge extraction from indigenous peoples is often an integral component of colonial control and exploitation (ibid., xxi). Perhaps research that is designed within indigenous systems of reciprocity is a step away from knowledge extraction (Smith, 1999).

Research as Reciprocity

As a child, whenever I misbehaved, my Métis grandmother (the unchallenged matriarch of our family) would chastise me (smack me upside the head) and tell me, "Mind your relations." It was not until I was working in northern Alberta that I realized this phrase is commonly used by Métis grandmothers. Even as a child I understood that the relations my grandmother told me to mind were not just my immediate family, but my extended family, ancestors, community members, and even strangers and that I was not just meant to mind them, but to also mind my relationships with them, and my connections with the world (including plants, animals, and spirits) (for a similar description see Todd, 2016a, 18). My behaviour reflected my relations, and so it was shameful to behave badly; even if my relatives were not physically present, relations still existed and mattered. As with Métis "relations," the term "relation" in English has many meanings and uses; embedded in it are ideas of connectivity, family, meaning, narration, and respect. In research, we need to always mind our relations.

"Gifts from the earth or from each other establish a particular relationship, an obligation of sorts to give, to receive, and to reciprocate" (Wall Kimmerer, 2013, 25). When an Elder

teaches me about a plant, or shares a story, they are giving me a gift. Certainly I have offered them tobacco, lunch, fuel, and an honourarium as protocol requires for that person and day, but what about the larger gift they have given me? I have learned new things about the world, about how to behave and harvest food. They have shared their time, wisdom, friendship, humour, stories, and sometimes their food and homes with me. Of course I help out in ways that I can, but what about the problems with consultation, contamination, and appropriation of lands they are pointing out to me with their words, actions, and experiences? I am not certain that doing more research is the answer, but by dedicating some time and effort to the problems that people consistently present me with, I hope at least, it shows that I am listening and paying attention. Winona Wheeler describes the Cree way as an oral and listening culture, "We are a people to whom understanding and knowledge comes by way of relationships - with the Creator, the past, the present, the future, life around us, each other, and within ourselves. And, like my ancestors, I am here on this earth to learn" (Wheeler, 2005, 190). As Robin Wall Kimmerer explains, "The moral covenant of reciprocity calls us to honor our responsibility for all we have been given, for all we have taken" (2013, 384).

In 1969, Lakota scholar Vine Deloria, Jr. described "anthropologists and other friends" who travel to Native American communities to perform research in a critical and comical manner. He advocates a policy for indigenous peoples to use to clarify the respective roles of anthropologists and communities:

> Each anthropologist desiring to study a tribe should be made to apply to the tribal council for permission to do his study. He would be given such permission only if he raised as a contribution to the tribal budget an amount of money equal to the amount he proposed to spend on his study. Anthropologists would thus become productive members of Indian society instead of ideological vultures. (Deloria Jr, 1988 [1969], 29)

Currently, in northern Alberta, a prospective researcher *is* required to submit and present a proposal to the Chief and Council of the Nation in which the researcher wants to operate. This first step is virtually impossible unless members of the Chief and Council know the researcher or a respected community member endorses them. If the governing body approves the work after reviewing the proposal, they author a band council resolution (BCR), which is a sort of bylaw allowing the researcher to work and live on reserve. Usually included in the BCR is an information sharing agreement that requires all information to be verified by collaborators and Chief and Council prior to publication, and for all information gathered to be the housed with and to be owned by research participants or the First Nation. Based on my previous work and relationships, I am fortunate to have been given permission from Fort McKay in 2011 and a BCR from Bigstone Cree Nation in 2013. As described below, I have assisted in acquiring funds to support projects related to my research, that are managed by each of the communities in which I work.

Of course, reciprocity in research extends far beyond financial reciprocity. In his book *Research is Ceremony: Indigenous Research Methods*, Shawn Wilson advocates for research that is

based on relationality and accountability to relationships (Wilson, 2008). Relationality is the shared aspect of an Indigenous ontology and epistemology, and Wilson claims that the "shared aspects of relationality and relational accountability can be put into practice through choice of research topic, methods of data collection, form of analysis and presentation of information" (2011, 7). Similarly, Margaret Kovac explains that a "relational research approach is built upon the collective value of giving back to the community" (2009, 149). Sharing knowledge is the most obvious way a researcher can give back; however, significance, relevancy and accessibility of the research are also crucial (Kovach, 2009).

Ethnography in late industrialism, which is arguably our current historical period characterized by degraded infrastructure, exhausted paradigms, and the incessant chatter of media, is an ethnography that is "attuned to its times" (Fortun, 2012). This sort of ethnography uses techniques to loop back on itself, so that further ethnographic research is responsive and creative and attends to emergent realities. These techniques discern the discursive risks and gaps of a particular problem domain and feed ethnographic findings back into ethnographic engagement (Fortun, 2012). In late industrialism, ethnographers need to collaborate with those whose problems they are studying and activate new idioms and ways of engaging the world: "It is activist, in a manner open to futures that cannot yet be imagined" (Fortun, 2012, 459). Meanwhile Mario Blaser reminds us that Indigenous communities do not simply resist development, but they also sustain "life projects" (Blaser, 2004):

> Life projects are embedded in local histories; they encompass visions of the world and the future that are distinct from those embodied by projects promoted by state and markets. Life projects diverge from development in their attention to the uniqueness of people's experiences of place and self and their rejection of visions that claim to be universal. Thus, life projects are [premised] on densely and uniquely woven 'threads' of landscapes, memories, expectations and desires. (Blaser, 2004, 26)

Therefore, research can contest the denial of historical and current relationality to create an ethical space between First Nations individuals and researchers (Donald, 2009, 5).

Cree Reciprocity

> In the Cree world, everyone's personal, family, and regional histories interconnect and overlap; all are extensions of the past, and all are grounded in wahkotowin, *kinship/relations*. According to Nehiyawiwhihtamawakan, *Cree teaching, etymology,* we inherit relationships and obligations from and to the generations behind, among, and before us, to life on this earth as we know it, and to our homelands. Our histories are infused in our daily lives - they are lived experiences. So it is that the memories of our forefathers and foremothers become our own. And we are burdened with the obligation to keep them alive…In the Cree world, our sources are our teachers, and the student-teacher relationship proscribes life-long obligations, responsibilities, respect, and trust. (Wheeler, 2005, 196-197)

As a student of Cree teachers, how can I be learning about Cree ways of life, without adjusting my research to those protocols and responsibilities? I am in no way am professing to be some sort of authority on Cree forms of respect and reciprocity, but I explore some of the existing literature on the topic below, as there is a wealth of scholarship on the topic of reciprocity in Canada. David Anderson notes that in northern ethnography the term "reciprocity" has become a central concept similar to the term "culture" in anthropology (Anderson, 2014, 15). Reciprocity in northern ethnographies typically refers to the exchange of gifts, offerings, and ethical acts of respect towards all living beings. Many indigenous origin stories remind us that humans were the last species to arrive on earth and so are dependent on the wiser, older beings for their mercy and offerings (Watts, 2013, 25). Humans came into already functioning societies with particular values, cultures, and ethics and had to enter into agreements with these societies as relations (Reder, 2012, 509).

Based on his work with the Manitoba Rock Cree, Robert Brightman describes Cree respect for animals, including spiritual observances surrounding animals, as being born out of necessity (Brightman, 1993, 103). As long as hunters and trappers act appropriately, through song, dream interpretation, butchering, and other observances and rituals, animals will decide to make themselves available. An animal must sacrifice itself in order for a hunter to be successful and the animal will be reborn and continue in this cycle, as long as the hunter does not offend the animal (ibid.): "The most commonly expressed Rock Cree ideology of the hunter-prey relationship postulates an endless cycle of gift exchanges between humans and animals" (ibid., 187). Animals take pity on the hungry hunter and give their bodies as gifts and the hunter in exchange treats the animal's body in a respectful fashion and makes offerings to the animal's soul at feasts, and if done properly, the animal is restored to the living condition (ibid.): "Hunter and prey are thus successively subject and object in an endless cycle of reciprocities" (ibid., 187-188).

Colin Scott describes how James Bay Cree obligations for respect and reciprocity are based in the personhood that is recognized in all beings. Humans are not distinct or set above other creatures, but are instead one type of being that interacts with "a network of reciprocating" beings (Scott, 1996, 72). "These reciprocative interactions constitute the events of experience" (ibid.). All beings express and interpret signs and respond in reciprocal relations to degrees of respect shown. Illness, pollution, and harvesting success for example are all based on interactions of reciprocity (ibid., 73). An animal or medicine offers itself to a respectful harvester, and then that harvester is respectful to their community members by sharing the bounty, who later reciprocate by sharing their bounties. This is not to imply that Cree harvesters do not also have technical knowledge about harvesting and precise and accurate ecological knowledge (Brody, 2004[1981]; Scott, 2006), as they often do, with an emphasis on "'relational sustainability', not 'system management'" (Langdon, 2002). Reciprocity governs all relations between beings, whether positive or negative (Scott, 2013), which is an important concept to keep at the forefront of research activities, as a reminder that research can easily enter relationships of negative reciprocity.

Kluanes also believe that one must maintain respectful relations with human and non-

human beings alike through the practice of reciprocity (Nadasdy, 2003, 85). All beings are intelligent, social, and spiritually powerful and are subject to complex reciprocal relations with one another, and this is vital to physical and cultural survival (ibid., 108). Kluanes, like Crees, take delicate care as to not act in ways that will offend other beings or to enter into relations of negative reciprocity. Interestingly, many First Nations peoples see scientific wildlife research to be disrespectful and inappropriate behaviour towards animals (ibid., 109). I have heard Bigstone Cree Nation members talk about how the catch and release style of fishing is "playing with" the fish and disrespectful. If the fish offers itself to you, you need to kill it. I have heard the same about eagles, when a Frog Lake Elder asked me what he was supposed to do when the bird is protected under the Endangered Species Act, but he is required to kill it out of respect when it offers itself. For Kluanes, physically bothering animals with radio collars, studying scat, and catch and release fishing are offensive, as is bothering anything within the animal's realm (Nadasdy, 2003, 109). In this sense, scientific research is too rushed and treats animals as if they are unintelligent. Community-based and community-engaged research, in contrast, has the freedom and foresight to design research that is grounded in concepts of respect and reciprocity towards all living beings.

Community-Based Contaminants Studies

Inspired by my experiences as a traditional land use consultant, my intention for my doctoral research was to focus on Cree indicators for pollution that are embedded in spiritual, emotional, and symbolic perspectives. The last thing I wanted to do was to duplicate applied work that acts to prove or disprove what First Nations are observing in the environment; rather I wanted to record Crees' observations and explanations for wild food contamination. This is still a large part of my work. However, as I met with Bigstone Cree Nation and Fort McKay leaders, it quickly became clear that they wanted me to help acquire funding so that they could do their own environmental monitoring and sampling; they wanted to be able to fund their own scientific research and testing of their wild food supply that they could trust. So I am assisting both communities on different projects that sample wild food for testing. Surely, the process and results from working with scientists and laboratories to complete scientific testing of food items will prove fruitful for my research as well.

Bigstone Cree Nation is a Cree community and Fort McKay is a Cree and Dené community that also works closely with the related and neighbouring Métis. Both Nations are located in northern Alberta and their reserves and territories are on top of the Athabasca oil sands deposit. Fort McKay is the community closest to oil sands mining activities and therefore is the most impacted by the Alberta oil sands operations. I have worked for both First Nations on and off for over eight years. These communities have adjacent and overlapping territories because the concepts of tribe or band are introduced (Wetherell & Kmet, 2000); people in Bigstone Cree Nation and Fort McKay are interrelated, as before settlement people moved around in familial groups according to seasonal harvesting, and they still do so in many ways. In spite of having been confined to reserves, people continue to have much larger territories and networks for harvesting and spiritual and social exchange than is typically acknowledged

by the Provincial and Federal Governments.

As previously mentioned, I have permission from both communities for the research described below. I have ethics clearance from McGill University for my doctoral research, and I voluntarily abide by the International Society of Ethnobiology's (ISE) Code of Ethics (Ethnobiology, 2006): "The fundamental value underlying the Code of Ethics is the concept of *mindfulness*—a continual willingness to evaluate one's own understandings, actions, and responsibilities to others" (Ethnobiology, 2006). While the entire seventeen principles in the Code of Ethics and their associated practical guidelines (Ethnobiology, 2006) are relevant to this discussion, I will briefly focus on most pertinent of the principles below.

Principle 5, the Principle of Active Participation (Ethnobiology, 2006) recognizes that community members must participate in all phases and activities related to research "from inception to completion" and including the application and publication of results. Principle 10, the Principle of Active Protection (Ethnobiology, 2006), requires that researchers take measures to protect communities' relationships with their environment and cultural and biological diversity. Principle 12 of the ISE Code of Ethics is the Principle of Reciprocity, Mutual Benefit and Equitable Sharing, and it recognizes that communities must benefit from "tangible and intangible processes" and the ongoing results and ramifications of the research (Ethnobiology, 2006). It states: "Mutual benefit and equitable sharing will occur in ways that are cultural appropriate and consistent with the wishes of the community (Ethnobiology, 2006). Finally. Principle 13 is the Principle of Supporting Indigenous Research, which recognizes the need for research undertaken by Indigenous peoples and communities based on their own methods, protocols, and information sharing and storage systems. Researchers need to support these efforts in any way possible and include them in research design.

Since 2011 I have worked on a research project with Fort McKay and the Wood Buffalo Environmental Association (WBEA), a non-profit organization that monitors air quality in the Athabasca oil sands region. Fort McKay is a founding member of WBEA and is hosting a pilot study to monitor berries for contamination in its traditional territory, due to its concerns about berry health and requests for this project. I work with a group of twelve to fifteen Fort McKay Elders and youth to record their teachings, memories, insights, environmental knowledge, and observations of four different berry patches. WBEA also funds and assists us in using passive air monitors, weather stations, and in testing the berries for contaminants and nutritional quality. In a beautifully written article based on his own experiences as a northern Woodlands Cree scholar, Herman J Michell uses berry-picking as a metaphor for community-based research (2009): "Gathering berries helps people communicate with that quiet stillness where peace and wisdom dwell. It is through berry picking and prolonged periods of time out on the land that we bond with the natural world" (Michell, 2009, 66).

We started the project with a series of focus group meetings in 2011 and then decided to begin visiting berry patches in 2012. I was aware from my traditional land use work that a lot of Elders in the region want to go out on the land, but often lack transportation and general assistance because a lot of their children and grandchildren are employed in the oil sands mines and related industries and are therefore unavailable on a regular basis. So we started off

the project by simply providing transportation and lunches to visit berry patches in the Fort McKay territory. We quickly realized that a lot of the community's berry patches have been mined and others are no longer accessible due to blocked roads and construction. The group eventually chose three berry patches near Fort McKay and another farther away in a sacred area known as Moose Lake (Cuerrier, Turner, Gomes, Garibaldi, & Downing, 2015). Each of the patches are historically important for the community and located in areas that the Elders wanted to monitor for various reasons. One

Figure 1: Fort McKay berry project participant holding blueberries

patch is very close to the Fort McKay hamlet, another is near the Athabasca River, another is near mining activities, and the one at Moose Lake is farthest away from mining activities (although various companies are now constructing projects in the area).

Figure 2: Blueberries ready to be sent for testing

During the first year of visiting the berry patches people checked the patches and/or picked berries, had lunch, and shared knowledge and stories about the places (see Basso, 1996). It seems that everyone is in a good mood in a berry patch. The group decided to focus the project on two cultural keystone species (Garabaldi & Turner, 2004): velvet-leafed blueberries (*Vaccinium myrtilloides*) and cranberries (also commonly called lingonberries; *Vaccinium vitis-idaea*), although the group regularly talks about and collects other edible and medicinal plants, and I record everything that anyone wants

to share and have recorded. Interestingly, in 2012 the group collected berries from each of the patches and took them home, but during the following year when they got to know me better, they told me that they did not consume any of the berries from the patches near Fort McKay, because they did not trust them due to the proximity of the respective patches to oil sands developments. Although the patches near Fort McKay are important historical familial and social places, people now travel much farther to collect berries; or if they are not able to travel, they are unable to access berries they trust are edible. The berries from Moose Lake, the berry patch that is the farthest from Fort

Figure 3: Bigstone Cree Nation Elder Clement Auger recording landscape observations

McKay and oil sands mines, are the only ones the berry group trusts and consumes regularly. They consider the place to be "clean" and they always collect enough berries from this location to share with family members, Elders, and people with health problems (see Parlee & Berkes, 2006).

Due to these concerns about the berries, the Fort McKay group decided in 2013 that they wanted to introduce the use of science to monitor the berry patches. Following this decision, the WBEA erected passive air monitoring stations in each of the berry patches and began testing berries tested for nutritional value and contaminants. The berry group continues to assist with maintaining the air monitoring stations, changing the filters, doing regular readings, and collecting berries for testing. The group has also recently requested that WBEA add weather stations, plant observations, and snow sampling to the monitoring scope. The Elder's wisdom is incorporated into this process. For example, in 2015 after Elders from the berry group noted that berry plants do well in foggy or misty areas, WBEA added humidity-measuring equipment to the weather stations. The berry group meets regularly to discuss and decide about how they want the project to proceed. I work with WBEA to provide a yearly report that the group verifies. Members of the group also attend conferences and co-present project results with me. I provide regular updates in the Fort McKay newspaper, the *Red River Current*. It is everyone's intention and wish that the project continue for years into the future in order to have long-term results. The project has also enabled the group to be a socially tight and cohesive unit. We are currently completing a publication that demonstrates the correlation between the project's traditional and scientific results and a book chapter on the use of cranberries as medicine in a volume Professor Leslie Main Johnson is editing based on the 2015 conference "Wisdom Engaged: Traditional Knowledge for Northern Community Well-being".
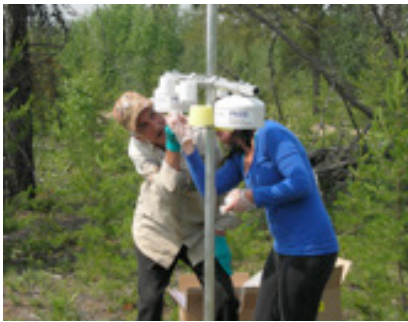

Figure 4: Fort McKay Elder Howard Lacorde assists WBEA technician Natalie Bonnell to change passive air filter

My past work for Bigstone Cree Nation on traditional land use studies and assessments is one of the major inspirations for my doctoral research. I have spent more time on the land in their territory listening, fishing, hunting, trapping, and plant gathering, than in any other place. People have welcomed me into their homes and patiently taught me *Sakaw* (Bush or Northern) Cree (Westman & Schreyer, 2014) and continue to do so (my Cree still needs lots of work). Over the years, people have often shared their concerns and observations about wild food contamination. Most Bigstone Cree Nation members living in their territory prefer traditional foods, but are increasingly anxious about the safety of wild food due to industrial pollution. Representatives of the Bigstone Cree Nation administration responded immediately after I contacted them about my doctoral research proposal. They told me that they had recently been given deformed fish and oily ducks from members who had been out

fishing and hunting. They did not trust the government agencies that had offered to send the animals for testing, and so they asked me for assistance. We partnered with toxicologist Dr. Nil Basu at McGill's Centre for Indigenous Nutrition and Environment to apply for a grant from the First Nations Environmental Contaminants Program; and, were awarded funds for 2014-2015. Bigstone Cree Nation has a large number of environmental monitors who are trained through Eco-Canada's Building Environmental Aboriginal Human Resources (for which I am an instructor). They have worked hard with local harvesters to collect 150 samples for testing. When needed, I complete reports, assist the monitors, and perform informal interviews with Elders and Knowledge Holders. Bigstone Cree Nation plans to use this project as a pilot for a much larger long-term community-based environmental monitoring program.

Conclusion

"If research doesn't change you as a person, then you haven't done it right" (Wilson, 2008, p. 135). My experiences with applied and doctoral theoretical research are not clear cut and defined as separate activities. My relationships are not formal and do not end when specific research projects are over. I intend to know and spend time with people who teach and humour me for the rest of my life. It deeply concerns me when I hear someone claim that they do ethnographic research "in the field" and that they keep a distance from the field location while not doing formal research. Individuals are not research subjects; they are people with whom we have relations. Friends teach me Cree, take me moose

Figure 5: Bigstone Cree Nation Elder Clement Auger netting fish

hunting, and tell me stories about how to hunt a bear in its den. When I am worrying about something, they make me feel better. They worry about their territory being damaged and their treasured bush food being contaminated by companies. I can only hope that my efforts to record their concerns and knowledge, coupled with my ongoing engagement in inquiry with them about the safety of their food supply, will reciprocate in the gift of shared knowledge and life projects (Blaser, 2004).

In this paper, I suggest that it is possible for research to be a reciprocative, rather than an extractive endeavour. In my experience with traditional land use research in Alberta, applied research tends to be the latter, and it can easily be argued that academic anthropological research also has a history of and continued tendency towards extractive practices. In order for research to be reciprocal, it needs to be attuned to the community's desires for research, questions they want answered, and concerns they would like to be addressed. Financial reciprocity is an obvious first step, but research also needs to work within the community's own systems of respect and reciprocity to humans, plants, animals, landscapes, and other sentient beings of the land. I simply hope that as someone trained in research skills that I can be helpful to the people of the land in the area I have been raised, and to contribute to decolonizing processes.

About the Author

Janelle Marie Baker is a PhD Candidate in Anthropology at McGill University studying Cree perspectives on wild food contamination in Alberta's oil sands region in collaboration with Bigstone Cree Nation and Fort McKay First Nation. Baker is an instructor in anthropology at Athabasca University and was recently a visiting PhD scholar on Professor Anna Tsing's Niels Bohr Professorship project, Aarhus University Research on the Anthropocene: Discovering the Potential of Unintentional Design on Anthropogenic Landscapes. Baker is a past Warren Fellow at the McGill Institute for the Study of Canada, a Vanier Scholar, the 2013-2014 Canadian Federation for University Women CHEA Fellow, a 2014-2015 International Society of Ethnobiology Darrell Posey Fellow, and a current Canadian Northern Studies Trust Scholarship recipient. Email: janelle.baker@mail.mcgill.ca

References

Anderson, D. G. (2014). Cultures of reciprocity and cultures of control in the circumpolar north. *Journal of Northern Studies, 8*(2), 11-27.

Basso, K. H. (1996). Wisdom sits in places: Notes on a Western Apache Landscape. In S. F. a. K. Basso (Ed.), *Senses of Place* (pp. 53-90). Santa Fe: School of American Research Press.

Blaser, M. (2004). Life projects: Indigenous Peoples' agency and development. In M. Blaser, H. Feit, & G. McRae (Eds.), *In the way of development: Indigenous Peoples, life projects and globalization* (p. 2) London and Ottawa: Zed Books and the Canadian International Development Center.

Brightman, R. (1993). *Grateful prey: Rock Cree human-animal relationships*. Berkeley and Los Angeles: University of California Press.

Brody, H. (2004[1981]). *Maps and dreams*. Vancouver; Toronto: Douglas & McIntyre. Treaty No. 8 and Adhesions, Reports, Etc., (1899).

Caryn Babaian, P. T. (2011). The power of plants: Introducing ethnobotany & biophilia into your biology class. *The American Biology Teacher, 73*(4), 217-221.

Council, B. L. (2015). *Understanding successful approaches to free, prior, and informed Consent in Canada. Part I*. Retrieved from http://borealcouncil.ca/wp content/uploads/2015/09/BLC_FPIC_ Successes_Report_Sept_2015_E.pdf

Cruikshank, J. (1998). The social life of stories: Narrative and knowledge in the Yukon Territory. Lincoln and London: University of Nebraska Press.

Cuerrier, A., Turner, N., Gomes, T., Garibaldi, A., & Downing, A. (2015). Cultural keystone places: conservation and restoration in cultural landscapes. *Journal of Ethnobiology, 35*(3), 427-448.

Deloria Jr, V. (1988 [1969]). *Custer died for your sins: An Indian manifesto*. Norman: University of Oklahoma Press.

Donald, D. T. (2009). Forts, curriculum, and Indigenous Métissage: Imagining decolonization of Aboriginal-Canadian relations in educational contexts. *First Nations Perspectives, 2*(1), 1-24.

Ethnobiology, I. S. o. (2006). *International Society of Ethnobiology code of ethics* (with 2008 additions). Retrieved from http://ethnobiology.net/code-of-ethics/

Fortun, K. (2012). Ethnography in late industrialism. *Cultural Anthropology, 27*(3), 446-464.

Garabaldi, A., & Turner, N. (2004). Cultural Keystone species: Implications for ecological conservation and restoration. *Ecology and Society, 9*(3), 1-18. Retrieved from http://www.ecologyandsociety.org/vol9/iss3/art1/

Government of Alberta. (2007). *Alberta's First Nations Consultation Guidelines on Land Management and Resource Development.* Retrieved from https://open.alberta.ca/publications/albertas-first-nations-consultation-guidelines-on-land-management-and-resource-development-updated-n

Government of Alberta (2013). *The Government of Alberta's Policy on Consultation with First Nations on Land and Natural Resource Management.* Retrieved from https://open.alberta.ca/publications/6713979

Government of Canada. (2011). *Aboriginal Consultation and Accomodation: Updated Guidelines for Federal Officials to Fulfill the Duty to Consult.* Retrieved from http://www.aadnc-aandc.gc.ca/eng/1100100014664/1100100014675

King, T. (2012). *The Inconvenient Indian: A curious account of Native People in North America.* Canada: Anchor Canada.

Kovach, M. (2009). Indigenous methodologies: Characteristics, conversations, and contexts. Toronto; Buffalo; London: University of Toronto Press.

Laidlaw, D. a. M. P-R. (2014). Alberta First Nations consultation & accommodation Handbook. *CIRL Occassional Paper, 44.*

Langdon, S. (2002). C*onstruing 'conservation': An examination of conceptual construction and application to Yup'ik cultural practice.* Paper presented at the Ninth Conference on Hunting and Gathering Societies, Edinburgh.

Michell, H. J. (2009). Gathering berries in northern contexts: A Woodlands Cree metaphor for community-based research. *Pimatisiwin: A Journal of Aboriginal and Indigenous Community Health, 7*(1), 65-73.

Mikisew Cree First Nation v. Canada (Minister of Canadian Heritage), (2005). Retrieved from https://scc-csc.lexum.com/scc-csc/scc-csc/en/item/2251/index.do

Nadasdy, P. (2003). *Hunters and bureaucrats: Power, knowledge, and Aboriginal-State relations in the Southwest Yukon.* Vancouver, Toronto: UBC Press.

Parlee, B., & Berkes, F. (2006). Indigenous knowledge of ecological variability and commons management: A case study on berry harvesting from Northern Canada. *Human Ecology, 34*, 515-528.

Passelac-Ross, M. M., and V. Potes. (2007). Consultation with Aboriginal Peoples in the Athabasca oil sands region: Is it meeting the Crown's legal obligations? *Resources, 98*, 1-8.

Reddekopp, N. (2013). Theory and practice in the Government of Alberta's consultation policy. *Constitutional Forum constitutionnel, 22*(1), 47-62.

Reder, D. (2012). A complex web of relations that extends beyond the human. *Journal of Chinese Philosophy, 39*(4), 507-517.

Scott, C. (1996). Science for the west, myth for the rest? The case of James Bay Cree knowledge construction. In L. Nader (Ed.), *Naked science: Anthropological inquiry into boundaries, power, and knowledge* (pp. 69-86). New York: Routledge.

Scott, C. (2006). Spirit and practical knowledge in the person of the bear among Wemindji Cree hunters. *Ethnos, 7*(1), 51-66.

Scott, C. (2013). Le partage des ressources au Québec: perspectives et stratégies autochtones. In S. G. Alain Beaulieu, Martin Papillon (Ed.), *Les Autochtones et le Québec: Des premiers contacts au Plan Nord* (pp. 363-384). Montreal: Les Presses de l'Universite de Montreal.

Simpson, A. (2007). On ethnographic refusal: Indigeneity, 'voice' and colonial citizenship. *Junctures, 9*, 67-80.

Simpson, A. (2014). *Mohawk interruptus: Political life across the vorders of settler states*. Durham and London: Duke University Press.

Simpson, L. R. (2004). Anticolonial strategies for the recovery and maintenance of Indigenous knowledge. *The American Indian Quarterly, 28*(3&4), 373-384.

Smith, L. T. (1999). *Decolonizing methodologies: Research and Indigenous Peoples*. London & New York: Zed Books Ltd.

Tanner, J., & Rigney, A. (2003). *Athasbasca Chipewyan First Nation traditional land use study*. Fort Chipewyan, AB: Athabsaca Chipewyan First Nation.

Tobias, T. N. (2000). *Chief Kerry's moose: A guidebook to land use and occupancy mapping, research design and data collection*. Vancouver: A Joint Publication of the Union of BC Indian Chiefs and Ecotrust Canada.

Todd, Z. (2016a). An Indigenous feminist's take on the ontological turn: 'Ontology' is just another word for colonialism. *Journal of Historical Sociology, 29*(1), 4-22.

Todd, Z. (2016b). Relationships; Theorizing the Contemporary, Cultural Anthropology. Retrieved from https://culanth.org/fieldsights/799-relationships

United Nations. (2008). *United Nations declaration on the rights of indigenous peoples*. Retrieved from http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf

Wall Kimmerer, R. (2013). *Braiding sweetgrass: Indigenous wisdom, scientific lnowledge, and the teachings of plants*. Minneapolis Minnestoa: Milkweed Editions.

Watts, V. (2013). Indigenous place-thought & agency amongst humans and non-humans (First Woman and Sky Woman go on a European world tour!). *Decolonization: Indigeneity, Education & Society, 2*(1), 20-34.

Westman, C. (2006). Assessing the impacts of oil sands development on Indigenous Peoples in Alberta. *Indigenous Affairs, 2*(3), 30-39.

Westman, C. (2013a). Cautionary tales: Making and breaking community in the oil sands region. *Canadian Journal of Sociology, 38*(2), 211-231.

Westman, C. (2013b). Social impact assessment and the anthropology of the future in Canada's tar sands. *Human Organization, 72*(2), 111-120.

Westman, C., & Schreyer, C. (2014). ÎNÍHIYAWÎTWÂW 'They are speaking Cree': Cree language use and issues in Northern Alberta, Canada. *IJSL, 230*, 115-140.

Wetherell, D. G., & Kmet, I. R. (2000). *Alberta's north: A history, 1890-1950*. Edmonton, Alberta: Canadian Circumploar Institute Press, The University of Alberta Press and Alberta Community Development.

Wheeler, W. (2005). Reflections on the social relations of Indigenous oral histories. In U. Lischke (Ed.), *Walking a tightrope: Aboriginal people and their representations* (pp. 189-212). Waterloo, Ontario: Wildfred Laurier Press.

Wilson, S. (2008). *Research is ceremony: Indigenous research methods*. Black Point, Nova Scotia: Fernwood Publishing.