Natural Resource Management and Indigenous Food Systems in Northern Ontario

By

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Economic development, more than any single issue, is the battle line between two competing worldviews. Tribal people's fundamental value was sustainability, and they conducted their livelihoods in ways that sustained resources and limited inequalities in their society. What made traditional economies so radically different and so very fundamentally dangerous to Western economies were the traditional principles of prosperity of Creation versus scarcity of resources, of sharing and distribution versus accumulation and greed, of kinship usage rights versus individual exclusive ownership rights, and of sustainability versus growth.

Rebecca Adamson

Abstract

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The forests and freshwaters of Northern Ontario are complex socio-ecological systems that have provided opportunities to sustain local lives, economies, and cultures since time immemorial. Through nation-to-nation agreements, Indigenous nations ceded land title to the Crown through treaties in which the Crown promised them enhanced livelihood. The treaties articulated the rights of each party to share access to these lands, and the Canadian courts continue to describe the nature and extent of the rights of each party as well as their duties and responsibilities. Despite great developments in Canadian society, descendants of the Indigenous treaty signatories have experienced disproportionately high rates of unemployment, negative health outcomes, low education rates, and increased food insecurity. The legislative framework guiding Crown land management in Ontario is strongly rooted in Canada's colonial past; thus the Indigenous land user's access to foods is largely disassociated from the perspective of the Crown land manager.

This research explores assumptions associated with Crown forest management in Ontario based on the purposes of the Crown Forest Sustainability Act, with specific objectives linking participant action research with independent thesis-action research. Community-based research priorities are reflected in in each chapter within the context of Indigenous food systems and natural resource management in Northern Ontario.

The major findings of this research confirm that if meeting social, economic, and environmental needs of present and future generations is the purpose of Crown forest management, then based on experiences of Indigenous land users, the paradigm in which natural resource management occurs should be re-evaluated. The researcher provides recommendations for forest managers, including shifting the current knowledge paradigm from the primarily quantitative approach to a more holistic paradigm that includes qualitative information. To achieve this recommendation, the need to reform required training for forest management authorities, to include Indigenous worldviews as well as

Aboriginal and Treaty Rights. Furthermore, in order to meet the needs of Indigenous land users, the natural resource management paradigm should be expanded to include food system management. Finally, lessons learned from the research project are presented as the 4Rs for rebuilding food sovereignty: reclaim, reorganize, re-skill, and restore.

Keywords: Indigenous food systems, Natural resource management, Food Sovereingty, Forest Management, Aboriginal and Treaty Rights, Socieal Enterprise, Ontario, First Nations

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I dedicate this thesis to my grandfather, Joseph LeBlanc, and to my children Cheyden, Zyah, and Joren, in hopes that this work helps to ensure that the good life realized by our elders exists still for our children.

CHAPTER 1: INTRODUCTION

The right to food has been defined as the "right to have regular, permanent, and unrestricted access, either directly or by means of financial purchases, to quantitatively and qualitatively adequate and sufficient food corresponding to the cultural traditions of the people to which the consumer belongs, and which ensures a physical and mental, individual and collective, fulfilling and dignified life, free of fear" (Ziegler 2008, 9). Through a number of national and international agreements, Canada has supported the concept of the right to food, and yet despite these agreements, a state of food security has not been attained in the country (Rideout et al. 2007). During a country mission to Canada, the UN Special Rapporteur on the Right to Food was "disconcerted by the deep and severe food insecurity faced by Aboriginal peoples living both on and off reserve in remote and urban areas" (De Schutter 2012, 5). One of the key findings of a recently completed state of the knowledge report on Aboriginal food security was that "Aboriginal households across Canada experience food insecurity at a rate about two times higher than that of non-Aboriginal households" (Council of Canadian Academies 2014, 36).

The relationship between Indigenous Nations and the Crown in Canada is extremely complex, with a long history of colonialism,

proselytism, modernity, capitalism, globalism, positivism, neoliberalism, assimilation, adaptation, reconciliation, anti-colonialism, activism, and nationalism. The negative implications of the relationship between the Crown and Indigenous food systems are well documented, with access to local food sources, or lack thereof, emerging as of critical importance to rates of food insecurity (De Schutter 2013; Council of Canadian Academies 2014).

The forests and freshwaters of Northern Ontario contain the same foods that once supported sustainable Indigenous food systems. The Crown now manages these food sources as a part of its natural resource management regime, while Indigenous land users' rights to access these lands are protected by the various treaties that cover the land base. In consideration of the state of food insecurity in Aboriginal communities, and in recognition of the importance of local food resources to achieving food security, this research explores Indigenous food systems and natural resource management in Northern Ontario.

This introductory chapter outlines the objectives of the thesis project and provides a brief literature review of broad themes that connect the applied research studies described in later chapters, specifically previous works related to Indigenous foods systems and natural resource management in Ontario, as well as case law related to Aboriginal and treaty rights in Canada. A methodology

section follows, with broad application to the thesis project. Each chapter also includes appropriate reviews of existing knowledge, as well as descriptions of project specific methodologies.

OBJECTIVES OF THE STUDY

This thesis explores assumptions associated with Crown forest management in Ontario based on the purposes of the Crown Forest Sustainability Act, which are:

> to provide for the sustainability of Crown forests and, in accordance with that objective, to manage Crown forests to meet social, economic and environmental needs of present and future generations. 1994, c. 25, s. 1.

Specific objectives of the research are:

1) to explore Indigenous food systems and natural resource management in Northern Ontario;

2) to explore the historical legal and jurisdictional context that shapes Indigenous food systems and natural resource management in Northern Ontario;

3) to explore the perceived risks to community health and well-being associated with natural resource management

and industrial development;

4) to explore the impacts of Ontario's natural resource management regime on the accessibility and availability of forest and freshwater foods land-users; and

5) to inform strategic community-based actions in support of Indigenous food sovereignty and community resilience.

Research Area - Northern Ontario

The region of Northern Ontario is 802,000 km^2 constituting 87 percent of the total land area of the Province of Ontario. In contrast, the population of Northern Ontario constitutes only six percent of the province's population at 803,200 in 2012 (OMF 2013). In a national perspective, the region's population is greater than that of three Canadian provinces and all three territories. The Aboriginal population in Northern Ontario makes up about 7.5% of the region's total population (Woodrow 2002).

Nearly all of Ontario is comprised of ceded Indigenous lands, although there are currently more the 50 land claims unsettled (Ontario 2012). The first treaties in Ontario were made in the south beginning in the late 1700s and ending with the Williams Treaty of 1923. The treaties that relate to Northern Ontario include the Manitoulin Treaties (1836 and 1872), Robinson-Huron (1850),

Robinson-Superior (1850), Treaty 3 (1873), Treaty 9 (1905-06), and the Treaty 9 adhesion (1929-30) (AANDC 2013). These treaties between Indigenous nations and the Crown are the basic building blocks that created Canada and remain the key vehicles of arranging relationships between the parties (Henderson 2004). Much conflict has arisen over contemporary interpretation of the oral and written agreements made during the treaty-making process; Indigenous perspectives reflect an intent to share the land, but the Crown's perspective is one of ceding land title (Long 2010).

Generally, Northern Ontario can be described by a number of indicators of dependence, such as a heavy reliance on government transfer payments, high public-sector employment, higher than average unemployment, high out-migration of young people, little diversity in major employers, and heavy government interventions that favour natural resource extraction (Nelles 2005; Southcott 2007 and 2008). The boreal forest region of Northern Ontario has experienced a relatively short history of industrial exploitation (Bryant *et al* 1997). Much of Ontario's boreal forest is recognized as one of the last intact forest landscapes in the world (Potapov *et al.* 2008). In the area known as Ontario's Far North, 42% of the province's land base, industrial development is limited; however, growing demand has initiated a land-use planning process legislated by the Far North Act (2010).

The Case Study Community - Aroland First Nation

The community of Aroland First Nation is an Indian Reserve located in the boreal forest region of Northern Ontario, Canada and the people are the descendants of signatories to Treaty #9. Reserve lands encompass 19,599 hectares and extend northwards from Highway 643 to lands along the western and northern shores of Esnagami Lake. The community has a long history with the area surrounding the reserve land and has maintained complex relationships with others using the land as home. The 196 square kilometres that make up the reserve is the land; however, the community's traditional territory[1] extends thousands of square kilometers and is shared with other members of Treaty #9, various municipalities, and the Crown, represented by both provincial and federal governments. Rights to access resources to generate a livelihood from these shared lands are protected in Treaty #9[2] and affirmed in Section 35 of the Constitution Act (1982).

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[1] Traditional territories are the geographic boundaries of traditional use and occupancy by individual communities.

[2] Treaty # 9 (1905-06) protects for indigenous people "the right to pursue their usual vocations of hunting, trapping and fishing throughout the tract surrendered as heretofore described, subject to such regulations as may from time to time be made by the government of the country, acting under the authority of His Majesty, and saving and excepting such tracts as may be required or taken up from time to time for settlement, mining, lumbering, trading or other purposes."

Aroland First Nation offers an ideal case study community to explore the relationship between Indigenous food systems and natural resource management in Northern Ontario, because its traditional territory includes both areas of industrial activity and undeveloped regions of the boreal forest. Industrial activities in the region to date encompass forestry, mining, recreational hunting and fishing, as well as ecotourism. There also exists within the community a strong traditional economy driven by primary production. There are large tracts of shared forested lands that have the potential to provide diverse commodities in today's dual economy[3]. Wages from participation in the industrial economy combined with inputs from primary production in the traditional economy sustain life in place.

LITERATURE REVIEW

Title and Rights of Nations and People

European nations settling in North America brought with them an alien concept of land title; over time, integration of this new concept occurred by negotiation of treaties that facilitated European settlement and expansion, as well as resource development,

[3] A dual economy is the existence of two separate economic sectors within one country; the concept was originally created by Boeke (1953) to describe the coexistence of modern and traditional economic sectors in a colonial economy.

by ceding title with nation-to-nation agreements. Though the treaties promised the future security of land, labour, and lifestyles of the signatories, the British and subsequent Canadian colonial governments unfortunately ignored the prerogative treaties, leaving many Aboriginal peoples with unacceptable poverty and an undignified existence (Henderson 2004).

The right of the Crown to colonize the land now known as Canada was granted through the treaties by various Indigenous nations whom the Crown recognized as title holders of the land (Usher 1997); these rights included the authority to construct political jurisdiction, determine land uses, and delegate decision-making authority within the Crown's constructed political systems (Usher 1997; Borrows 1999; Dufraimont 2000). The rights of Indigenous treaty signatories to an enriched livelihood were understood by the treaty negotiators and beneficiaries as a sufficient, sustainable, and supplemental livelihood (Henderson 2004).

Currently the federal government recognizes two types of rights in regards to Indigenous people and land: Aboriginal rights and treaty rights. Aboriginal rights are tied to Aboriginal title and Aboriginal title is the right to land itself (Delgamuukw v. British Columbia 1997); these rights exist where no treaty has extinguished Aboriginal title. The recognition of Aboriginal title in the Royal Proclamation (1763) and the affirmation of Aboriginal rights in

Section 35 of the Constitution Act (1982), as well as numerous court decisions (Delgamuukw v. British Columbia 1997; Tsilhqot'in Nation *v.* British Columbia 2014; Grassy Narrows First Nation *v.* Ontario (Natural Resources 2014), have delineated and defined political relationships and jurisdictional responsibilities in Canada. Aboriginal title is "characterized by many dimensions. It is inalienable and cannot be transferred, sold, or surrendered to anyone other than the Crown"; it is also "held communally," "…was recognized well before 1982 and is accordingly protected in its full form by s. 35(1)" (Delgamuukw v. British Columbia 1997). Aboriginal interest in land is very broad and "incorporates present-day needs" (Delgamuukw v. British Columbia 1997). Furthermore, it "is a pre-existing legal right not created by the Royal Proclamation of 1763, by s. 18(l) of the Indian Act, or by any other executive order or legislative provision" (Guerin v. The Queen 1984). While the courts have described the nature of Aboriginal and Treaty rights, they have also provided means for infringing upon those rights (R. v. Sparrow 1990).

Treaty rights are encapsulated within the treaties negotiated between the Crown and First Nations. In northern Ontario, treaties extinguished Aboriginal title to land and established a relationship with the Crown and the government of the time. The rights and responsibilities in the treaties passed from the British Colonial Government to the Government of Canada and the Province

of Ontario (Grassy Narrows First Nation *v.* Ontario Ministry of Natural Resources 2014), just as they have passed to future generations of Indigenous peoples. The Government of Canada is said to have a fiduciary responsibility towards Indigenous peoples because "the Crown is under the obligation to deal with the land on the Indians' behalf when it is surrendered" and "where by statute, by agreement or perhaps by unilateral undertaking, one party has an obligation to act for the benefit of another, and that obligation carries with it a discretionary power, the party thus empowered becomes a fiduciary" (Guerin v. The Queen 1984); this responsibility comes through the treaties, as land and discretionary power are ceded and the fiduciary responsibility emerges. Much conflict has arisen in Canada over the realization of Aboriginal and Treaty rights, and the courts have instructed that "treaties and statutes relating to Indians should be liberally construed and doubtful expressions resolved in favour of the Indians" (Nowegijick v. The Queen 1983). The ceded land rights obtained by the Crown removed Indians from the land; the ceded discretionary power obtained by the Crown facilitated the attempted destruction of Indigenous sovereignty. Regardless, the core constitutional principle informing the interactions between various levels of government and Aboriginal peoples is the honour of the Crown (Rio Tinto Alcan Inc. v. Carrier Sekani Tribal Council 2010).

Responsibility for Indians and Lands Reserved for Indians

Section 91 of The Constitution Act (1867) describes the legislative authority of the Parliament of Canada, including Indians and Lands Reserved for Indians 91(24), positioning some Indigenous peoples, those defined as Indians, as well as the Crown lands reserved for them, as Reserves under the jurisdiction of the Federal Government. The legislative expression of this jurisdictional responsibility comes in the Indian Act (1985). This Act defines who qualifies to be registered as an Indian (S6), and creates the status and non-status portions of Aboriginal peoples and communities. The Indian Act provides the legislative connection between status Indians and the Government of Canada. It structures the jurisdictional relationship of Indians, Indian Bands and Lands Reserved for Indians, granting ultimate discretionary power to the Minister of Indian Affairs, currently the "Minister of Aboriginal Affairs and Northern Development". Shared responsibilities for northern development, natural resources, and Indian affairs has a long history in Canada (AANDC 2006).

Responsibility for Natural Resource Management

While section 91(12) of The Constitution Act (1867) grants legislative authority of Sea Coast and Inland Fisheries to the Parliament of Canada, section 92 describes the subjects of exclusive Provincial Legislation, including "Municipal Institutions in the

Province" 92(8) and "Property and Civil Rights in the Province" 92(13), making Ontarians and their communities a provincial jurisdiction. Section 92(5) also grants legislative authority for "the management and Sale of the Public Lands belonging to the Province and of the Timber and Wood thereon" to the Province of Ontario. Section 109 of the Constitution Act (1867), states that "All Lands, Mines, Minerals, and Royalties belonging to the several Provinces of Canada, …and all Sums then due or payable for such Lands, Mines, Minerals, or Royalties, shall belong to the several Provinces." In Delgamuukw v. British Columbia (1997) it was found that "the ownership by the provincial Crown (under S. 109) of lands held pursuant to Aboriginal title is separate from jurisdiction over those lands," which means that a provincial law of general application cannot extinguish Aboriginal rights. Furthermore, R. v. Sioui (1990) found that "if the treaty gives the Hurons the right to carry on their customs and religion in the territory of the park, the existence of a provincial statute and subordinate legislation will not ordinarily affect that right." Sections 92 and 109 of the Constitution Act (1867) give legislative authority to the Province of Ontario for Crown lands, although Aboriginal and treaty rights to said land are not excluded through these sections.

The Government of Ontario exercises its right to create a legislative authority for Crown land in several key pieces of legislation. The Provincial Parks and Conservation Act (2006) deals

with the permanent protection of Crown lands through the designation of parks and protected areas. The creation of Conservation Authorities is afforded by the Conservation Authorities Act (1990), which creates corporate bodies with jurisdiction to manage watersheds. The Mining Act (1990) encourages the development of non-renewable mineral resources in the province. The Far North Act (2010) sets out a land use planning process for Crown lands in

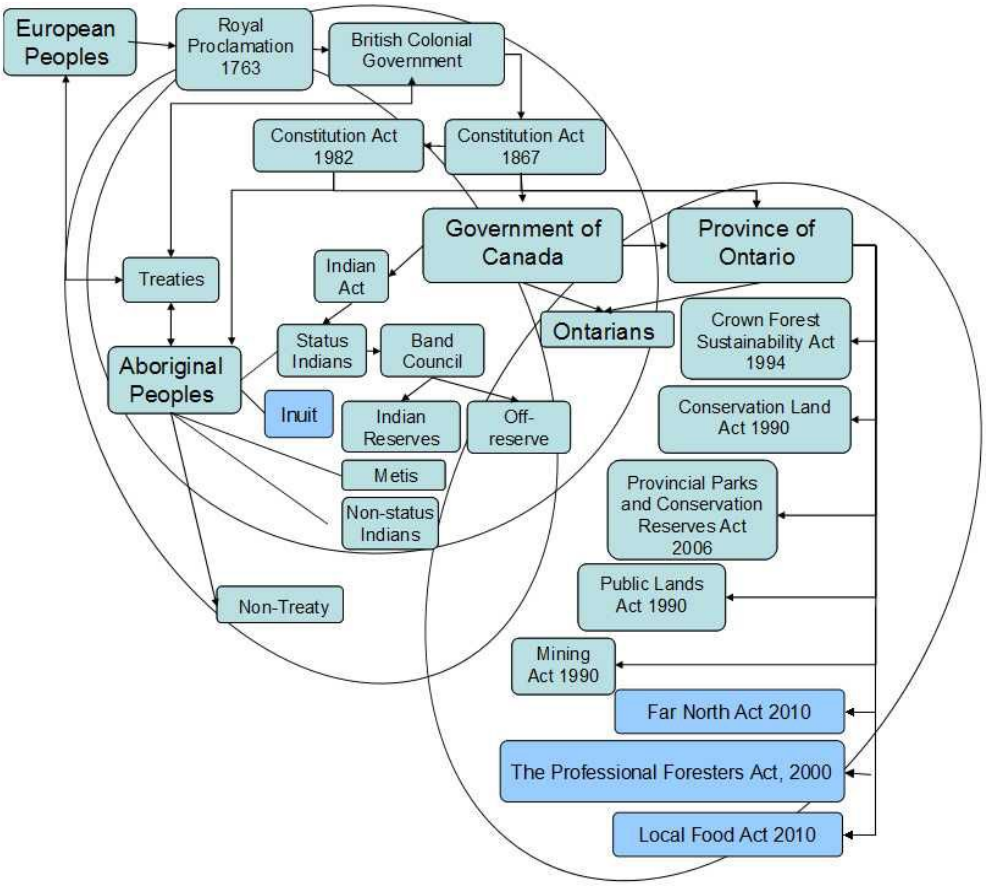

Figure 1. The key legislative relationships among peoples in Canada and the delegation of political and jurisdictional responsibilities in Ontario related to natural resource management, people, and places (adapted from McPherson 1992).

well-defined northern regions of the province. Provincial authority on the remaining forested Crown lands is expressed through the Crown Forest Sustainability Act (1994) and relates to the management of Crown lands and the timber and wood thereon.

The Duty to Consult and the Right to be Consulted

With respect to the management of natural resources, the legal responsibility to consult with Aboriginal peoples on issues that may infringe upon their rights lies with the Crown. In Haida Nation v. British Columbia - Minister of Forests (2004), it was affirmed that the duty to consult and accommodate applies to the province and "third parties cannot be held liable for failing to discharge the Crown's duty to consult and accommodate." The duty to consult was expanded to include dealing in good faith with the intention of substantially addressing concerns in Mikisew Cree First Nation v. Canada - Minister of Canadian Heritage (2005). In this case, it was also stated that the Crown, while it has a treaty right to 'take up' surrendered lands, also has a responsibility to deal in good faith with the intention of addressing concerns and an obligation to inform itself of potential impacts on treaty hunting, fishing, and trapping rights and to communicate its findings. In Haida Nation v. British Columbia - Minister of Forests (2004), it was also found that "the effect of good faith consultation may be

to reveal a duty to accommodate." These court decisions necessitate some form of community engagement in decision making about natural resource development. Dealing with concerns about the intention of addressing them means that the consultations done by the Crown should imply an intention by the Crown to change its plan to minimize the infringement of rights.

With regards to Aboriginal peoples, the Crown has a fiduciary responsibility and duty to consult on matters pertaining to ceded and Reserve lands. On these Crown lands in Ontario, treaty rights protect aboriginal access and necessitate consultation in good faith, a responsibility of the Provincial and Federal Governments. While the duty to consult and fiduciary responsibility are shared provincial and federal responsibilities, the responsibility for Indians and lands reserved for Indians lies with the Government of Canada, and the responsibility for public lands and resources lies with the Province of Ontario. The power to "take up" lands surrendered under treaty, so as to limit the hunting and fishing rights by the Province of Ontario, was affirmed by the Supreme Court of Canada in Grassy Narrows First Nation *v.* Ontario Ministry of Natural Resources(2014). In exercising the Crown's powers to "take up" ceded lands, the Province of Ontario is subject to the duty to consult and accommodate First Nations' interests (Mikisew Cree First Nation v Canada Minister of Canadian Heritage 2005, SCC 69), a duty expressed under the honour of the Crown (Grassy Narrows First

Nation *v.* Ontario Ministry of Natural Resources 2014, SCC 48). The blanket inapplicability of legislative authority imposed on both the Federal and Provincial government by the doctrine of interjurisdictional immunity has been recently displaced in the Supreme Court of Canada decision on Tsilhqot'in Nation *v.* British Columbia (2014, SCC 44). In its decision, the court stated that "Aboriginal rights are a limit on both federal and provincial jurisdiction" and "there is no role left for the application of the doctrine of interjurisdictional immunity and the idea that Aboriginal rights are at the core of the federal power over 'Indians' under s. 91(24) of the Constitution Act, 1867" Tsilhqot'in Nation *v.* British Columbia 2014).

INDIGENOUS FOOD SYSTEMS

The commodities attained by local peoples through direct interaction with the land have supported healthy northern communities since time immemorial. Food production by farming, hunting and gathering, fishing and trapping was the basis of the traditional food system (Kuhnlein et al. 2001; Willows 2005). In Northern Ontario, a variety of forest and freshwater foods are available, including fish, deer, caribou, moose, rabbit, bear, beaver, partridge, goose, cattail roots, berries (cranberries, blueberries, choke cherries, strawberries), seeds, rose hips,

edible flowers and teas (Boulet et al. 2014). A traditional diet based on seasonal and regional availability of these and other edible plants and animals developed to meet the needs of local peoples.

As always, the contemporary importance of traditional food goes beyond nutrition as Aboriginal peoples see it; food is an important indicator of cultural expression and has great sociological meaning (Kuhnlein et al. 2001; Willows 2005). Many Indigenous peoples view food and medicines as one and the same (Obomsawin 2007). For Indigenous land-users, their identities are tied to the land and associated practices (Manore and Mino 2007; Nabhan 2007). Contributions of traditional foods to the diets of local peoples are still significant. Quantitative valuations of the forest and freshwater food contributions in Northern Ontario are sparse, although in the Ojibwe community of Webequie, local fish contributed approximately half a pound of meat per person per day (Hopper and Power 1991), and for the Omushkego Cree, local meats contributed a monetary value of $7.8 million, equal to one-third of their annual economy (Berkes et al. 1994). The perception held among Aboriginal peoples that their traditional foods hold high health values has been documented (Wein 1995; Gittelsohn et al. 1996; Johnson et al. 2011). Many Aboriginal peoples also believe that the restoration of traditional subsistence foods and practices is essential to regain the health of people and communities (Conti 2006). For

Aboriginal peoples, the concept of health reflects a state of connectedness with spirit, culture, community, land, family, and within the individual self (Ray 2007).

Through colonization, the diets of Aboriginal peoples in Canada have undergone a significant transition from local foods to processed foods (Pelto and Pelto 1983). This transition has been facilitated by a number of factors, including physical estrangement from the land, practices, and knowledge (Vecsey 1987), assimilative pressures to change existing social, economic and food systems (Mihesuah 2003), and contamination of the natural environments that support local food systems (Rosenberg et al. 1997; Willow 2009). The current diet of many Aboriginal peoples has been found to be low in fruit and vegetables and high in fat, salt and sugar intake (DeGonzague et al. 1999; Bersamin et al. 2007; Council of Canadian Academies 2014). The current food systems of northern Aboriginal peoples is characterized by a mixed diet of harvested food from the land and imported food sold in stores, posing unique considerations for understanding food security and health (Council of Canadian Academies 2014).

The health and economic disparities between the Aboriginal population and mainstream Canada have been well established (Romanow 2002; Farmer 2004; Tjepkema et al. 2011). The results of the dietary and lifestyle transitions associated with colonialism

include disproportionately high rates of obesity, Type II diabetes, hypertension, coronary heart disease, peripheral vascular disease, appendicitis, kidney stones and some forms of cancer (Milburn 2004). Poverty and poor health are strongly inter-related and mutually reinforcing (Farmer 2004). Unfortunately, Aboriginal peoples living on Reserve are much more likely to be admitted into care facilities from preventable illnesses and much less likely to access specialist care than those living off Reserve (Shah et al. 2003).

Traditional Economy

The traditional economy was focused largely on subsistence use and was based on a mutually beneficial relationship between the local environment and local users. This relationship was informed by a worldview in which humans, non-human animals and the land share a common essence and are granted respect and equality (McPherson and Rabb 1993; Simpson and Driben 2000). A traditional economy is one where people produce most of what they need to survive. With hunting, trapping, fishing, gathering and farming, there is a reliance on a diverse, healthy natural environment. The health of the ecosystem and the resilience of the traditional economic system are interconnected. Consumptive human interactions with other species are not exploitations of natural resources, but rather

reciprocal exchange with benefits to each party (McPherson and Rabb 1993).

Aboriginal communities in Northern Ontario still retain active traditional economies (Boulet et al. 2014). These communities can be characterized as having a mixed or dual economy; in this mixed economy, income-in-kind from the land from traditional economic activities and cash income from wages and social transfers are shared between community members (Usher 1976). In many northern communities, First Nations and settled municipalities included, the traditional economy is still contributing significant in-kind support to many households. There have been several studies focussed on the value of the traditional economy to First Nations communities. These studies have provided insight into the in-kind monetary contribution of wild meats to the economy (Usher 1976; Berkes et al. 1994; Berkes et al. 1995; George et al. 1996), or have explored the market potential for non-timber forest products[4] (NTFPs) (Boxall et al. 2003).

Modern Aboriginal economies are rooted in a variety of different systems. The customary or traditional economy is based on the distribution of communal wealth expressed in sharing, reciprocation, and mutually beneficial relationships. This system exists alongside a western economy that is based on individual

[4] Non-timber Forest Products are non-wood commodities that can be obtained from forests, such as foods, ecological services and furs.

accumulation of wealth expressed in capitalistic competition for power and profit (Harris and Wasilewski 2004). The co-existence of these two economic models is described by some as a mixed or dual economy (Usher 1976; Wolf and Walker 1987; Berkes et al. 1994; Berkes et al. 1995). The classification of Aboriginal economies as dual is a western description used to describe a small portion of the Aboriginal world.

Aboriginal peoples have sustained life in spite of many negative socio-economic conditions. The statistics represent not only the destructive nature of the relationship with western culture, but also the resilience of Aboriginal peoples (Smith 1999; Neu and Therrien 2003). Attempts to quantify the economic contribution of our traditional economy often involve conversion to and comparison with the western economy, which provide an incomplete view of the contributions of traditional activities to the current local economy. Incompatibility stemming from differing worldviews results in much of the value of the traditional economy being invisible to conventional economic analysis, since the harvested products do not pass through the market (George et al. 1996). Non-market-based production is a major contributor to many households in Canada; in fact, the nation's "shadow economy" was estimated to be valued at approximately $16 billion in 2004 (Schneider 2012). Many Indigenous products do not pass through the western markets

because they are not a part of that system; they are, however, often marketable if the producers participate in the market society; foods are one example of such products.

The world systems view asserts that "the capitalist economy has evolved into a single economic system that accommodates all manner of cultural and political systems and to which all such systems must adapt" (Anderson 1999, 31). Adaptation[5], changing physical or behavioural characteristics to suit new or changing circumstances, is very different from the changes associated with modernization, adoption of new and abandonment of the old. Adaptation over abandonment and adoption necessitates a more complex perspective of development than the duality represented in the western theories; "Indigenous people believe and behave as if there is not just one of two [First and Second World] paths to development but many and diverse ones … where a blending and fusion of these [traditional and modern paths] is both likely and more widespread" (Anderson 1999, 50).

[5] Adaptation is the process of changing to fit new environments or conditions. It is an important element of resilience theories and sustainable natural resource management philosophies.

Western Theories of Aboriginal Economic Development – Economic Development as a Tool of Civilization

The theories and control of most of Northern Ontario's economic development initiatives are not reflective of Indigenous values and desires. Western views of development support industrial projects, as they are viewed as the means to an end, civilization through development (Neu and Therrien 2003). Development projects include capacity building, business development and natural resource extraction, among many others. The civilization of Indians and the adoption of western theories and development initiatives have facilitated successful development initiatives from a western perspective (Wolf and Walker 1987; Anderson 1997; Fraser 2002; Boxall et al. 2003). Relationships with members of the market society are expressed in various partnerships, joint ventures, co-management agreements and the development of Aboriginal corporations. Aboriginal involvement in the economy and the generation of wealth is seen by some as the "ultimate push to self government or at least to a decent standard of living and a decent level of participation in the community by generating wealth" (Wuttunee 2002, 10). Participation in the capitalist globalized market society, in itself does not promote self governance; western theories of capitalist systems acknowledge the inherent formation of dependency relationships (Innis 1995; Anderson 1999), because

"help offered to so-called underdeveloped people never came without a price" (Hookimaw-Witt 1998, 160). Western perspectives place western cultures, societies, places, and economies in the spatial and temporal core, while Aboriginal cultures, societies, places and economies are situated in the spatial and temporal periphery. The acts to civilize Indians have done a very good job of restricting life in the Aboriginal world (Neu and Therrien 2003). Chronic dependency and perceived underdevelopment are outcomes of interaction with the Eurocentric worldviews, whose cultural binaries and dualisms have been destructive to Indigenous communities, as they lessen or exclude the perceived value of Indigenous knowledge (Battiste 2005).

Aboriginal Participation in the Market Economy/Society – Aboriginal Theories

Increasing the level of Aboriginal economic development was considered one of the fundamental goals of the Royal Commission on Aboriginal Peoples (RCAP 1993). Strategies for change, the commissioners argued, must be rooted in an understanding of the underlying contributory historical processes, namely the economic provisions of the treaties and the need for Aboriginal people to manage their own economies, lands and resources that have supported Indigenous economies in the past (Newhouse 1997).

The contingency perspective, said to be an Aboriginal theory of participation in market society, is described as a combination of regulation theory, the post-imperial perspective and alternative development approaches (Anderson 1999). The following list describes the social, political, ecological and economic components and ideals that influence the effective implementation of the contingency perspective, adapted from Anderson (1999) and Jorgensen and Taylor (2000):

- Accommodation to the dominant regime of accumulation that reflects the needs and objectives of the people/region.
- Negotiation of mutually beneficial arrangements (as part of the mode of development) between leaders of a developing region and those who control the economy.
- An active role for people and leaders in developing strategies and negotiating arrangements that meet the needs and objectives of the people/region.
- Supralocal regulatory mechanisms that coordinate the activities of peoples and reduce destructive competition among the region.
- The existence of mechanisms for the people to modify arrangements should the outcomes prove unacceptable.
- Control of the resources valued by the key players in the global economic system.
- A skilled and receptive workforce, open to hierarchal management structures.
- Close proximity to markets and an openness to commercialization.

The success of the contingency perspective appears to be dependent on the relationships among Aboriginal peoples, western society and the land. As outlined above, dependency

on outside regulatory mechanisms, partners willing to negotiate mutually beneficial relationships, and an active civil sector are characteristics of the contingency perspective. In addition, control of resources, effective Aboriginal political representation, and mechanisms for people to modify arrangements are also required.

Depending on an individual's position in the political, social, cultural and ecological labyrinth, the contingency approach may facilitate development from an Aboriginal perspective. The 'Caring for Country' activities of the Northern Land Council in Australia provides an example of the expression of Aboriginal theories of development dependent on the nature of the local context. The success of the activities in promoting participation in customary activity as a means of improving socio-economic wellbeing through community-based land management programs is a result of the relationships between the local Aboriginal world and the western world. Aboriginal people own 44% of the terrestrial land mass, and it is on their land that title, power and authority are held, and the 'Caring for Country' activities take place (Altman and Whitehead 2003). The ownership and control of resources allows for the expression of theories of development held by the land owner. In the case of the Northern Land Council in Australia, ownership allowed for the expression of local values and theories of development. In the case of Ontario, Crown

ownership facilitates the expression of western modes of development, and Aboriginal participation requires adoption of these development theories.

Strengthening Aboriginal Worlds

As a result of the pervasive and expansive nature of western theories of economic development, cultural survival for Indigenous poeples is an economic battle fought on the ground, in the bureaucracies of government, and in the boardrooms of resource-extraction corporations (Neu and Therrien 2003). Critical dialogue that engages ideas and practices has always been a part of Aboriginal culture, without which we are led by theorists and practitioners who do not share our ideas (Newhouse 2004). The economic battle includes negotiations, legal challenges, as well as physically defensive and offensive acts, but must also include adaptation. Adaptation is expressed in the development of alternative development theories, such as Aboriginal theories of development. Adaptation aims to restructure systems and relationships to better position the Aboriginal world, spatially and temporally.

Alternative theories to western theories of development accept "the existing system of global accumulation as a fact. It does not propose to turn away from it and shut the door…. Broadly speaking,

the objective of an alternative development is to humanize a system that has shut… [Aboriginal peoples] out…. Its central objective is their inclusion in a restructured system that does not make them redundant" (Anderson 1999, 50). From a western perspective, the undeveloped traditional world is redundant and exists on the periphery of the western world. From an Indigenous perspective, our world is valid, contemporary, and exists in the core of our place and being.

The duality of old and new worlds has led to displaced perspectives of civilized and uncivilized, developed and undeveloped, or modern and traditional. This perspective also fixes spatial and temporal relationships in nature and society. Society, culture, economy and the environment are viewed in static time and space, positioned along the path between undeveloped and developed; in response, "there is a growing consensus within Aboriginal communities about the need to base development efforts upon Indigenous thought and ideas" (Newhouse 2004, 42). Strengthening our life in the core of our world through life-projects builds the resiliency needed to adapt to the western market society instead of adopting it; it is the articulation of Aboriginal theories of development.

Development and Life-Projects

Development, whether social, cultural, ecological or economic is a construct of the western world, and it has long been recognized that if "in working out a settlement of Native claims, we try to force Native social and economic development into molds that we have cast, the whole process will be a failure" (Berger 1983, 374). Development projects on reserves often include capacity building, business development and resource extractions, among others. Economic development projects as a means of participating in the market society are commonplace. Outside relationships with the market society (government, industry, non-governmental organizations, media, etc.) have spread into the Aboriginal world. Market-based economic development theories seek participation by Aboriginal peoples for a number of reasons. Corporations seek partnerships with Aboriginal peoples in order to access resources and consumers (Anderson 1997).

In response to these outside directives, theories of development have emerged in defence of Aboriginal society, culture, place and autonomy. George et al. (1996) write of the Mushkegowuk in Northern Ontario that "they do not consider integration with the economy of the south, and the replacement of the traditional sector by the wage economy, as foreseen in the conventional view of development, to be feasible or desirable" (S359). This

sentiment is shared by Indigenous communities around the world (Blasser et al. 2004). Indigenous perspectives on the complexity of life have generated theories of development that reflect this complexity. Alternative, 'people-centered' theories of development are emerging within the development discourse, which show some willingness to include objectives others than economic growth (Newhouse 2004). Life-projects are tied to building resiliency of the Aboriginal world, the ability to adapt to change (Blasser 2004; Harris and Wasilewski 2004). Development and life-projects are both place based; "what distinguishes them is the relative importance that each gives to horizontal and vertical linkages and what consequences these visions have for place-making" (Blasser 2004, 29). Aboriginal life-projects are not opposed to all western development, but rather seek compatibility in their world, promoting adaptability through resiliency.

How Indigenous Land Uses on Crown Lands are Managed in Ontario

Historically, Ontario's Crown forests have been managed primarily for a single commodity (timber) with provisions made for other values (foods, minerals, etc.) through policy directives and management activities. Provision for industrial activities dominates the management and use of Crown land in Ontario for the extraction of commodities. Forest stewardship has been parsed into

natural resource management activities that are segregated into various government ministries and fall under multiple jurisdictions. In Ontario, the Ministries of Natural Resources and Forestry, the Environment, Transportation, and Northern Development and Mines all have jurisdiction over various aspects of Crown land management. The jurisdiction of the federal government further compounds the complexity of Crown land management through the responsibilities held by Environment Canada, Fisheries and Oceans Canada, Natural Resources Canada, Parks Canada, and Aboriginal Affairs and Northern Development Canada[6]. All of these ministries play a role in the management of Crown lands and thus hold the duty to consult within the honour of the Crown on Aboriginal and Treaty Rights as a part of the fiduciary responsibility.

Authoritative knowledge is the primary source of information and guidance for natural resource management in Ontario. For example, a Registered Professional Forester (RPF) is the only authority capable of certifying a forest management plan in Ontario (CFSA 1994). The RPF authority is gained through registration with the Ontario Professional Foresters Association (OPFA). This body is a proxy regulator for the Crown, in the profession of forestry in Ontario ever since registration is a requirement to sign forest management plans in Ontario (Professional Foresters Act 2000). The

[6] Aboriginal Affairs and Northern Development Canada is the currently applied titled for the Department of Indian Affairs and Northern Development (TBS 2014).

OPFA structures its requirements around professional training and experience. Members must have taken undergraduate level courses in sixteen key forest science and management subject areas (OPFA 2005). There is provision for the inclusion of other authorities, at the discretion of the Minister of Natural Resources, in certifying the forest management plan, where there are "elements of a forest operations prescription [that] are not within the standard expertise of professional foresters" (CFSA 1994 s. 16(3)).

There is a strong tradition of reductionist approaches informing current environmental laws and forest management practices (Bosselman 2010). Forest managers and land users inherited this system of management from a Western paradigm. A worldview derived from the process of colonization, Western philosophy is reflective of hierarchal and bimodal ways of knowing, as well as bearing a focus on extraction of resources for foreign wealth. The accounting principles and management practices used to quantify manageable units (forest stands, trees, caribou, trappers, etc.) to be manipulated to maximize the sale of timber from a forest are emergent from the colonial worldview. Quantitative research generates the knowledge that informs this accounting for and managing of units. In this paradigm, various independent authorities define the management objectives, identify variables, conduct measurements, develop theories, and produce statistics and models that inform decision making. Geographic Information Systems (GIS) technologies

offer tools to convert these datasets into digital and geographic representations of often distant forests. As a result, Ontario's forests are transformed into models managed by external interests detached from the complex socio-ecological system. This labyrinth is situated across national, provincial, state, and territorial boundaries. As a result, the "relationships between Indigenous peoples and governments are filtered and managed through a complex field of bureaucratized manipulations, controlled by soft technologies such as strategic planning, law, and accounting" (Nue and Therrien 2003, 5).

As previously listed, there are a number of key pieces of legislation that impact the management of natural resources. There are many competing interests seeking access to Crown resources, and the legislation set forth by the Crown sets the rules of the development game. As described above, various conflicts over the infringement of Aboriginal and treaty rights by the Crown and its actors have led to clarification and direction by Canada's courts. Unfortunately, there are major differences between the Province and First Nations around the scope of Aboriginal and treaty rights (Wilson and Graham 2005). In response to these differences, corrective measures have recently been initiated by the Crown in key pieces of legislation. For example, the Province of Ontario now recognizes Aboriginal and treaty rights in the Mining Act (1990)

in an amendment in 2009. The purpose of the Mining Act (1990) now reads:

> …to encourage prospecting, staking and exploration for the development of mineral resources, in a manner consistent with the recognition and affirmation of existing Aboriginal and treaty rights in section 35 of the Constitution Act, 1982, including the duty to consult, and to minimize the impact of these activities on public health and safety and the environment. 2009, c. 21, s. 2.

The Far North Act (2010) applies to the northernmost Forest Management Units, as well as the area north of the Area of the Undertaking. The Act set out a land use planning process separate from the Forest Management Planning Process. However, throughout much of Ontario, the Crown Forest Sustainability Act (1994) remains the most significant piece of legislation pertaining to Indigenous land uses on Crown Land. This Act describes the creation of forest management units and requires the creation of a forest management plan for each unit to be prepared according to the Forest Management Planning Manual. Aboriginal communities adjacent to Forest Management Units have limited opportunities to participate in planning, such as the opportunity to appoint one community member to be a part of the forest management planning team, or the opportunity to develop a custom consultation process with MNR district managers; though the responsibility for the development of the forest management plan ultimately lies with the minister,

they "may [almost always] require the holder of a forest resource license to prepare a forest management plan for a management unit" (CFSA 1994, s. 10(1)). The establishment of forest management boards for community forests is a possibility under section 15(1) of the Crown Forest Sustainability Act (1994), though community forests remain un-established and the topic of some academic debate (Duinker et al. 1991; Harvey and Hillier 1994; Robinson et al. 2001).

The Forest Management Planning Manual (2009) also requires the development of an Aboriginal Background Information Report as a part of all forest management plans in Ontario. The report summarizes Aboriginal values that the Forest Management Plan is required to contain:

> a) a summary of the use of natural resources on the management unit by Aboriginal communities, in particular hunting, fishing, trapping and gathering;
>
> b) forest management-related problems and issues for those Aboriginal communities; and
>
> c) an Aboriginal values map which identifies the locations of natural resource features, land uses and values which are used by, or of importance to, those Aboriginal Communities.

While "there is a growing recognition that Indigenous community-based involvement in natural resource management can bring significant economic and sociocultural benefits" (Altman and Whitehead 2003, 2), the same benefits are needed and are possible to achieve in non-Indigenous communities. Currently, however, the concept of sustainable forest management is in the

process of being redefined both in policy and practice (Angelstam et al. 2004). Generally, there is transition from the classic focus on sustainable timber management (Schlaepfer and Elliott 2000), toward multifunctional ecosystem management (Meffe 2002) and a focus on sustainable resilient social-ecological systems (Berkes et al. 2003).

The term 'socio-ecological system' (SES) describes complex integrated systems in which humans are a part of nature; the use of this term began as a means of stressing that the delineation between social and ecological systems is artificial and arbitrary (Quilan 2006). Aboriginal peoples use the interconnectedness of the environment and all living things as a central theme in Aboriginal culture, and as such they can be described as living within SESs. Traditional ecological knowledge (TEK) related to the local environment has guided human interactions with the local environment. TEK has developed over generations through direct interactions with the local environment and has guided traditional practices that promote biodiversity, healthy ecosystems, and environmental sustainability. When TEK is combined with scientific knowledge, there is great potential for monitoring healthy environments and achieving sustainable resource use (Berkes and Folke 1998). Given the complexity of SESs, the development of theories aimed at explaining their behaviour may be nearly impossible. As such, resilience theory should be viewed

as a framework for considering the dynamics of the system (Anderies et al. 2006).

Walker et al. (2004) define resilience as "the capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity and feedbacks" (6). Resilience-based studies tend to encompass interdisciplinary theories as they explore the general function of complex SESs. The resilience approach is well suited to capturing the complex nature of SESs, although the holistic or generalized nature of resilience theory may prevent the development of mechanisms, such as models, that can be used to predict the impact of particular management activities. Resilience-based research does have management implications, as it provides a means of focusing attention on particular attributes in dynamic SESs, in addition to the development of principles to guide management activities aimed at improving long-term performance (Anderies 2006). The Resilience Alliance has developed a list of some of the common threats to resilience in SESs. The list includes environmental threats such as loss of biodiversity and toxic pollution, and economic and institutional threats such as inflexible, closed institutions, subsidies that encourage unsustainable resource use, and a management regime focused on production and increased efficiencies (Resilience Alliance 2007). Blasser (2004) discusses the complex network of relationships that

forms through horizontal connections (within) and vertical connections (outside). The hierarchal worldview held by modern Western societies is a result of their ignorance of the "connections and hybridity not only in nature and society, but also between the vertical and horizontal threads that make up place" (Blasser 2004, 30). Promotion of individual, family, and community resilience is being used to improve health and well-being in Aboriginal communities, through strengthening social capital, networks and support; revitalization of language, enhancing cultural identity and spirituality; supporting families and parents to ensure healthy child development (Kirmayer et al. 2009).

METHODS ACROSS ALL STUDIES

My Perspective

As an Indigenous man of mixed Odawa and English descent, I entered this research project with a particular perspective of the past and present relationships between Indigenous and European cultures. As an Indigenous person who was also a researcher, I was deeply concerned by the nature of the past and present relationships between Indigenous peoples and Western science/academics, and I am committed to not perpetuating this reality. Experiences shared

with me within Indigenous communities supported assertions like those of Linda Smith, that "research is probably one of the dirtiest words in the Indigenous world's vocabulary" (Smith 1999, 1). Upon exploring contemporary research methodologies, this conflict, while entrenched in the colonial relationship, appears to be exacerbated by quantitative approaches that restrict people to the role of research subjects. Similarly, a quantitative approach restricts the role of people to managed subjects, whereas a qualitative methods approach facilitates their participation throughout the research process. Ontario's natural resource regime has a strong tradition of quantitative reductionist approaches informing current laws and management practices. Alternatively, the qualitative research approach allows participation throughout the research process (Stoecker 1999). Essentially, the intent of this research was that it be done *by* rather than *on* Indigenous peoples. In particular, the inclusive nature of cyclical action research done by those researched appealed to me because of its requirement to plan, act, observe, and reflect (Carr and Kemmis 1986), and its applicability to empowering disenfranchised groups and the management of organizational change (Schon 1987; Whyte 1991; Brown 1993; Greenwood et al. 1993).

I came to my PhD research with an Honours undergraduate degree in Forest Conservation and significant personal experiences in the forests of Northern Ontario. Subjectively, I approached this

project from the perspective that the dominant research and management paradigm behind natural resource management in Northern Ontario was lacking in its ability to meet the needs of Indigenous land users due to its philosophical perspectives. Over time, I have seen a shift in the language being applied to the management of natural resources; words like 'sustainability,' 'community-based,' 'honour,' and 'respect' have crept into the legislation, and changes in the nature of the relationship between cultures and with shared lands are assumed outcomes. As a new "forest manager," I felt at odds with the dominant Western ways of knowing, divisive and categorical in nature, and an Indigenous way of being, in which knowledge lives in practice (Maurial 1999; Dei 2000).

Some scholars argue that only Indigenous peoples should do Indigenous research (Smith 1999); it is worth noting that I am not from Aroland First Nation. I have tried my best throughout this project to adhere to the cultural protocols, values, and beliefs of myself, the people with whom I have engaged in this research, and to the academic institution granting the degree. This was often difficult and I hold my responsibilities to engage others respectfully as equals above all else. As with others before me, I sought to balance the dynamics of power in the research relationship and avoid the illusion of inclusion (Reason and Bradbury 2001). The rigidity of academia often does not easily

accommodate the need for reflexivity in the community, nor does it usually foster decolonizing actions. Decolonization is not a destination, but a process (Strang 1991), a commitment to decolonizing research must be an act, demonstrable in practice (Menzies 2004).

My decision to engage in qualitative, social science research within the PhD in Forest Sciences program at Lakehead University emerged from a desire to contribute to the philosophy of natural resource management so as to make positive change in the lives of Indigenous land users. Part of my responsibility in this relationship was for me to better understand the experiences of land users. All data collection design was informed and, where possible, collected and interpreted by land users. Participant action research involves empowerment through knowledge and collaboration, employing methods that seek to increase participation, recognizing that increasing participation means democratizing the knowledge process. This involves legitimizing forms of knowledge not normally seen as valid (Stoecker 1999). In a qualitative approach to research, "real participation requires a 'co-generative dialogue' where researcher knowledge, drawing and abstracting from multiple contexts, is combined with insider knowledge rich in experience and detailed understanding of a specific setting" (Stoecker 1999, 842). In order to reach this

'co-generative dialogue,' we must expand our means of knowledge development and valuation to include qualitative information. In social research, knowledge is a social construction; therefore, researchers are partners with participants on the path to discovery, and, as such, the researchers themselves require investigation as part of the study by turning one's research lens inward (Steier 1991; Lather 2009).

As an Indigenous man, I am on my own journey of decolonization, and participation in research such as this is inherently auto-ethnographical, an approach said to provide the opportunities to self-educate and self-empower (Langellier 1999). As a natural resource manager trained in the modern and Western paradigm, research of this nature represents a critical ontology[7] of the natural resource management paradigm. Praxis is the act of linking practice and theory, specific to this research the act of linking critical actions to political actions in the real world (Freiré 1993). Like the work of others, I hope this research aids the oppressed in becoming aware of the "limit situations" imposed upon us, so as to imagine ourselves beyond those limits, informing actions in order to ultimately overcome the state of oppression. However, I am aware that despite the promise of empowerment and

[7] Critical ontology involves how and why political opinions, religious beliefs, gender role, racial positions, and sexual orientation have been shaped by dominant cultural perspectives (Kincheloe and Steinberg 2006).

change, Western research has often failed to inform actions for the oppressed (Lather 2007; Smith 1999).

Zuber-Skerritt and Perry (2002) provided guidance on the difference between core-action research and thesis-action research as a graduate student preparing a thesis for adjudication. Core-action research, collaborative, participatory action research in the field (aimed at practical improvement), is distinct and related to the independent action research done in the thesis (Zuber-Skerritt and Perry 2002). From this perspective, the candidate essentially has two projects: the action research project and the thesis project, which uses data from the action research project. Data collection from the diverse interdisciplinary research projects included the application of both qualitative and quantitative methods in social research. Triangulation of the data collected was built into the research design through utilizing different data sets, researchers, theories, and methods (Fielding and Fielding 1986). Through triangulation, the use of multiple research methods simultaneously, the rigour of the research is increased as well as the validity of the results (Jick 1979; Greene and McClintock 1985; Kirk and Miller 1986).

Building Relationships and Co-developing Research Themes

Throughout the relationship, we employed interdisciplinary, community-based participant-action oriented research

methodologies. Previous scholars have identified four phases associated with qualitative field work, including getting in, learning the ropes, maintaining relationships, and finally leaving and staying in touch (Shaffir and Stebbins 1991). There is a common perception of researchers coming to communities and leaving with knowledge never to return. I intend to continue to explore issues led by community-based researchers for as long as they will participate. Participation as reciprocity recognizes the reciprocal relationship marked by responsibility and obligation between the researcher and those researched (Elam and Bertilsson 2003; Ormiston 2010). Participation of Indigenous peoples, in the current quantitative approach to natural resource management is limited, whereas a qualitative approach may facilitate real participation that "must not be about 'advising' the researcher, but actually controlling the decision-making process" (Stoecker 1999, 842).

In the early years of the project, I focused on building community relationships and positioning myself in the research, the 'getting in' and 'learning the ropes' phases. These phases included participation in numerous formal and informal interactions with community leadership, staff, and general members. I initially came to the community with a broadly proposed research topic of the traditional economy in First Nations communities and how it contributes to the northern economy, community health, ecosystem

health, and resiliency in local socio-ecological systems. This topic was broad and open enough to allow the research to be refined and refocused with community input. As we got to know each other, various community members helped shape the final research themes that included:

- Local Food System and Values Mapping
- Contamination of the Food System
- Food Species Management
- Marketing Forest and Freshwater Foods

Early in the research relationship, we began mapping historic and present land uses, as well as observed disturbances. The mapping turned out to be a critical exercise in building a working research relationship with community members. Through focus group sessions and individual interviews, I engaged local knowledge holders in the mapping exercise as well as in discussions pertaining to traditional use and the local environment. Maps and aerial photographs were used to help facilitate a thorough discussion of the issues related to natural resource management, such as the application of herbicides. In these sessions, I employed the focus group (community) and long interview (individual) methodologies (Morgan 1997; McCracken 1988). Two focus group sessions were held in the community. The first was a mapping exercise and discussion

of the ecology of moose, blueberries, fish, and related topics as identified by the participants. Historical and current population dynamics and traditional land use were also discussed. The purpose of the second meeting was to review, modify, and expand on the information gathered in the first session. These sessions were audio-recorded while land-uses were mapped and discussed by participants. Participants were recruited through community meetings and through word-of-mouth. Through the focus group session, individuals who wished to expand on the knowledge shared were identified as participants for the individual long interviews. These interviews focused on the threats and perturbations identified by the participants of the focus group sessions. Some interviews took place in individual's homes while others took place in locations identified in the mapping exercise as known to support forest and freshwater food species. On-site discussions related to traditional uses, current utilizations, and other issues that arose throughout the trips. Trips were taken to areas identified by participants as of particular concern because of silvicutural activities. We discussed perceptions of the impacts of silvicultural applications and impacts on human use at these sites.

Together we explored the impacts of management policies and economic activities on people's access to natural resources and their ability to participate in the traditional economy by identifying values and issues through mapping and interviews in

collaboration with community members. We explored issues of food sovereignty with community members, including access to fish, wildlife, plant foods, and medicines from shared lands. In addition to food resources, access to other natural resources such as timber and firewood were also explored. The information shared provided me with a critical grounding in the local environment, historical areas and events, as well as challenges and opportunities with the traditional economy and the natural resource industry. To ensure capacity existed to continue the mapping activities beyond my thesis, a number of community members were trained in GIS and mapping techniques and continue to contribute to a living document held by the band.

THESIS ORGANIZATION

The body of the thesis represents a series of distinct but related manuscripts that describe applied community-based research projects that explored the co-developed community-identified research themes and the thesis objectives. Throughout the thesis, I make use of the first-person singular, as well as a collective 'we.' I acknowledge the contributions of members of the supervisory committee and the community-based researchers in selecting the appropriate voice. Each chapter was written for publication in

appropriate peer-reviewed journals or collected works, and as such is presented in the format of each publisher.

In Chapter 2, I explore the historical erosion of Indigenous food sovereignty in Northern Ontario by looking at the deliberately imposed changes upon Indigenous food systems which led to the current state of food insecurity on reserves in Northern Ontario. This paper is co-authored with Dr. Kristin Burnett (Department of Indigenous Learning at Lakehead University), and in it we use the voices of the researcher to describe how the current food system developed in Northern Ontario First Nations. A version of this paper has been accepted for publication in 'The Medicine is in the Land': First Nations in Northern Ontario Reconnecting Land, Food and Culture. In Robidoux, M.A., and C. Mason (eds.). University of Manitoba Press, Winnipeg (in press).

In Chapter 3, I examine individuals' uses of key forest and freshwater foods as well as their perceptions of contamination and food security in relation to natural resource management activities. A version of this paper was submitted as the final report of a collaborative community-based research project funded by Health Canada. The interdisciplinary research team included members of Lakehead University's Food Security Research Network[8] and Aroland

[8] The Food Security Research Network couples university resources—faculty, students and staff—with Northwestern Ontario partners in a Contextual Fluidity Partnership Model designed to grow their knowledge base. For more information on the network see: www.foodsecurityresearch.ca.

First Nation. The paper was co-authored with community members/researchers Mark Bell and Sheldon Atlookan, and Dr. Mirella Stroink from Lakehead University's Psychology Department. Dr. Connie Nelson from the Food Security Research Network at Lakehead University also made significant contributions to the intellectual development of the paper. The paper is written from the perspective of the community members/researchers to describe the perceived risks to the community's health and well-being associated with natural resource management. Drawing on responses to survey questions that asked respondents recall local food consumption as well as rate the safety of key local foods. Silvicultural records from forest management authorities are also used to indicate the amount of spraying activity that has occurred and its distribution within the region.

In Chapter 4, I explore the community's perspectives of the current and historical natural resource management regime. The impacts of these regimes are examined with particular attention on individual access to moose. A version of this paper was published in the journal Alces (47: 163-174; 2011). The data for this paper came from the same collaborative community-based research project funded through Health Canada. The same interdisciplinary research team included members of Lakehead University's Food Security Research Network and Aroland First Nation. This paper was co-authored with community members/researchers Mark Bell and

Sheldon Atlookan, as well as Dr. Brian McLaren (Faculty of Faculty of Natural Resource Management at Lakehead University) and undergraduate student Chris Pereira (Honours Bachelor of Science in Forestry). The community members/researchers and I interpret the results and perspective to describe the impacts of Ontario's natural resource management regime on the accessibility and availability of forest and freshwater foods generally.

In Chapter 5, I present a case study of a participant action research project that created a social enterprise based on an Indigenous worldview aimed at rebuilding Indigenous food sovereignty. The initiative is called the Aroland Youth Blueberry Initiative. A version of this paper has been submitted to the Social Enterprise Journal. This paper was co-authored with community members/researchers Mark Bell and Sheldon Atlookan. We use the voice of the community-based researchers to describe the impacts of Ontario's natural resource management regime on the accessibility and availability of forest and freshwater foods. Together we reflect on the effectiveness and success of this action-based research project to create an Indigenous social enterprise in support of food sovereignty and community resilience.

The final chapter explores the thesis as a whole through a general discussion of its chapters. I also ruminate on and interpret the lessons learned from the community-based research projects,

discuss their implications for Indigenous food systems and natural resource management in Northern Ontario. I provide considerations for Indigenous and Crown actors, managers and policy makers for meeting the goals of sustainable forest management that meets the needs of present and future generations. Finally, I offer recommendations designed to aid rebuilding Indigenous food sovereignty within the existing paradigm.

CHAPTER 2: WHAT HAPPENED TO INDIGENOUS FOOD SOVEREIGNTY IN NORTHERN ONTARIO: UNDERSTANDING IMPOSED POLITICAL, ECONOMIC, SOCIO-CULTURAL, AND SOCIO-ECOLOGICAL CHANGES[9]

INTRODUCTION

Since the Second World War, governments, non-governmental organizations, the International Monetary Fund, and the World Bank have attempted to resolve starvation and malnutrition around the globe, a phenomenon commonly referred to as 'food insecurity,' with solutions premised on increased economic growth and less market regulation. Such efforts are based on the assumption that poverty and inequity can be resolved through free-market capitalism and neoclassical economic thinking. At the World Health Summit of 1996, the World Health Organization (WHO) defined food security as existing "when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life."[10] The concept of food security has its limits and, according to William Schanbacher (2010), reinforces a model that "reduces human

[9] This paper is co-authored with Dr. Kristin Burnett, a version of this paper has been accepted for publication in Robidoux, M.A., and C. Mason (eds.). *'The Medicine is in the Land': First Nations in Northern Ontario Reconnecting Land, Food and Culture*. University of Manitoba Press, Winnipeg.

[10] World Health Organization, "Food Security," http://www.who.int/trade/glossary/story028/en/ (accessed October 2013).

relationships [with food] to their economic value."[11] Indeed, the concept of food security has systemically ensured answers to starvation and malnourishment remain deeply rooted in economic and government driven solutions where the power to initiate real change remains in the hands of a privileged few. Efforts to alleviate food insecurity to date have been largely unsuccessful, due in part to an ignorance of the historical context in which they exist. The colonized Indigenous nations of Canada suffer from the cumulative impacts of many deliberate disruptions to their sovereignty. In this chapter, we hope to set the context for discussions pertaining to the current expression of food insecurity in First Nations communities in northern Ontario by exploring significant historical disruptions to Indigenous food systems.

WHERE ARE WE NOW?

The failure of the food security framework to address the systemic imbalances that are entrenched in many political, social, and economic systems has led countless food activists to look for alternative models. Food sovereignty, a term coined at the Second International Assembly of La Via Campesina in Tlaxcala, Mexico in 1996, has been increasingly employed because it acknowledges and names the "political and economic power dimensions inherent in the

[11] William Schanbacher. 2010. *The Politics of Food: The Global Conflict between Food Security and Food Sovereignty* (ABC-CLIO, LLC, Santa Barbara 2010), Chapter ix.

food and agricultural debate."[12] However, many different iterations of food sovereignty exist. For food activist Raj Patel, food sovereignty is a call to arms for those "who have systematically been excluded from the formulation of food policy, who have long been forced to live with the consequences of agrarian policy authored by those in cities with few, if any, links of accountability to those whose lives are wrecked by their ideas."[13] Other definitions emphasize the importance of cultural diversity, the values of mutual dependence, and an essential respect for the environment.[14] Nevertheless, one of the major goals of food sovereignty remains the desire to invert the structures of power and place the people who "produce, distribute, and consume food at the centre of decisions on food systems and policies."[15]

These definitions of food security are limiting because they fail to include the diversity of food systems, as well as the social meanings and relationships that different peoples and cultures have

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[12] Wiebe, N., and K. Wipf. 2011. Nurturing Food Sovereignty in Canada. In Wittman, H. et al. (eds.). 2011. *Food Sovereignty in Canada: Creating Just and Sustainable Food Systems.* Fernwood Publishing, Black Point, Nova Scotia.

[13] Raj Patel, "Food Sovereignty: A Brief Introduction," http://rajpatel.org/2009/11/02/food-sovereignty-a-brief-introduction/ (accessed October 2013).

[14] For examples see: Schanbacher, W. 2005. The politics of food. In Windfuhr, M., and J. Jonsen. (eds.). *Food Sovereignty: Towards Democracy in Localized Food Systems.* ITDG Publishing, U.K.; Amin, S. 2011. Food sovereignty: A struggle for convergence in diversity. In Amin, S., E. Holt-Gimenez, R. Patel, O. DeSchutter, and J.P. Stedile (eds.). Food Movements Unite: Strategies to Transform our Food System. Food First Books, Oakland. Pages 154-188.

[15] http://www.wdm.org.uk/what-food-sovereignty [accessed 4 November 2013]

with their food and food ways, including those traditions that are central to the production and preparation of food. Definitions of food sovereignty need to go further than looking at human actions and a concern for the environment to valuing and respecting the places where food is gathered and produced on cultural and spiritual levels, while also addressing the power inequities and disconnections between the urban people who consume food and the rural/agricultural people who produce it. Presently, for First Nations in Canada, their systematic exclusion from the formulation of food policy occurs predominantly in the natural resource management sectors at the provincial level. First Nations have long been forced to live with the consequences of extractive resource management planning undertaken by distant industries and policy makers.

Rural and remote northern First Nation communities are currently experiencing disproportionate rates of household food insecurity and, as a result, confront a multitude of social, economic, and health issues. In a review of the food subsidy programs for northern communities in 2004 by the federal government, the study revealed that commercial food costs were 82% higher in Fort Severn than in Ottawa. The same review also revealed that in Fort Severn, two-thirds of the households were considered ‘food insecure’ and at least one quarter of the families had experienced hunger in the

past twelve months because they were unable to afford food.[16] This was not a new situation for Fort Severn. Indian and Northern Affairs Canada (INAC) had undertaken a nutrition survey twelve years earlier and found that food insecurity had been a "serious concern" for women; "approximately 45% of women in Fort Severn reported running out of money to buy food at least once a month in the past year, 39% reported not having enough to eat in the house in the past month, and about 40% of women were extremely concerned about not having enough money to buy food."[17] More broadly, a Regional Longitudinal Health Survey conducted in 2008 indicated that 17.8% of Indigenous adults age 25-39 and 16.1% of Indigenous adults age 40-54 in Canada reported going hungry due to lack of money in 2007-2008.[18] While these statistics are extremely upsetting, they are nothing new. For Indigenous people in Canada, food insecurity is rooted in the history of North America, beginning with the arrival of Europeans and the initiation of the fur trade and the cumulative effects of government policy, residential schools, and race-based legislation that disadvantages First Nations people.

Food insecurity for Indigenous people has become an invisible crisis in Canada, hidden throughout hundreds of fly-in and rural

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[16] Lawn, J., and D. Harvey. 2004. Nutrition and Food Security in Fort Severn, Ontario: Baseline Survey for the Food Mail Pilot Project. Ministry of Indian Affairs and Northern Development, Ottawa. Chapter ix.

[17] ibid.

[18] First Nations Regional Longitudinal Health Survey (RHS 2008/10) http://www.rhs-ers.ca (accessed October 2012).

communities never visible to the urban masses. For the dominant society, notions of food insecurity, starvation, and malnutrition most often evokes images of starving children who live in faraway countries where their circumstances are a function of catastrophic weather episodes, civil wars, and totalitarian regimes, not obese Indigenous men, women, and children on reserves in northern Canada suffering from the effects of diabetes.[19] In Canada, Indigenous communities are attempting to rebuild the sovereignty that has been eroded over time due to the efforts of colonial governments and the Canadian state to destroy and replace existing food systems and a resilient way of life. Many individuals suffer the consequences of food insecurity, which is expressed in the high rates of diabetes, heart disease, and childhood obesity.[20] The consequence of poor nutrition is ill health and is the result of a lack of nutritious and affordable food choices, which is a function of the oligopolistic market food system.[21] This system controls all aspects of imported foods on northern reserves, as well as the provision of food-producing resources such as seeds, traps, and nets. This form of external control was initiated under the federal

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[19] Wiebe, N., and K. Wipf. 2011. Nurturing Food Sovereignty in Canada. In Wittman, H. et al. (eds.). Food Sovereignty in Canada: Creating Just and Sustainable Food Systems. Fernwood Publishing, Black Point, Nova Scotia. Page 1.

[20] National Aboriginal Health Organization. 2012. Aboriginal Children and Obesity. Fact Sheet.

[21] Raj Patel. 2007. *Stuffed and Starved: The Hidden Battle for the World's Food System*. Harper Perennial, Toronto. Page 51.

government and extended through market monopolies and global capitalism. At its most fundamental level, food sovereignty is a political and social statement that calls for the right of people to define their own food systems or, in other words, to shape and craft food policy, but it is also a concept that needs to incorporate beliefs that move beyond how food arrives at your table. Food sovereignty is a limiting concept for many Indigenous peoples because it is premised on the complete transformation of a system that is already imposed. Making the existing system more egalitarian will not change the fundamental nature of the problem: mainly, the sustained imposition of alien economic, social, and cultural structures.

For Indigenous people, assessing food sovereignty must include matters that are not measurable according to western concepts. Food sovereignty is not just about nutrition and affordability, but also a connection to history, place, culture, and tradition. Anishinaabe food activist Winona LaDuke describes her people's connections with food as such: "for us, [food] comes from our relatives, whether they have wings or fins or roots, that is how we consider food. Food has a culture. It has a history. It has a story. It has relationships."[22] These interconnections are also deeply rooted in

[22] Platt, J. 2012. Why Winona LaDuke is Fighting for Food Sovereignty. *Mother Nature Network*. http://www.mnn.com/leaderboard/stories/why-winona-laduke-is-fighting-for-food-sovereignty (accessed October 2013).

places where people have done things before; we can see these connections through the names of places[23] or through the activities that take place there, like blueberry picking or growing potatoes. Important places, like the seemingly endless number of places named "Potato Island," "Blueberry Hill," or "Moose River" across the North, offer inter-generational learning opportunities for the reinforcement of positive, constructive behaviours such as family and community building, in ways that the market food system never could.

The state of food insecurity in Indigenous communities is a result of a long colonial history that needs to be addressed, especially when exploring Indigenous expressions of food sovereignty. Food insecurity and food sovereignty in Indigenous communities cannot be addressed without first understanding the challenges and transformations that Indigenous people have experienced and continue to endure since the arrival of Europeans in North America and the introduction of hierarchical economic, social, and political systems. The destruction of food economies that have led to food insecurity in Indigenous communities throughout North America needs to be placed in its appropriate historical context in order for us to understand and address the ills of present day realities. The spiritual oppression produced

[23] Norder, J. 2012. The Creation and Endurance of Memory and Place among First Nations of Northwestern Ontario, Canada. *International Journal of Archaeology*, 16(2): 385-400.

by colonialism and food insecurity is something that goes beyond food; even so, food remains a tangible way to begin the conversation about those injustices. Food is connected to all different systems from the social and sacred to the economic and cultural, and serves as a good starting point for that discussion. For Indigenous people, external control over their foodways has been a central part of the colonial process. Indigenous expressions of food sovereignty have been eroded over time, and what follows is a brief overview of the transformative events that have shifted control over food processes and relationships from the local to the regional, national, and international.

THE HISTORICAL CONTEXT

Contact between Indigenous people and Europeans was not so much a single event, but rather the beginning of a series of ongoing encounters that continues to this day.[24] During the early period of contact, trade sustained these encounters, creating new and different relationships between Indigenous people and Europeans and leading to the incorporation of First Nations into a growing

[24] Lutz, J.S. 2007. First Contact as a spiritual performance: Encounters on the North American West Coast," in *Myth and Memory: Stories of Indigenous-European Contact*. Lutz, J.S. (ed.). University of British Columbia Press, Vancouver. Page 31.

mercantilist then capitalist economy.[25] While trade with Europeans was built upon existing trade networks that spread throughout the Americas, participating in their economic system was philosophically different from engaging with other Indigenous nations. Trade for European goods brought First Nations into contact with Europeans and their worldviews, often before many Indigenous groups had ever encountered their first European settlers.

Over time, Indigenous peoples were increasingly caught up in a growing web of production wherein, instead of production and redistribution within local or regional systems, Indigenous people became extractors and producers for much larger European markets.[26] While contact and the incorporation of First Nations in North America into the capitalist economy took place at different times and in many different ways, perhaps one of the most damaging elements of this exchange was not material but philosophical. Often the incorporation of Indigenous peoples into European trading systems had immediate and visible effects; for instance, those Indigenous traders and extractors who ascribed to European ideologies of Christianity, colonialism, and/or capitalism accrued greater benefits. Initially, French traders restricted the trade of guns

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[25] For examples see: Ray, A. 1979. *Indians in the Fur Trade: Their Role as Trappers, Hunters, and Middlemen in the Lands Southwest of the Hudson's Bay.* University of Toronto Press, Toronto; Krech S. (ed.). *The Subarctic Fur Trade: Native and Social Economic Adaptions*. University of British Columbia Press, Vancouver.

[26] Innis, H. 1999. *The Fur Trade in Canada: An Introduction to Canadian Economic History*. University of Toronto Press, Toronto.

to those Indigenous people they knew to have converted to Catholicism,[27] creating immediate and tangible rewards for participating.

Increasing involvement in the fur trade altered the political and social economy of First Nations where these "new modes of production favoured men over women, young over old, the individual over the group."[28] Trade and the accumulation of wealth changed the ways in which families and communities related to each other and introduced the idea that resources could go elsewhere and serve very little benefit to the community. The removal of resources from a closed system to one that did not share similar worldviews regarding wealth and capital accumulation meant that there was little reciprocity in the exchange of goods. Instead, resources were drained from Indigenous communities and their surrounding territories. The incorporation of First Nations into a system premised upon the accumulation of individual wealth to further state and class interests lay in direct contradiction to Indigenous modes of community, reciprocity, mutual respect, and collective well-being.

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[27] Salisbury, N. 1992. Religious encounters in a colonial context: New England and New France in the Seventeenth Century," *American Indian Quarterly* 16/4: 501-509.

[28] Klein, A. 1983. The Political-Economy of Gender: A 19th Century Plains Indian case Study. In Albers, P., and Medicine, B. (eds.). *The Hidden Half: Studies of Plains Indian Women.* University Press of America, New York. Page 165.

In 1850, an Act for the Better Protection of the Lands and Property of Indians in Lower Canada and an Act for the Protection of Indians in Upper Canada from Imposition, and the Property Occupied or Enjoyed by them from Trespass and Injury were passed.[29] This legislation was perhaps the most significant piece of legislation regarding Indigenous peoples in Canada. The purpose of this act was to determine who belonged and who did not belong on this 'protected' land. In order for that to happen, the state needed to be able to determine who was an Indian and who was not. As a result, for the first time, Indigenous identity was codified in Canadian law without any consideration for existing self-determined membership or community practices and relationships. Indians were defined as "all persons of Indian ancestry, and all persons married to such persons, belonging to or recognized as belonging to an Indian band, and living with that band."[30] By creating a limited category/definition of 'Indian' the government ensured that people and communities would fight each other for access to dwindling resources.

To further erode Indigenous self-governance and control over their lands, in 1857 Upper Canada passed 'An Act to Encourage the

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[29] Statutes of the Province of Canada, 1850, 13-14 Victoria, chapter 74. See also: Statues of the Province of Canada, 1850, 13-14, Victoria, Chapter 42.

[30] Milloy, J. 1991. The early Indian Acts: Developmental strategy and constitutional change. In Miller, J.R. (ed.). *Sweet Promises: A Reader on Indian-White Relations in Canada.* University of Toronto Press, Toronto. Page 147.

Gradual Civilization of Indian Tribes in this Province, and to Amend the Laws Relating to Indians.'[31] It included the first enfranchisement provisions whereby, if Indigenous people met a particular set of criteria, they would be stripped of their Indian status and be given the 'privilege' of becoming British citizens. The criteria included any Indian man over 21 years of age who could "speak, read, and write either English or in French language readily and well, and is sufficiently advanced in the elementary branches of education and is of good moral character and free from debt."[32]

The most significant elements of the 1850 and 1857 acts were that they established provisions under which we saw the first national articulation of the characteristics and types of behaviors that would represent civilized actions for Indigenous populations.[33] These legislative acts imposed a sweeping and universal definition of what it meant to be an 'Indian.' The 1857 Act was followed by the 1869 Act for the Gradual Enfranchisement of Indians, the Better Management of Indian Affairs, which initiated a formal and concerted attack on Indigenous forms of governance by the Canadian state that continues to this day by feigning the

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[31] Statues of the Province of Canada, 20 Victoria, c. 26, 10 June 1857.

[32] John Tobias, J. 1983. Protection, civilization, assimilation: An outline history of Canada's Indian Policy. In Getty, I. and Lussier, A. (eds.). *As Long as the Sun Shines and Water Flows: A Reader in Canadian Native Studies*. University of British Columbia Press, Vancouver. Pages 42-43.

[33] Ibid. Pages 20-43.

notion of 'self-government' on reserves.[34] While this act imposed European-Canadian forms of governance, it also ignored the fact that First Nations had been self-governing since time immemorial. The Crown reserved the right to remove from office those people considered unqualified or unfit to hold it. Usually it was those individuals who defied the Indian agent or refused to comply with the department of Indian affairs regulations.[35]

In 1876, all extant legislation pertaining to Indians was consolidated under the Indian Act. Over the next hundred or so years, there were no less than fifty major amendments to the Indian Act, many of which were designed to further impose European-Canadian modes of living, working, learning, being a family, and developing worldviews. Indeed, the 1896 amendment, which criminalized the Sun Dance and Potlatch, were indicative of efforts to regulate economic behaviors and activities by prohibiting the redistribution of goods within communities, resulting in the erosion of social cohesion, reciprocity, and well-being.[36] In 1880, the federal government created a new branch in the civil service, the Department of Indian Affairs, in order to establish the formal means and necessary

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[34] Statutes of Canada, 1869, SC 32-33, Victoria, chapter 42.

[35] Miller, J.R. 2000. Skyscrapers *Hide the Heavens: A History of Indian-White Relations in Canada*. University of Toronto Press, Toronto. Pages 198-199.

[36] For more information, see Pettipas, K. 1994. *Severing the Ties that Bind: Government Repression of Indigenous Religious Ceremonies on the Prairies.* University of Manitoba Press, Winnipeg.

bureaucracy by which to manage Indians and Lands reserved for Indians.

To solidify formal control over First Nations and their territories, the federal government was assigned exclusive jurisdiction over "Indians and Lands reserved for Indians" under the British North American Act section 91, subsection 24 in 1867.[37] Besides creating a paternalistic system wherein Indigenous people would always be treated like children unable to manage their own affairs, section 91 produced an ongoing jurisdictional nightmare in regards to the management of natural resources and the delivery of key services. According to the British North American Act, all matters pertaining to 'Indians' are under federal authority. Whereas land management; healthcare (including prescription drug abuse clinics, annual food price monitoring, breastfeeding supports, etc.); infrastructure (such as roads, bridges, drinking water facilities, sewage, schools, airports, etc.); natural resources (including rivers and streams, exploration, hunting, trapping, resource development [extraction], silviculture, and watershed protection mechanisms such as Conservation Authorities); education; and child welfare are all under provincial jurisdiction. As such, the provinces are not legally responsible for Indians or

[37] Tobias, J. 1983. Protection, civilization, assimilation: An outline history of Canada's Indian Policy. In Getty, I., and Lussier, A. (eds.). *As Long as the Sun Shines and the Water Flows.* University of British Columbia Press, Vancouver. Page 39.

lands reserved for Indians, and various jurisdictions interpret their legal duties regarding Indigenous peoples very differently.[38]

In Ontario, the province has entered into service delivery agreements with the Government of Canada to provide social assistance. However, the Ontario Works program is applied universally throughout the province at rates calculated without consideration for the cost of living. The cost of living is significantly higher in many northern First Nations communities compared to the rest of Ontario. Critics have called for the revision of social assistance mechanisms across Canada, liking inadequate funding for public health and food insecurity.[39] In urban centers, critics often base their recommendations on statistics generated through public health agencies and academia; however, there are very few data service collection mechanisms for Indigenous people, especially those living on reserves, and therefore very little data exists. Local boards of health have been collecting food prices annually using the Nutritious Food Basket since 1974.[40] In Northern Ontario, there is no such comprehensive, standardized monitoring of the cost of food. The only price 'monitoring' mechanism that

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[38] Miller, J.R. 2000. Skyscrapers *Hide the Heavens: A History of Indian-White Relations in Canada*. University of Toronto Press, Toronto. Pages 146-154.

[39] De Schutter, O. 2012. Report of the Special Rapporteur on the Right to Food. United Nations General Assembly, 22 Session, 24 December 2012. Pages 30-40.

[40] Ontario, Ministry of Health. 2010. Nutritious Food Basket: Guidance Document. Queen's Printer for Ontario. Page 8.

currently exists under Nutrition North Canada requires that certain food prices be self-reported by food vendors in only sixteen of Ontario's 133 First Nations.[41] As a result, foods marketed to on-reserve Indigenous peoples are virtually unregulated, the real cost of living is widely unknown, and food insecurity rates cannot be truly documented. Without informed decision making, First Nations issues are often relegated to a jurisdictional void without consistent funding, program access, or structural support.

In relation to land management, there exists a series of patchwork agreements negotiated between the federal and provincial governments with little input from First Nations. Moreover, what has become clear from this system is that the different levels of government communicate very little with each other, and most often, the interests of capital determine which policies and agreements are implemented or followed. This division of jurisdiction has led to conflict between natural resource managers (the province) and the people who live on the land (First Nations). For example, it is up to the provinces and their structures—the Ministry of Natural Resources and not First Nations—to decide if blueberries get sprayed in season with glyphosate, even if Indigenous peoples are living in the region and harvesting these wild foods.

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[41] Nutrition North Canada. 2013. Eligible Communities and Subsidy Rates. http://www.nutritionnorthcanada.gc.ca/eng/1366896628975/1366896685293 (accessed November 2013).

The Indian Act and the jurisdictional confusion that exists due to section 91 of the British North American Act have relegated First Nations to a grey area in constitutional and legal matters. Many of the services and rights that are taken for granted by non-Native people in Canada do not exist for Indigenous people. Significantly, the Indian Act and its application have restricted the ability of Indigenous people to use and manage their lands as they had for generations. Indeed, the basis of all Indian legislation has been to force the adoption of European forms of governance, private property, individualism, and nuclear patriarchal families.

At the same time that the state began to pass legislation that would come to define identity and membership for many Indigenous people, the Canadian government also initiated the 'modern' treaty-making process in the 1850s with the Robinson treaties (Robinson-Superior Treaty and Robinson-Huron Treaty, or Treaties One and Two respectively).[42] William Robinson negotiated the Robinson Treaties primarily with the Ojibwa of the northern Great Lakes region. These early treaties established the template upon which the federal government would negotiate the numbered treaties. All possess similar characteristics (with minor variations): the cession of land and creation of reserves, the guarantee of annuities,

[42] Surtees, R. 1986. Treaty Research Report: The Robinson Treaties (1850). Treaties and Historical Research Centre, Indian and Northern Affairs Canada, Ottawa.

the description of the government's obligations and responsibilities, and the continued right to hunt and fish by Indians on Crown lands.[43] The treaty process then moved farther west and then north to cover most of Canada except for British Columbia and the Arctic.[44]

While there are vastly different interpretations and understandings of these treaties between the state and the different First Nations who negotiated them, what is clear is that the treaties were used by the federal government to confine people to reserves and compel their transition from a mobile lifestyle, in which people were coercively integrated into the food system, to a sedentary lifestyle where people are increasingly reliant on commercial foods. The treaties involved giving up specific rights, which was not the intent of the people who signed them. According to Elders, only good things were intended and the treaties would form the basis of a mutually beneficial relationship in which these lands were shared. Instead, the treaties gave European-Canadians a piece of paper they used to unilaterally build a country on ceded Indigenous

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[43] Treat 7 Elders and Tribal Council *et al.* 1986. *The True Spirit and Original Intent of Treaty* 7. McGill-Queen's University Press, Montreal. Pages 297-326.

[44] For more information on treaties see: Long, J. 2010. *Treaty No. 9: Making the Agreement to Share the Land in Far Northern Ontario in 1905.* McGill-Queen's University Press, Montreal; Indian and Northern Affairs. 2010. *A History of Treaty-Making in Canada*. Government of Canada Depository Services Program, Ottawa; Switzer, M. 2011. *We Are All Treaty People.* Union of Ontario Indians, North Bay; Miller, J.R. 2009. *Compact, Contract, Covenant: Aboriginal Treaty-Making in Canada*. University of Toronto Press, Toronto.

lands without consideration for the peoples who had lived there since time immemorial.

The treaties confined Indigenous people to reserves. Indian agents were empowered to restrain the movements of Indigenous peoples on their lands. For instance, people who wanted to leave their reserve or visit family on another reserve had to request permission from the Indian agent. In exercising these powers, government officials forced a transition to a static community model by preventing mobility within the forest and freshwater food system. The Indian agent also had the power to prevent people from hunting and fishing. No longer were communities able to make adjustments for environmental changes. For instance, when the flow of a river changed, communities were unable to move to an area where they could access more resources. The federal government no longer allowed that kind of flexible and adaptable mobility and living interconnected with nature.

In addition to directly undermining the ability of First Nations to control and determine their own foodways on their own territories, the federal government sought to ensure that environmental and culture knowledge would not be passed from one generation to the next through the forcible transfer of children from their environment and culture. Indeed, the removal of Indigenous children from their homes and communities by European-Canadians has become a deeply entrenched practice in

Canada. The systematic internment of generations of children in Indian Residential Schools began in the 1870s and lasted until 1996.[45] Most Residential Schools were harsh and violent institutions designed to assimilate children by severing their ties with family, community, and culture. In 1920, Duncan Campbell Scott, one of the major architects of Canadian Indian policy, described government policy before a special parliamentary committee:

> I want to get rid of the Indian problem. I do not think as a matter of fact, that this country ought to continuously protect a class of people who are able to stand alone. That is my whole point. Our objective is to continue until there is not a single Indian in Canada that has not been absorbed into the body politic, and there is no Indian question, and no Indian Department.[46]

After World War II, in addition to the residential school system, child welfare authorities seized thousands of Indigenous children under the guise of child protection. This era is popularly known as the 'sixties scoop'.[47] In northwestern Ontario from 1981 to 1982, Indigenous children made up 85% of the children in care.[48] The

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[45] For more information about residential schools see: Chrisjohn, R. et al. 1997. *The Circle Game: Shadows and Substance in the Indian Residential School Experience in Canada.* Theytus Books Ltd., Vancouver; Milloy, J. 1999. *A National Crime: The Canadian Government and the Residential School System, 1879 to 1986*. University of Manitoba Press, Winnipeg; Miller, J.R. 1996. *Shingwauk's Vision: A History of Native Residential Schools*. University of Toronto Press, Toronto.

[46] As quoted in Titley, E.B. 1986. *A Narrow Vision: Duncan Campbell Scott and the Administration of Indian Policy in Canada.* University of British Columbia Press, Vancouver. Page 50.

[47] Sinclair, R. 2007. Identity Lost and Found. *First Peoples Child and Family Review* 3(1): 66.

[48] Mandell, D. et al. 2003. *Partnerships for Children and Families Project: Aboriginal Child Welfare.* Wilfred Laurier University, Waterloo, Ontario. Page 2.

disproportionate representation of Indigenous children in the child welfare system persists to this day.[49]

What residential schools and the sixties scoop amounted to was the systematic severing of the connections between parents and children. Disconnected parents lost the ability to teach their children place-based knowledge that had been learned and passed on for generations. Removed children were prevented from observing their families acting as self-sufficient and productive members of communities. These children were not present to learn how people take care of each other from local knowledge holders. Traditions of collective action were eroded during this time, as children lost the lesson that work and life-sustaining activities could and should be undertaken collectively for the good of the entire community.

The children were taught that their culture and identity were uncivilized and underdeveloped. They were forced into the western world through Christianity, violence, and hard labour. For many survivors, their experiences in the schools included severe punishments that have left deep wounds. For example, the schools often used labour in their gardens as punishment, and schoolchildren would be subjected to hours of intense labour in the garden for various infractions relating to expressions of their culture. Many were left with negative sense-memories associated with gardening;

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[49] Blackstock, C. 2011. Wanted: Moral courage in Canadian child welfare. *First Peoples Child and Family Review* 62: 35-46.

consequently, these individuals did not grow up to tend gardens, which was traditionally a common practice. The removal of children and the use of food activities as forms of punishment served to sever the intergenerational transmission of ecological knowledge that could only be learned through observation and practice.

Ultimately, residential schools disrupted community cohesion and damaged the values of mutual obligation and respect. The removal of children from their parents and communities has had a deep and long lasting legacy of violence and trauma.

OLIGOPOLIZATION OF THE IMPORTED FOOD, FUELS, AND SUPPLY MARKETS AND THE INTRODUCTION OF PROCESSED AND FAST FOODS

An oligopolized market system exists throughout northern Canada in regards to the provision of foods, fuel, and most general goods, meaning few actors with strong relationships control the various elements of this market-based system, including supporting industries of wholesale, distribution, transportation, retail, and banking. As a result, corporate interests have developed a sophisticated supply chain and supporting infrastructure. Indeed, the North West Company's Northern Stores, which hold approximately 50% of the market share in northern Canada, reported record profits of 134.3 million in 2012.[50] Under this model, profit and growth

[50] "North West Company Reports Record Profit," CBC News, 25 April 2013.

dictate interchanges between people and the suppliers of their basic needs. Social accountability with external corporate interests is only employed insofar as is required by law. Under this model, Indigenous food sovereignty is nearly impossible because the control of food economies and the power lies in the hands of remote entities driven by profit.

As a result of the centralization of power and decision-making in our market-based food system, individuals are presented with few choices at high cost. Foods, fuel, clothing, toiletries, housewares, and supplies supporting the participation in traditional food systems are offered through very few vendors. These vendors currently decide what is sold and at what price. Prior to contact, Indigenous peoples in what is currently known as Northern Ontario were permaculturalist hunter-gatherers with established local food systems. Food production and distribution systems were significantly disrupted by imposed changes, and the systems that replaced them displaced food sovereignty. The global increase in consumption of highly processed, nutrient-dense convenience and fast foods has also reached the remote forests of the north. In the 2000's, four Pizza Huts, five KFCs, and fourteen Fun 2 Go snack shops were opened by the North West Company in several remote First Nations in Northern Ontario, bringing greater access to convenience foods high in fats, salt, and refined carbohydrates. Indigenous people now comprise one of the unhealthiest segments of Ontario's

population. Individuals with type 2 diabetes and heart disease are dependent on healthy diets for proper management of these chronic diseases; however, they are forced to continue to source foods from the same markets they always have, in which healthy market foods are not offered for sale and therefore unavailable, of poor quality and therefore unacceptable, and/or prohibitively costly and therefore inaccessible.

The prevalence of diet-related diseases in Indigenous communities has supported the development of a significant health promotion industry. Dietary patterns indicate a predominantly processed diet in First Nations communities[51] and the existing health promotion response is to guide consumer choices within the existing market. Unfortunately, it appears these strategies are developed without a contextual understanding of how Indigenous food sovereignty has been eroded. The root cause of poor nutrition practice in Indigenous communities is not simply that people do not know what to eat; the reality is that nearly all aspects of Indigenous food systems have been disrupted, eroding Indigenous food sovereignty, health, and well-being.

[51] Chan, L., O. Receveur, D. Sharp, H. Schwartz, A. Ing, K. Fediuk, A. Black, and C. Tikhonov. 2012. First Nations Food, Nutrition and Environment Study: Results from Manitoba (2010). University of Northern British Columbia, Prince George, B.C.

CONCLUSION

Current food systems in Northern Ontario First Nations communities exist as a function of colonialism. If we were to draw an analogy between changes to our food systems and a raging river, an observer standing on the river's edge sees our food systems as a permanent unmanageable force that moves without our involvement, and any efforts to alter the river's flow are swept away by its massive force. However, this river has not always been there and its energy once flowed elsewhere. Colonialism and its imposed disruptions not only carved the path for this energy to flow, they also redirected the river from the path carved over generations. While it would seem that, at this point, the easiest solution would be to jump into the river and be swept away with the flow, instead, we have learned that this energy does not lead to a good place, and we must continue to place our stones in the river's path so that over time and through our collective strength we can change the current. We can disrupt the existing food system by creating new pathways and removing our energy from existing ones.

The solutions to food insecurity in First Nations' communities cannot emerge from the existing dominant paradigm that has eroded Indigenous food sovereignty. The imposed disruptions to Indigenous food systems discussed in this chapter have had cumulative impacts greater than any single disruption. First Nations peoples, traditions, and systems are inherently resilient; however, the

cumulative impacts of food system changes have eroded our resiliency over multiple generations. This is not to say our independence cannot be restored, but the actors who operate this imposed food system literally hold Indigenous food sovereignty and well-being hostage. As people seek to rebuild food security and return to a healthful life, we must reclaim food sovereignty from those external powers that control it and gaining an understanding how food sovereignty was taken in the first place is a crucial step towards restoring our communities.

CHAPTER 3: FOREST AND FRESHWATER FOODS IN TWO NORTHERN ONTARIO FIRST NATIONS: PERCEPTIONS OF ENVIRONMENTAL CONTAMINATION AND FOOD SECURITY[52]

INTRODUCTION

Community members from Aroland First Nation are concerned about the safety and security of forest and freshwater foods in our territory. Every year, tens of thousands of hectares of Crown forests in Ontario are treated with herbicides and pesticides as a means of achieving objectives set forth in the province's Crown Forest Sustainability Act (1994) in accordance with the province's Forest Management Planning Manual (2009). Our rights to access foods within the Crown forests in which these activities are taking place are protected by Treaty #9 and section 35 of the Canadian constitution. Areas where we produce foods, through hunting, fishing, gathering, and trapping, are being managed by the forest industry, which the Crown has licensed to extract timber and entrusted to develop forest management plans.

Forestry is not the only industry whose actions cause concern about contamination. Mining companies have abandoned open pits and shafts, as well as tailings ponds, nearby to important areas for forest and freshwater foods. We have many concerns with these

[52] A version of this paper was submitted as the final report of a collaborative community-based research project funded by Health Canada. The paper was co-authored with community-based researchers Mark Bell and Sheldon Atlookan, as well as Dr. Mirella Stroink. Dr. Connie Nelson also made significant contributions to the intellectual development of this paper.

practices, but our primary concern emerges from the application of the herbicide glyphosate to recently cut areas and its impacts on local food consumption. We are unsure of the extent or impact of chemical contamination in our foods. Laboratory testing is prohibitively expensive and thus unable to accurately inform our decision-making.

In this study, we explore the impacts of perceived environmental contamination on local food consumption. Members of Lakehead University's Food Security Research Network worked closely with community representatives to develop and conduct a survey meant to explore consumption patterns and perceptions of contamination in four primary local foods: fish, moose, wild rice, and blueberries. The purpose of this study was to gain a better understanding of the consumption of traditional food in the participant communities and to determine whether the perception of contamination from industrial activities has an effect on local food consumption.

METHODS

In this study, individuals from Aroland and a neighbouring remote community completed the survey on traditional food consumption. The neighbouring community was approached to participate in an attempt to create the opportunity to conduct a comparative study with a remote First Nation. Though we share access to the forest and a cultural heritage, the remote community is accessible only

by air and winter road, falling within the area north of the Area of the Undertaking, the forest area defined for the purposes of a class environmental assessment of forest management practices in Ontario. Thus, study participants from the remote community will have had less exposure to industrial forestry activities.

Unfortunately, after completion of the surveys in the second community, a newly elected Chief and Council terminated our research relationship. As consent was sought and obtained from each individual respondent and the name of the community is irrelevant to the results, I have included the results without identifying the community. These surveys were completed in person in either the community's meeting hall or in individuals' homes with the assistance of community-based coordinators.

The survey included two sections: the first section focused on eating patterns, perceptions of contamination, and food security, and the second section focused on health, well-being, and community demographics. The two sections of the survey were linked with an anonymous participant code. Total combined respondents included 35 individuals who completed the first section of the survey and 24 who completed the second section. In Aroland, respondents ranged in age from 25 to 60 with a mean age of 44. There were 14 males and 3 females who indicated gender. In the other community,

participants ranged in age from 18 to 56 with a mean age of 32 and there were 12 males and 4 females who indicated gender.

In the 'Eating Patterns' section, participants were asked to identify and name the areas where they gathered blueberries and wild rice, hunted moose, and caught fish (as well as the type of fish). For each area, respondents indicated how often they acquired the food on a 5-point scale (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = very often). They then indicated how many of their meals included locally caught fish, blueberries, wild rice, and moose in each of winter, spring, summer, and autumn on a 5-point scale (0 = none, 1 = a little, 2 = some, 3 = most, 4 = all). To assess food security, participants answered four questions that were directed toward measures assessing participants' level of concern that their food would run out in the previous year (Bickel et al. 2000). Participants then completed a section entitled Perceptions of Contamination, in which they were asked to indicate on a 5-point scale (1 = completely safe and clean, 2 = mostly safe and clean, 3 = mildly contaminated, 4 = contaminated, 5 = very contaminated) the degree to which they believed the forest and freshwater foods they consumed were clean as opposed to contaminated. They were then asked how much their perception of contamination affects the amount of food they are willing to eat from the local area on a 5-point scale (1 = not at all affected, 2 = a little affected, 3 = somewhat affected, 4 = quite affected, 5 = very much affected).

In the second section of the survey entitled Health and Well-Being, participants completed a self-assessed general physical health 5-point scale (1 = poor to 5 = excellent); a 5 point Satisfaction with Life scale (Diener et al. 1985); and questions related to their connectedness with the land, including 10 questions on the Connectedness with Nature survey (Mayer and Frantz 2004), five questions assessing participants' sense of connection with the traditional lands of the community, and five questions assessing the degree to which gathering and eating traditional foods has been important to participants' sense of connection with culture, history, and land. In addition, participants were asked to assess themselves using a 12-item survey tool on their beliefs about contamination and health. These items were then grouped into three subscales. The first four items assessed beliefs that herbicide spraying could affect people's health when they eat blueberries, wild rice, moose, and fish respectively. The next four assessed similar beliefs regarding past mining practices in the area. The final four assessed beliefs that eating local traditional food from the area causes health problems and the degree to which this worried participants. Finally, the extent to which participants concerned themselves with nutrition and exercise was self-assessed.

RESULTS

Traditional Food, Connection to Land, Health, and Well-Being

Correlations between local food behaviour and health and well-being were examined for the two communities separately. For the neighbouring remote community, there was only one significant correlation. The larger the proportion of the local diet that they reported to be meat and fish, the lower participants' reported level of food insecurity.

In Aroland, participants who were happier with their level of nutrition consumed more fish in spring, $r = 0.64$, $p = 0.02$, summer, $r = 0.82$, $p = 0.001$, and fall, $r = 0.67$, $p = 0.02$. Consuming moose in winter was associated with better diet, $r = 0.59$, $p = 0.03$, while consuming moose in spring was associated with lower food insecurity, $r = -0.58$, $p = 0.04$. Consuming moose in summer was associated with overall self-rated health, $r = 0.59$, $p = 0.04$, and consuming moose in fall was associated with both better body weight, $r = 0.57$, $p = 0.04$, and better overall health, $r = 0.55$, $p = 0.05$. Consuming local blueberries in winter was associated with better self-reported body weight, $r = 0.69$, $p = 0.04$, while consuming blueberries in spring was associated with lower food insecurity, $r = -0.64$, $p = 0.05$. Consuming local blueberries in summer was associated with both diet, $r = 0.76$, $p = 0.01$, and exercise, $r = 0.64$, $p = 0.05$. Overall, participants from Aroland who indicated

that a larger proportion of their local diet was meat also indicated feeling better about their diet, $r = 0.86$, $p = 0.001$.

In Aroland, consuming fish in autumn was significantly correlated with connectedness to nature, $r = 0.64$, $p = 0.03$, and the belief that food connects the person to land, $r = 0.71$, $p = 0.01$. Consuming moose in spring was also correlated with connection to nature, $r = 0.69$, $p = 0.02$, while consuming blueberries in autumn, $r = 0.70$, $p = 0.03$, and winter, $r = 0.67$, $p = 0.05$ were correlated with the belief that traditional food connects the person with traditional lands. Furthermore, the greater the participants' overall reported levels of local food consumption, the stronger their connection to traditional lands, $r = 0.65$, $p = 0.03$, and to the belief that food connects them to the land, $r = 0.73$, $p = 0.01$. All three variables were found to be significantly and positively correlated with life satisfaction (see Table 1). Connectedness to traditional lands was also positively correlated with diet. The belief that food connects the person to traditional lands was also positively correlated with diet, exercise, and weight, as well as negatively with food insecurity. In summary, in addition to physical health and well-being, participation in traditional food gathering and consumption were associated with a sense of connectedness to nature and to traditional lands, as well as with the belief that eating local food connects the person with the land. These variables

in turn were associated with several indicators of health and well-being.

Table 1. Significant correlations among the health and well-being indicators and connection to nature, connection to land, and the belief that food connects the person with the land for Aroland.

	Life Satisfaction	Diet	Exercise	Weight	Food Insecurity
Connectedness to nature	0.58*	--	--	--	--
Connection to traditional land	0.63*	0.58*	--	--	--
Food connects me with traditional land	0.65**	0.53*	0.55*	0.57*	-0.57*

Levels of Local Food Gathering and Consumption

The two communities did not differ significantly from each other in the reported levels of consumption of local fish or moose by season (see Table 2). The most frequently caught fish was pickerel, followed by lake whitefish.

Table 2. Mean and standard deviation of self-estimated frequency with which meals in a given week and season include a local food for each community.

		Winter	Spring	Summer	Autumn
Aroland	Fish	1.43 (1.02)	2.07 (1.07)	2.67 (1.11)	1.78 (1.19)
	Blueberries	0.80 (0.7987)	0.60 (0.70)	2.50 (1.38)	2.00 (1.67)
	Wild Rice	0.10 (0.32)	0.00	0.00	0.56 (1.33)
	Moose	1.87 (1.19)	1.00 (0.96)	1.64 (0.84)	2.33 (1.40)
Remote Community	Fish	1.43 (1.27)	2.25 (1.28)	3.00 (1.15)	1.57 (0.98)
	Blueberries	0.67 (1.15)	0.33 (0.58)	2.50 (1.76)	1.00 (1.73)
	Wild Rice	0.50 (0.71)	0.00	0.00	1.00 (1.41)
	Moose	1.44 (1.01)	1.22 (1.09)	1.89 (1.36)	2.90 (0.88)

* Note: 0 = none, 1 = a little, 2 = some, 3 = most, 4 = all.

Perceived Contamination and Local Food Behaviour

Perceptions of contamination in fish, moose, and blueberries were compared between the communities. Respondents in Aroland rated blueberries as being significantly more contaminated than did the remote community $F_{1,18} = 7.67$, $p = 0.01$, but there were no significant

differences between the communities for fish or moose. In Aroland, perceived contamination of fish was significantly correlated with how often winter meals included fish, r = 0.60, *p* = 0.03. No other correlations were significant for either community.

No significant differences were found between the communities in beliefs about food contamination from silvicultural herbicide spraying, mining, and health impacts. In the remote community, the degree to which the person views their overall diet to be local was marginally negatively correlated with the belief that herbicidal spraying affects the food system, r = -0.63, *p* = 0.07, and with their overall score on the contaminants belief scale, r = -0.65, *p* = 0.06. In other words, in the remote community the more one believes that local food is affected by contamination, the less local food is reportedly consumed. No correlations in beliefs about contamination were found between specific foods (fish, blueberries, and moose) in reports from the remote community. In Aroland, the belief that herbicide spraying affects the food system was positively correlated with the number of fish meals consumed in the summer, r = 0.68, p = 0.02, the number of moose meals in winter, r = 0.60, p = 0.04, and the number of blueberry meals in the summer, r = 0.65, p = 0.04.

CONCLUSION AND DISCUSSION

The purpose of this study was to gain a better understanding of the consumption of traditional food in the communities and to determine whether the perception of contamination from industrial activities has an effect on local food consumption. Consuming local, traditional foods appears to play a role in feelings of positive health and well-being. In both communities, those who reported consuming greater amounts of locally caught fish and locally hunted meat reported better health outcomes on a number of indicators. Seasonal variations in local food consumption indicate heavy consumption during the productive season for all four foods, with evidence of storage for later consumption throughout the year.

Fish is an important part of the local diet, particularly in spring and summer, being consumed in 'most' or 'some' of the participants' meals in these seasons in both communities. Blueberries are important in the summer diet and to some extent in the fall diet for respondents in Aroland. Moose is an important part of the diet in fall, and to a lesser extent in winter, for both communities, being consumed in approximately 'most' fall meals for the remote community, and 'some' in Aroland and between 'a little' and 'some' for both communities in winter.

Gathering and consuming local blueberries are also an important part of the health and economic profile for people in Aroland. As

blueberries are available fresh only in summer, those who reported consumption of blueberries in the fall, winter, and spring would have had to store blueberries for consumption throughout the year.

These findings indicate that forest and freshwater foods remains important to people's diet in these communities. Given that participation in local food practices was also found to be associated with health and well-being and connection to nature and land, it is important to further explore how perceptions of contamination may impact local food behaviour.

Another factor that is important to overall feelings of well-being is the sense of connection to nature and traditional lands (Trull 2008). The process of acquiring traditional food from the local environment is an important part of a healthful lifestyle that not only provides nutrition, but also serves to strengthen the individual's feeling of connection with nature and the traditional lands of the community.

The marked difference in perceived contamination of blueberries between communities likely stems from their unique contexts and experiences. Aroland is located within what the Ontario Ministry of Natural Resources calls the Area of the Undertaking. As a result, the community has experienced a longer history of exposure to silvicultural herbicide applications. Aroland's traditional territory is vast and many activities are taking place within it.

Timber harvesting on certain sites, with specific soil types and understory coverage, tends to promote blueberry production in the years following the timber harvest. Many of these sites are then treated with silvicultural herbicides either pre-tree planting (chemical site preparation) and/or a few years following the tree planting (release treatments). For example, application of the herbicide glyphosate causes much concern for blueberry production. Spraying on Crown lands generally occurs in August, which coincides with the peak season for berry-picking. The application of silvicultural herbicides to these sites often reduces the productivity of the blueberries occurring within them, creating a contaminated site. Nearby studies have confirmed our observations regarding the impacts of glyphosate on blueberries; Moola and Mallik (1998) found that the application of this herbicide reduced the productivity of blueberries by up to 97% over a three year period. In the interviews, community members have referred to these sites as "lost forever," as they will never return to source food from these locations.

The cumulative nature of forest harvesting and associated silvicultural activities means more of these sites are being created every year. Witnessing this progression and loss of food production areas may be what is leading to higher perceptions of contamination in Aroland. As an example of the cumulative experience, the locations of herbicide application in a seven-year period are

presented in Figure 2. These sites all occur along forest roads shared by land users and industry, representing much less land than has been harvested annually. An individual's perception of the cumulative loss of land due to successive industrial activities is likely inflated due to the concentration of these activities along roadways.

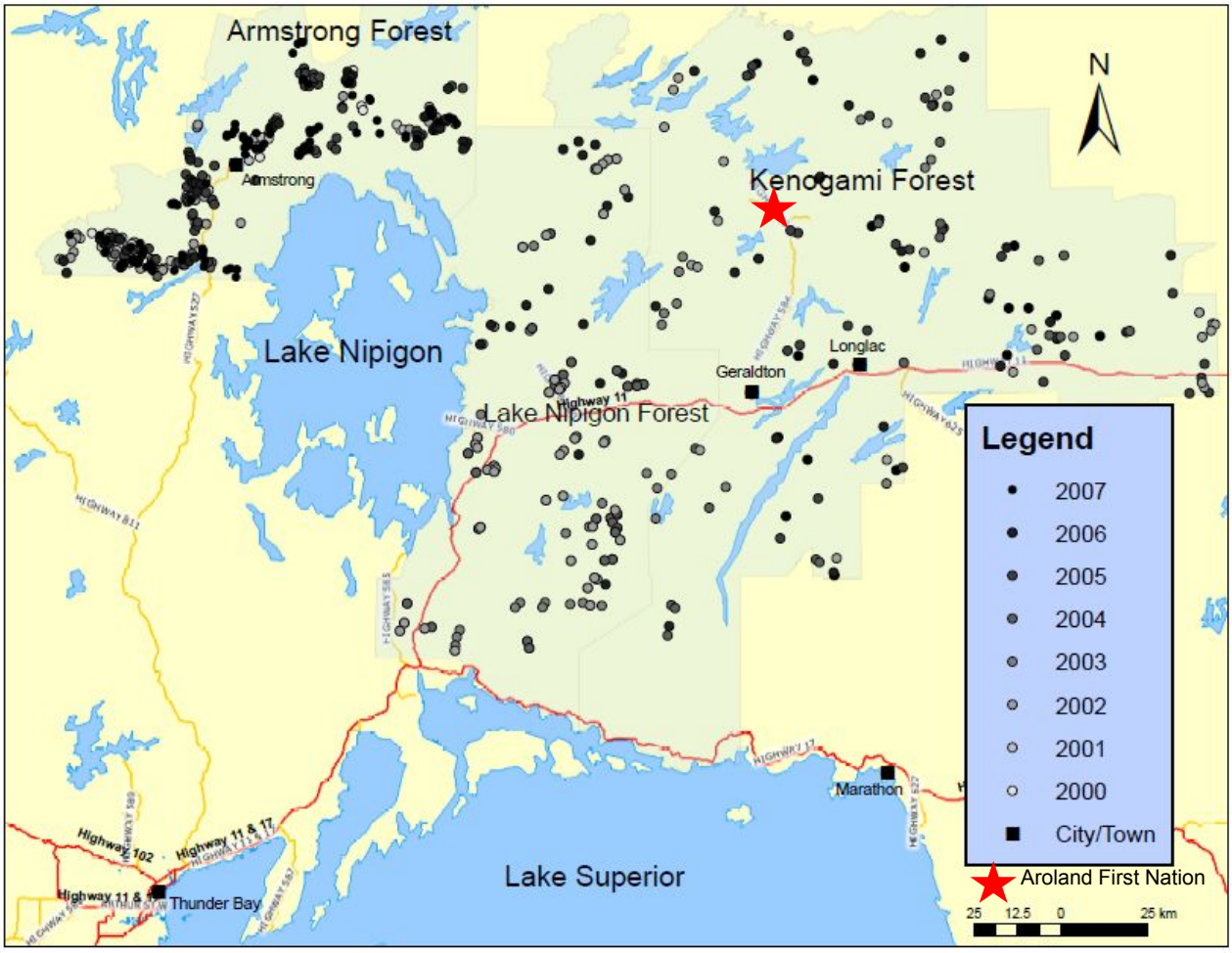

Figure 2. Location of herbicide application in Aroland First Nation's territory between 2000 and 2007.

Finally, for participants in Aroland, the more an individual believes that forest and freshwater foods are affected by contamination, the more of that food one eats. While this seems counterintuitive, the findings suggest that in Aroland participation in the local food system may be leading to increased concern of contamination issues, but so far that awareness has not resulted in a decrease in local food consumption. Therefore, people in Aroland who consume larger amounts of local food are perceiving evidence of contamination and its impacts on health but the foods are so important to people that the perceived contamination has not led to a reduction in local food consumption. It is also important to note that the land users' exposure to sites perceived to be contaminated and therefore not harvested is also informing their awareness. Figure 3 illustrates the appearance of sprayed and unsprayed blueberries.

Figure 3. Blueberries from an unsprayed site in Aroland's territory (left) and from a sprayed site (right).

The Province of Ontario's Crown Forest Sustainability Act (1994) is supposed to manage for the social, economic, and environmental needs present and future generations. In this study we explored the perceived risks to the community's health and well-being associated with natural resource management activities and the impacts on forest and freshwater food use. The concern Indigenous land users express regarding the cumulative impacts of silvicultural activities like herbicide spraying speak directly to the infringement of their rights by the Crown.

CHAPTER 4: FIRST NATIONS MOOSE HUNT IN ONTARIO: A COMMUNITY'S PERSPECTIVES AND REFLECTIONS[53]

INTRODUCTION

Archaeological evidence and the petroglyphs of our ancestors show that the relationship between people of Ontario's First Nations and moose (*Alces alces*) is very old. It involves human use of meat, internal organs, hide, and skeleton (Timmermann and Rodgers 2005), while moose benefited from human use of fire that resulted in increased production of their forage plants. As Natcher et al. (2007) further affirmed, humans used fire to influence the movement of moose during fall hunts and to ease their own movement during hunting. We find such stories of our past to be intermittent in the scientific literature, and often told from a modern perspective that suggests the relationships are no longer relevant. We are delighted by how Watson and Huntington (2008) shared their understanding of a moose hunt, and are sympathetic to the lack of understanding shown by ecologists and wildlife biologists in the shared story of humans and moose together in the boreal forest. We, who met in Aroland First Nation of the Treaty 9 area of Ontario, Canada (Aboriginal Affairs and Northern Development Canada 2008), now wish to share with ecologists and wildlife biologists a review of our

[53] A version of this paper was published in Alces 47: 163-174 (2011). This paper was co-authored with community-based researchers Mark Bell and Sheldon Atlookan, as well as Dr. Brian McLaren and undergraduate student Chris Pereira from Lakehead University.

relationships with moose. We hope to illustrate that the past is part of our present situation and that the direction the future will take us depends on our acknowledging this singular story that is broader than the moose hunt itself.

Before we begin, we can share what we learned about the present and future elsewhere. In Nova Scotia, Canada, the Mi'kmaq peoples of Cape Breton Island have recently worked together with the Parks Canada Agency and with provincial officials to maintain treaty rights to moose hunting (Bridgland et al. 2007). In the Canadian territories, Indigenous peoples are intimately involved in co-management and monitoring of moose (Larter 2009). In Scandinavia, Saami community representatives form part of the administrative boards that set moose quotas (Bergman and Åkerberg 2006). We ask why, among these examples of respect, there is such disrespect for our relationship with moose in Ontario. We know that wildlife biologists and sport hunters typically view First Nations moose harvest with disdain (Lynch 2006). Kay (1997) even suggested that traditional hunting was unsustainable and that our ancestors kept moose populations from expanding into much of Canada, even though his perspective is solely from British Columbia.

We appreciate the regional variation in the relationship between people and moose; Crichton (1981) reviewed the situation in Manitoba and concluded the same as Kay (1997), while more recent

investigation in Alberta suggests that what wildlife biologists call ‘unregulated’ harvest actually can have no detrimental effect on a moose population (Lynch 2006). Feit’s (1987) review is older, but includes 2 key points to which we will return: 1) if management of sport hunting of moose and management of the forest does not acknowledge First Nations practices with respect to moose, conflict will escalate, and 2) conflicts develop when resource users do not share a common cultural heritage.

Our broader purpose in this paper is not to claim that the moose and First Nations relationship has always been a good one; rather, it is to convey how people who hold values might be those best equipped to explain their values and plan their future actions. Sharing some of our cultural heritage is our first objective. In Timmermann and Rodgers’ (2005) detailed summary of values embodied by moose, fear and uncertainty are the tone in describing moose management involving First Nations peoples, especially in Ontario. Thus, offering objective considerations on use of the land in Ontario for its forest resources, including moose, is our second objective. Who is responsible for managing natural resources and who are they managing for? All those for whom the resource is being managed should have a forum for sharing their values, and those responsible for management must be sensitive to, and incorporate those values.

OUR AREA

Our perspective focuses on Aroland First Nation, an Anishnabek community in Northern Ontario. According to the records of Nishnawbe Aski Nation (a non-profit treaty organization), there are 300 people living on-reserve and 400 others living off-reserve, but we feel an unaccounted for number exist. We have a long history with the surrounding area, and in our traditions maintain a complexity of mutually beneficial relationships with other beings using this land as home. As a result, our community members include all humans and non-humans with whom we are interdependent.

In the past, we participated in the fur trade and made a livelihood through local production of foods that came to us naturally or from agriculture (Morrison 1986). Gradually, as development activities took up land, the opportunities to make a livelihood shifted and we were officially discouraged from participating in food production (Waisberg and Holzkamm 1993). Forestry offered new economic opportunities that offset these losses to our economy (Driben 1985), but created a higher demand from external entities for our land's resources. Aroland First Nation No. 242 gained reserve status under the Indian Act on April 15, 1985 (Aboriginal Affairs and Northern Development Canada 2008). Reserve lands encompass 19,599 ha (75.7 square miles) and extend

northwards from Highway 643 to lands along the western and northern shores of Esnagami Lake.

As a signatory to Treaty 9, our community retains rights to access off-reserve resources among those parts of our territory not taken up with development. Our territory extends thousands of square kilometres, but this land is now developed or restricted from us in a number of ways, including parks and protected areas, municipalities, mines, and mills interconnected with vast and complex networks of closed roads and private rails. Our traditional territory area includes 5 provincial Wildlife Management Units, hunted by people from Thunder Bay, Ontario and farther away, and 4 provincial Forest Management Units that are licensed to forestry companies, most with ownership in Thunder Bay or farther away. Respective oversight of these management units is under the direction of the Ontario Ministry of Natural Resources (MNR) and the Ontario Ministry of Northern Development, Mines and Forestry (MNDMF). In all cases, the ministries are headquartered well away from the areas in which they are actively engaged in making management decisions. In addition to the ‘managed’ portions that Ontario calls the ‘Area of the Undertaking,’ our traditional territory extends into Ontario’s less developed ‘Far North.’

OUR APPROACH

To start this research in December 2009, community-based researchers distributed a detailed questionnaire to potential moose hunters who lived on-reserve at Aroland First Nation; participants could be any male or female greater than18 years old. In addition to the questionnaire, consultations with the Chief and Council and other hunters also occurred as these people offered their time. This second consultation was administered orally with participants and recorded in writing by the interviewer and/or the survey participant.

To ensure consistency, potential problems were discussed before allowing participants to continue with the survey. Most concerns about the survey stemmed from long-standing trust issues about land use. There have been many instances over the past few decades of external interests seeking data from community members in relation to their land-use practices. Often, the information gathered was taken out of the community to be interpreted externally and it is unclear as to how the interpretation is useful to the community. To conclude the data collection process, our survey data was reviewed by the interviewer and, if necessary, conversations were continued to resolve uncertainties or discrepancies, and all surveys were kept anonymous. The survey protocol was reviewed and

approved by Lakehead University's Research Ethics Board (REB 113 08-09) and by Health Canada's Research Ethics Board (REB 2009-0007).

Participants indicated, on a 5-point scale (0 = none to 4 = all), how many of their meals included moose in each of winter, spring, summer, and fall. They were also asked why they hunt moose and in what season, how they accessed a hunting area, how they hunted, to what extent they relied on hunting for food, and how much moose meat is shared with the immediate family and with the community. Thirty-five community members completed the survey (mean age = 44 years, age range = 25-78 years).

In conjunction with another "Health and Well-Being" survey that included questions on a broader range of harvested, cultivated, and purchased foods, most participants indicated their agreement with the following on a 5-point Likert scale: 1) their physical health (1 = poor to 5 = excellent), 2) their life satisfaction (Diener et al. 1985), and 3) their connectedness with the land from the 'Connectedness with Nature' scale (Mayer and Frantz 2004). They were asked to assess their beliefs about food contamination and their health: whether forest herbicides could affect one's health if they ate moose or other forest foods, whether past mining practices in the area affected the quality of their food, whether eating local foods causes health problems and the degree to which

this worried participants, and the nutritional quality of their diet and the amount of physical exercise they maintain.

In 2010, in collaboration with the neighbouring community of Ginoogaming First Nation, we conducted a second smaller survey specifically about moose hunting. Participants were asked a series of specific questions related to hunting moose; between the 2 communities, 40 individuals completed the survey. In addition to questions related to how, where, and why they hunted, respondents were asked how many moose they harvest in a year.

Survey data was entered into Microsoft Office Excel and explored using correlation analysis to identify relationships and similarities among hunters. These relationships and similarities allowed for hypotheses to be formulated in discussion with community members, based on community hunting history and their relevance to non-Aboriginal moose harvest in Ontario. To supplement the interest of community members in conveying the extent of forest resources development and the use of forest herbicides in their traditional territory, we also accessed records from annual work schedules and reports to the MNR by the companies leasing the adjacent Forest Management Units. These records included paper copies of maps showing roads, logged areas, and associated Excel reports of ground-based and aerial spraying of herbicides from 2000-2007. The data on the maps and in the reports, borrowed from

the Geraldton, Nipigon, and Thunder Bay District Offices of the MNR, were transcribed into a Geographic Information System (GIS) in ArcGIS version 9 at Lakehead University.

OUR STORY

Pre-Contact, before 1800, the present

Our relationships are founded in our community and defined by our extended families. To survive, we have always used the local environment to generate our livelihoods. Products for trade, sale, and local consumption are cultivated and harvested from within our territory. Hunted and fished meats, as well as both cultivated and gathered vegetation from the land once represented the staples of our diet. Familial territories that provided these staples were designed and cultivated to ensure enough stock for later years (Driben et al. 1997). While familial units (nuclear families) often undertook production activities independently, sharing products among extended families and the community at large was commonplace. As with many indigenous communities throughout the world (e.g., Kofinas 1993), our activities were undertaken in accordance with time-honoured systems of authority and knowledge.

Our ancestors passed on this knowledge of the land that grants us the authority to manage the resources that sustain our community. This knowledge and its authority were never given legal status in

Canada under the rule of law (Herbert 2009). It is only the social relationships we hold within our community that honours the knowledge of our ancestors, ensuring it is passed to future generations. As we ethically engage in relations with non-human members (the plants and animals) of our community by hunting, fishing, cultivating, and gathering, we are undertaking activities that sustain the knowledge of our ancestors while meeting our sustenance needs. Honourably engaging in conservation activities relating to harvesting food is part of the continuance of our relationship with the past and our ancestors.

From an anthropological perspective, the role of moose hunting in the provision of food staples in First Nations communities is a point of contention. While some (e.g., Winterhalder 1983) rely on the notion that moose populations have consistently fluctuated due to climatic and anthropogenic influences as evidence of the continued occurrence of moose in our diet, others (e.g., Rogers and Black 1976, Hamilton 2002) reference the "Fish and Hare Period" to support the notion that there were times when moose were rare to non-existent and the dietary staples came from other sources, such as walleye (*Sander vitreus*), lake whitefish (*Coregonus clupeaformis*), caribou (*Rangifer tarandus*), ruffed grouse (*Bonasa umbellus*), snowshoe hare (*Lepus americanus*), and beaver (*Castor canadensis*). Our interpretation of the lack of moose in diets during the 'Fish and Hare Period' is that it resulted from a need to seek

continued sustenance while easing demands on some members of our extended community and allowing time for their populations to replenish.

Regardless of the anthropological interpretation of dietary inputs, moose have forever been important members of our community. Indeed, our crest is anchored by the image of moose antlers. Today, moose forms an important part of our diet in fall and, to a lesser extent, in winter. Moose meat is eaten at rates (self-estimated, mean ± standard deviation) of 1.87 ± 1.19 (winter), 1.00 ± 0.96 (spring), 1.64 ± 0.84 (summer), and 2.33 ± 1.40 (fall) meals per week. Likely the same as for our ancestors, those who consume more moose in spring (the rarest occasion) report feeling better connected to nature ($r = 0.69$, $p = 0.02$) with less food insecurity ($r = -0.58$, $p = 0.04$). Those who consume moose in winter associate themselves with having a better diet ($r = 0.59$, $p = 0.03$); those who consume moose in summer associate themselves with overall better self-rated health, ($r = 0.59$, $p = 0.04$); those who consume moose in fall feel they maintain better weight ($r = 0.57$, $p = 0.04$) and better overall health ($r = 0.55$, $p = 0.05$) than the rest of our population. With no other foods, whether country-harvested or purchased, did as many positive correlations occur as for moose. Overall, participants from our community who indicated a larger proportion of their diet from local, country-harvested meats also indicated feeling better about their diet ($r = 0.86$, $p = 0.001$).

As moose and other non-human members of our community have given their lives to sustain and enrich ours, so has the knowledge of our ancestors guided our relationships with each other, helping us ensure that all life exists in perpetuity. Slowly, however, these traditional means of governing our relationships exclusively within our own community were being displaced by new laws with foreign ideas and language.

Post-Contact through Railway Development, 1800-1874

Prior to the establishment of Canada, developments within our territory by outsiders focused on resource extraction to ship raw materials to Europe. A mercantilist dogma drove the quests for gold, furs, and forest products of Canada, exploited for wealthy monarchies, eventually in Ontario, for the King or Queen of England. In this pre-treaty era, we held title over our territory, and foreign interests were mostly contained to sporadic trading posts and mines (Driben 1985) as well as the odd town settled by European immigrants. Increased inflow of settlers followed the construction of the trans-Canada railway, which spawned a concentration of activities within its vicinity. Increased external interest in wood and minerals in our territory was the stimulus to seek greater control of the land, and for us to articulate more clearly our interests and desire to protect our traditional way of life. With these often

conflicting interests in mind, both parties entered into the treaty-making process.

Cession of Lands and Articulation of Rights, 1905 to present

In Treaty 9 rests the legal rights to access the same lands by two opposing parties: First Nations and the Government of Canada. On the matter of two distinct sets of rights, Treaty 9 reads as follows: "…and His Majesty the King hereby agrees with the said Indian that they shall have the right to pursue their usual vocations of hunting, trapping, and fishing throughout the tract surrendered as heretofore described, subject to such regulations as may from time to time be made by the government of the country, acting under authority of His Majesty, and saving and excepting such tracts as may be required or taken up from time to time for settlement, mining, lumbering, trading or other purposes." Our new neighbours began to exercise their rights to take up tracts of land, eventually creating Ontario government acts, regulations, policies, and guidelines, such as contained in the Municipalities Act (2001), the Mining Act (1990), and the Crown Forest Sustainability Act (1994).

Logging, Mining, and Protected Areas versus Traditional Activities in a Regulatory Era

Following the imposition of external knowledge and management systems by new authorities, many aspects of our own time-honoured systems of authority and knowledge became disrupted. New human actors from outside our community began restructuring our territory without our input or consent. Forest Management Units, parks and protected areas, Wildlife Management Units, mineral claims, and Indian Reserves were imposed on our territory. Along with these new divisions of the land, the dialogue and decision-making on the management of extended members of our community (all plants and animals) increasingly occurred in urban centers a great distance away, often preferentially protecting the rights of sports hunters or big business. Forest managers located themselves at District MNR offices, as well as at consultancy, constituency, and corporate offices in Thunder Bay and farther away.

Technological advancements in the areas of remote sensing and GIS, along with centralization in support of corporate and government efficiency, obligated decision-makers to be away from the land for which they were responsible. Those of us most connected with the forest feel we have been disconnected from the decisions most influential to our community. The source of knowledge maintained by the healthy reciprocal relationships of the past that

helped sustain this place and all living things within it were largely disrupted. Imposed jurisdictions and outside decision-making have displaced local controls. As a result, our ability to exercise traditional practices and implement the knowledge of our ancestors, which are both actions aimed at sustaining our community in perpetuity, has been greatly restricted.

Currently, our ability to undertake food production activities, even hunting, feels restricted. Undertaking many traditional activities has been reduced in stature and in terms of the time with which we are allowed to practice them, reflecting external perceptions of our culture. The time we take for traditional activities has also been reduced considerably by demands on us to compete with the new economy. Our food gathering has been now described – and self-identified – more often as undertaking recreational activity than as participating in a traditional economy. Purchased foods provide the staples of our diet today, even though they are increasingly less meaningful to our community health and well-being than our traditional foods.

We feel that traditional products can retain their economic, social, and cultural significance and remain an important diet component. The majority (73%) responded they still rely on moose as a source of meat. Nevertheless, we see a number of factors

contributing to fewer people participating in traditional activities like moose hunting. These factors include the larger cultural shifts of the past originating with various assimilation attempts (i.e., relocation to reserves, residential school, and child services) and passive acculturation (i.e., mass media, the culture of convenience, and the application of capitalist modes of development). More importantly of late, changes to the land from newly imposed regulations and management activities have forced much farther travel to undertake traditional activities. Most of us no longer migrate seasonally to follow our sources of food, nor do we follow our families to traditional territories. Permanent relocation of our community to a reserve was a government solution to providing services, but the decision means we now concentrate our hunting activities and deplete the territory immediately around us of animals. As we travel farther for hunting and spend more money so doing, some of us are now less willing to share what we harvest: 31% of respondents said they harvest moose for their use alone. Because our perception is that this trend will continue, our community seeks remedies such as the community freezer we recently obtained for food storage to help those in times of need.

Employment in resource extraction, primarily logging, provided cash for food purchases, or gasoline to travel farther for hunting; for a time, cash alleviated the pressure to produce food by traditional means. But economic downturns in the forest industry

and technological advancements that made logging more efficient also drove a reduction in employment, so the total benefit from the forest industry garnered by local peoples was reduced. New access to the forest gained from the building of logging roads was taken from us for road closures that paid for new roads, and from bridge removals that were likely designed to restrict our road use. Silviculture that followed the new roads is now a source of great disturbance to the forest. The sequence of events employed by forest managers as means to regenerate what they allow to be taken by loggers leaves our ecological community disrupted. The complex network of primary, secondary, and tertiary roads – regardless of whether they are closed to us – fragments the forest, even while it opens new areas to recreational hunters visiting us from the outside.

The roads of today also allow us to travel faster and farther than in the past, but we see around them that clear-cut logging removes natural forest stands. Following logging, soils are often scarified, a process that leaves permanent scars on the landscape. The furrows and trenches left by scarification leave an unnatural footprint on the land that managers claim is for new tree plantings whose seeds sourced outside the community. When they arrive, they are planted in a manner that optimizes the yield at maturity and ease of future harvest; spaced at ~2 m from each other in rows, these new trees experience almost no competition or other forces

of natural selection. Many planting sites are later sprayed with chemical treatments (herbicides), some aimed at reducing pest populations, but most aimed at reducing competition against the newly planted trees. The competing trees and shrubs that herbicides eliminate are in many instances food for the human and non-human members of our community. We feel that outside decision-makers are prioritizing efficiency in industrial production over the production of local goods that sustain our community. We see the resulting forest as foreign and unrecognizable and we are concerned that non-human community members experience the same. Moose will not use artificially regenerating forests in the same way as naturally regenerating forests; depending on the extent and pattern of logging, the road network, and the hunting pressure, the length of time needed for moose to repopulate an area can be 15 years or more. Government scientists (e.g., Rempel et al. 1997) tell us our concerns are valid.

Our perception of change to an area heavily influences how we use it. The extent of herbicide spraying activities over our traditional territory in any one year is small relative to its total area. For a typical moose with a home range much larger than even the largest blocks treated with herbicide, food supply is probably affected negligibly by herbicide treatments. The moose that experiences herbicides in its home range simply moves away for one or more years (Lautenschlager 1992). However, the ecological,

social, and economic impacts of one year's spraying activities are not restricted to that summer. For years to follow, the conditions created by spraying are evident; some plants are removed from sprayed areas almost completely (e.g., raspberry [*Rubus idaeus*]), and others take years to return to pre-treatment levels of production (e.g., blueberries [*Viburnum angustifolium* and *V. myrtilloides*]).

In our continual interactions with the land, we are acutely aware of the new annual disturbances because logging and the associated silvicultural activities (e.g., spraying) are concentrated along roads. Moose and our other food sources become farther from roads and more difficult to find; we retain in our memories records of previous years' silvicultural activities and we avoid harvesting food in disturbed areas. Some community members cease to use treated areas entirely, even after ecological and silvicultural processes restore disturbed areas and make them appear natural again. Though the reward is great, hunting requires significant time and economic input on the part of the hunter; 68% of responding hunters now travel >2 hours to moose hunt. Even as roads are used to access our territory, the concentrated disturbances to the forest, including extensive logging road networks, create an ever growing perception of cumulative negative impacts. People who eat more moose in winter are those most concerned that herbicides affect the food system

($r = 0.60$, $P = 0.04$). Economically, all losses of food equate to losses of local production opportunities.

Current Forest and Moose Management Guidelines and Our Hunting Rights

Forest management guidelines require the collection of our 'values' in the form of the Native Values Background Report prepared by the industrial and/or provincial forest managers. Generally, our community is notified of meetings held in the nearest provincial municipality (Greenstone, Ontario) as they relate to forest management planning as no meaningful consultation takes place in our community. For the past five years, our community has been informed directly of only a single information session pertaining to Forest Management Plan amendments in a single Forest Management Unit imposed upon our territory and few community members are able to travel to these meetings.

The bureaucracy is confusing as our hunters could be in one of five Wildlife Management Units (17, 18A, 18B, 19 or 21A) or in one of four Forest Management Units (Ogoki, Lake Nipigon, Armstrong, or Kenogami Forest). Each of these jurisdictions is managed according to directives given by government policies and guidelines. The managers responsible for these jurisdictional units must address the 'recreationally focused' directive of the Government of Ontario (e.g., Heritage Hunting and Fishing Act 2002), as well

as our constitutionally protected rights to harvest moose. Finding the balance is often politicized and the debate surrounding hunting rights has been disputed for decades among the citizens and governments of Canada. As a result of all this, we feel as if we hunt under duress.

In formal debates, the majority of Canadians agree that Aboriginal people should have the right to subsistence hunting. The Supreme Court has provided clear guidance on the application of these rights, the circumstances by which they can be infringed upon, and a test by which to determine the validity of arguments for infringement. Most importantly, the Constitution Act was amended in 1982 to include Section 35, which protects aboriginal and treaty rights. Much of the problem seems to lie in an apparent disconnection between informal public opinion and the official guidance for policy directives and management decisions.

While there are many stakeholders on the land base, management initiatives seem to favour wealthy, mainly urban, sport hunters. For many in our community, hunting and fishing provides valuable economic input as well as invaluable cultural, spiritual, and recreational opportunity. In hard economic times, moose and other sources of meat from our traditional territory can be crucial to our survival (George et al. 1995). Ontario's new Moose Management Policy states that "moose management will respect Aboriginal

peoples' unique perspectives, traditional knowledge and practices related to moose and the exercise of their constitutionally protected Aboriginal or treaty rights." But this guiding principle retains existing jurisdictional constructs, offering respect in lieu of seeking guidance. Respecting our values means acknowledgement of our ongoing use and an attempt to accommodate our perspectives. Seeking guidance means acknowledgement of our expertise and adapting practices, past to present.

Moving Toward Reconciliation

The actions of decision-makers are made possible by complex governance structures. Our inherent marginalization in these structures imposed from the outside limits the extent of our participation in decision-making. To those current architects of government policy and programs, our land is one of many jurisdictions to manage in a vast expanse of Crown forests. Originally, the British Royal Family's wealth and security was afforded by a global amalgamation of Crown lands throughout the Empire, only made possible by the treaties and land surrenders in areas previously occupied and governed by Indigenous people. Today, the Crown still exercises its rights, granted in these treaties, to build structures supporting continued development and management of land, with natural resource management authority afforded to the provinces of Canada. Ontario's jurisdictions, held

by the Ministries, and the policies and guidelines set by various authorities acting on behalf of Ontario or the Crown, are maintained to continue foreign settlement and the extraction of resources to distant corporations. The Constitution Act (1982) was structured to support greater independence, protecting Aboriginal and Treaty Rights (Section 35), as well as a new relationship. However, the aim of all management activities remains on facilitating the extraction of resources, and sustained extraction includes accommodations for other uses as our uses are marginalized.

We prefer to think and act holistically, engaging all those using our shared lands to manage them together. Our economy emerged in this place. While the context for traditional use of the land has changed over time, many resilient elements remain. Those aspects of the economy carried forward by culture and tradition remain the backbone of our community's sustainability. Our constitutionally protected rights to access our lands and sustain our community through contextually appropriate foods are jeopardized when they do not guide development. Practices and guiding principles rooted in this place are most appropriate to our future. The new moose habitat protection afforded by the Site and Stand Guidelines for the Crown Forest Sustainability Act includes provisions for consultations sensitive to our traditions. The directive in Ontario's Moose Management Strategy to respect traditional values represents further potential to include our community's economy

within the realm of other values. We are deeply concerned about the future of our community as more development occurs. We hope that readers understand that management of sport hunting of moose and forest management without acknowledging First Nations practices will cause conflict to escalate.

Our community surveys taught us more about not only the economic, social, and cultural traditions we have maintained within our community, but also about the impacts of marginalizing our use. Moose managers and forest managers need to balance consumption and conservation of resources for diverse interests. The results of our survey with moose hunters in Aroland and Ginoogaming First Nations showed the respondents were harvesting 87 moose per year. Bissett (2002) reported a total of 210 annual moose harvests recorded by the MNR in the Wildlife Management Units located within our traditional territory. As our harvests are not taken into account in the MNR record, we estimate that there is an error of approximately 40% in the moose harvest reported by the MNR in our traditional territory. As this estimate is based on data from 40 hunters in two of at least five First Nations sharing overlapping traditional territories, claiming 40% error is likely a conservative estimate. The effects of not accounting for our moose harvest could adversely impact the management of moose and the viability of future populations to the detriment of all users.

By continuing to restrict dialogue, our uses are not accounted for and an underestimation of moose harvested is allowed to continue by the MNR. A review of the MNR moose tag allocation is currently underway and Ontario's Moose Management Strategy indicates that the government is committed to improving the methods used to estimate moose populations and determine harvest allocation. Therefore, it is time to incorporate our perspective into moose population estimates and management planning through a meaningful, consistent, and transparent consultation. Developing a working relationship with ours and other First Nations communities is imperative to effectively manage moose in Ontario. But to date, the MNR solicited our knowledge only as an afterthought (reviewing plans and proposed changes to legislation or policy), not as a consultation with knowledge-holders (informing process and contributing to policy development). We agree with the conclusions of Watson and Huntington (2008) after their moose hunting trip, that the way to proliferate perspectives is not to translate or interpret knowledge, but to change the way that knowledge is represented to make different perspectives explicit when describing everyday life or scientific knowledge. We believe the incorporation of our perspective in a meaningful way will aid wildlife biologists to manage moose populations more effectively in the future. It will also ensure that our use will be recognized and sustained for future generations.

Moving into the future is about weighing costs and benefits of each new step. Together we should be able to look at each period of transition in the bridging of two cultures and be ready to admit when corrections were not made, which would have kept benefits outweighing costs for all users of the land. We are aware that the dominating, jurisdictional traditions guiding current forest and wildlife management are deeply entrenched and very difficult to uproot (Caza and Neave 2000). However, the sustainability of our community is tied to the sustainability of our economy. Misrepresentation of this fact in the current management system has encouraged marginalization of our knowledge. The question remains: can we review the traditions of the past and recognize them as a part of a whole that includes new traditions and new trade possibilities?

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Ginoogaming First Nation helped to conduct surveys with moose hunters in his community. This project was funded by the First Nations Environmental Contaminants Program of Health Canada. Connie Nelson and Mirella Stroink of Lakehead University's Food Security Research Network, co-applicants to the grant awarded to Aroland First Nation by Health Canada, offered sage advice during the drafting of this study. Peggy Smith, also of Lakehead University, helped supervise Christopher Pereira in his ambition to learn more about First Nations and moose in Ontario. Finally, we thank the Chief and Council of Aroland First Nation for granting us permission on behalf of the community to tell its story.

CHAPTER **5:** CASE STUDY OF THE AROLAND YOUTH BLUEBERRY INITIATIVE[54]

Social entrepreneurship and social enterprise are broadly defined terms, although most agree that social entrepreneurs play the role of change agents, with a focus on innovation and impact rather than income (Dart 2004). The shift in focus from financial capital to include social, environmental, and cultural capital is a significant philosophical transition from capitalist worldviews. In the face of capitalist globalization, peoples throughout the world are seeking to return balance between economic, cultural, and social values. As Indigenous peoples, we recognize these foci as emergent from an interconnected view of the world, one generally characterized as based on concepts of respect, responsibility, reciprocity, and redistribution as opposed to the capitalist worldview, which is based on power and profit (Harris and Wasilewski 2004). As social entrepreneurs strive to make social change through greater participation in economic systems, there may exist an opportunity to explore anti-capitalist models that are emergent from the Indigenous worldview (Anderson 1999; Jorgensen and Taylor 2000; Newhouse 2004).

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[54] A version of this paper has been submitted to the *Social Enterprise Journal*. This paper was co-authored with community members/researchers Mark Bell and Sheldon Atlookan.

This case study describes an Indigenous social enterprise,[55] the Aroland Youth Blueberry Initiative, a non-profit food hub that supports exchanges of economic, social, cultural, and natural capital. This study is presented within the context of Indigenous economic development and worldview, and as a contribution to the philosophy of social enterprise. The authors argue that there are many aspects of social enterprise that align well with Indigenous worldviews. The case study then describes systemic barriers experienced in the development of the enterprise and explores the community's right to food and their relationship with their treaty partners. The issues discussed include Aboriginal and Treaty Rights and tensions between local and external economies. The case study suggests that social enterprise has the potential to achieve positive social, economic, cultural, and environmental changes in Indigenous communities even where externally imposed barriers exist. The Indigenous peoples of Canada have had external economies imposed upon us for generations with little more than chronic poverty, disease, and dependency to show for it. The growing acceptance of social enterprise within a dominant Western culture nevertheless may provide new opportunities for economic

[55] Social enterprises apply commercial strategies to achieve social goals. Indigenous enterprise research is an emerging field; for more information, see Hindle, K., and M. Lansdowne. 2007. Brave spirits on new paths: toward a globally relevant paradigm of indigenous entrepreneurship research. In Dana, L.-P., and R.B. Anderson (eds.). *International Handbook of Research on Indigenous Entrepreneurship*. Edward Elgar, Cheltenham, U.K. Pages 8-19.

development emergent from Indigenous worldviews. However, in order to address systemic barriers, policy makers, funders, and social entrepreneurs require a wider breadth of understanding in relation to Indigenous economies, worldviews, and social entrepreneurship.

Background to the Case Study

Strategic actions were taken in the summer of 2008 by five key actors involved in creating the Aroland Youth Blueberry Initiative. Our actions have been directed, reflected upon, adapted, and self-sustained to date by our community. This community economic development initiative emerged from a larger community-university relationship in which community members generated their research priorities and questions in collaboration with university partners. We then undertook actions in four focus areas, one of which was non-timber forest product marketing. Key actors engaged each other in respectful and mutually beneficial relationships as we undertook collective actions. Our working relationship has evolved and changed over time. Key participants included community members, as well as Aroland First Nation staff and leadership along with staff, graduate students, and faculty members associated with Lakehead University's Food Security Research Network. Rather than engage community members as 'participants' or 'key informants,' we developed the Aroland Youth Blueberry Initiative collectively. The authors of this paper are key actors in the foundations of this

Indigenous social enterprise. Program implementation case study methodology was employed, which required the investment of significant time over a long period of time, to help discern whether implementation of this action is in compliance with its intent, describe implementation problems, and report on what has happened over time (Davey 1991).

Case Study Community

Aroland First Nation is a member of the Matawa Tribal Council in Nishnawbe Aski Nation, a territory overlapping two-thirds of the province in Ontario, Canada. Our population is 361 people permanently living on-reserve, about 60% of whom are under the age of 30 (Statistics Canada 2012). The settled community of Aroland was originally established by the individuals who were working at the Arrowland Forest Company. When the Arrowland Forest Company closed in 1941, the Crown, linking our local economy to the extraction of timber resources, attempted to relocate us to Long Lake and Ginoogaming First Nations (approximately 75 km east), where new sawmills were being developed (Driben 1985). We fought for our home and eventually Aroland First Nation #242 gained reserve status under the Indian Act on April 15, 1985.

The reserve lands encompass 196 square kilometres and extend northwards from Highway 643 to lands along the western and northern shores of Esnagami Lake. Our community has a long history with the

area surrounding the reserve land and we have maintained complex mutually beneficial relationships with others using our traditional land as home. The land area that makes up our reserve is in fact land owned by the Crown, held in trust for the band. The Indian Act, passes this authority to the Minister of Aboriginal Affairs and Northern Development and sets out the land management responsibilities for the reserve lands (AANDC 2013). Through the Band Council structure created under the Indian Act, this land is the only land upon which we have any clear role in decision making; our traditional territory,[56] on the other hand, extends thousands of square kilometres and is shared with other members of Nishnawbe Aski Nation, corporations, municipalities, legislative authority of the Crown.

Our right to access resources to generate our livelihood from these shared lands is protected in Treaty #9 and affirmed in Section 35 of the Constitution Act (1982). Recently published accounts of the signing of Treaty #9, support our perspective that the intent was not to cede title but to share the land (Long 2010). In the past, our community generated livelihood in this place through participation in the traditional economy. Our families were the primary producers of the goods, foods, and fuels needed to sustain

[56] The boundaries of traditional territories are self-determined, though typically are defined as areas of historic significance, resulting from use and occupancy.

life in this place. We interacted with each other and neighbouring communities to trade goods, foods, fuels, and knowledge. As new neighbours arrived in the form of European settlers, we engaged them in our regular practice of generating and exchanging resources and wealth with respect, reciprocity, and the expectation of mutual responsibility. However, these new actors in our economy held differing views on the accumulation and distribution of wealth, stemming from their individualistic views of property rights. While we interacted within our community and surrounding environment in respectful, reciprocal relationships in which natural capital was not depleted through extraction, but instead was shifted within localized systems, these new actors sought to extract wealth for foreign interests (Elias 1991).

More recently, primary production activities like hunting, fishing, trapping, lumbering, and gathering all helped generate a livelihood in this place. Traditional economic activities shifted resources that supported our community's livelihood, social cohesion, and resiliency. We shared the opportunity to generate and shift wealth within our community by interacting with our local environment in a respectful and reciprocal manner. These primary production activities combined to provide the necessities of life, and eased the forced transition to a static lifestyle in a permanent settlement.

While extractive, the new industries brought to our community did offer new economic opportunities that helped offset some of the losses of primary production to the local economy (Driben 1986). For example, early timber harvesting activities offered many new economic opportunities for our community that complemented the existing knowledge and skill sets of our people. Primary production activities generated social, environmental, and ecological capital and, when wage compensation was fair, our traditional economy interacted well with the wage-based system. This hybridized economy blended traditional economic activities with the wage-based economy in a complementary manner, until it eventually became unbalanced.

Gradually, as exploitative development models were imposed and our lands were taken up, opportunities to sustain life in this place changed drastically. Much like other Indigenous peoples in Canada, we were officially discouraged from participating in food production (Waisberg and Holzkamm 1993), a practice designed by the Crown to force economic assimilation. Other Crown actions aimed at assimilating our practices, beliefs, and economies have occurred over time which left lasting impacts of Indigenous peoples and societies (Alfred 2009). Actions aimed at forcing our families to transition to static life in settlements were coupled with promises of support. One of the tools used to support this transition was the introduction of social assistance payments in the mid-1960s.

These programs not only substituted losses for primary production, they encouraged a transition to the market-based economy by linking support to the wage-based economy. Furthermore, other Crown actions aimed at addressing the 'Indian Problem' involved removing children from their families, disrupting intergenerational experiential learning opportunities. While removed from primary production activities our children could not be shown how to live sustainably in this place. These and other Crown actions further displaced our society, economy, and culture while so far failing to impose or develop functional replacements independent of external support.

The Crown and their actors have drastically transformed the landscape in our traditional territory, forever changing our relationship with each other and the land. The Crown has created many unbalanced relationships in their quest 'civilize' us and 'develop' our economy, community, and environment. Their Eurocentric worldview is based on the accumulation of individual wealth without reciprocation. We see how their actions have depleted the natural capital. As industrial forestry development continued, its massive road network created better access to 'undeveloped' areas of our territory and a higher global demand for minerals brought a number of external entities, national and international mining and forestry corporations, who have extracted more and more natural capital from our community. Within our territory there are numerous abandoned mine sites, ranging from open pits left from

the exploitation of exposed gold veins to open shafts and tailings ponds left unattended. Decades of commercial timber harvesting have created a mosaic of disturbed and contaminated forests and fresh waters, fragmented by their custom built road networks consisting of thousands of kilometres of primary, secondary, and tertiary harvest roads. As a regular practice, forest managers spray a variety of herbicides and pesticides upon our shared lands, believing they are protecting and promoting the value of the forest, stock commercial trees such as spruces and pines, while killing food species for both humans and non-human members of our community such as blueberries, raspberries and willows. Further fragmentation occurs as a result of conservation efforts. In order to address expectations of conservation from the general public, the Crown has also created a network of 'protected areas' with various levels of accessibility.

We maintain rights to continue to use our shared lands in accordance with Treaty #9,[57] but these lands are now depleted and/or exclude us in a number of ways, including parks and protected areas, municipalities, mines, bridges, as well as harvested and sprayed

[57] Treaty # 9 includes the text: "the right to pursue their usual vocations of hunting, trapping and fishing throughout the tract surrendered as heretofore described, subject to such regulations as may from time to time be made by the government of the country, acting under the authority of His Majesty, and saving and excepting such tracts as may be required or taken up from time to time for settlement, mining, lumbering, trading or other purposes."

blocks that are all interconnected through a vast and complex network of open and closed roads and private rails. Anthropogenic disturbances occur throughout our traditional land use area and the systems upon which we once were interdependent are facing reduced natural capital from extractive activities by external actors. Furthermore, as resource extraction technologies have advanced, the need for local labour has declined. In the past, losses to primary production opportunities could be offset by the wage economy. With little to no employment benefit in modern resource extraction industries, we struggle to find balance with the actions of external interests profiting from resources extracted from our shared territory and our community's sustainability. When the boom goes bust in the natural resource extraction industries, external players lose interest in our territory and we are left with the impact of their actions. Local pulp and lumber mills will open periodically to meet rises in demand, then shut down and remain idle, laying off local peoples, until the next peak in demand. Unfortunately we see our skilled tradespeople, who were once able to work entire careers within the local industry, are now heavily reliant on seasonal employment, social assistance, and employment insurance (Cachon 2000).

Unfortunately, the economic systems imposed on our community were designed to benefit the capitalist nations at their core, while positioning us in the periphery and prioritizing the core's

development and expansion to the depletion of natural capital in the periphery (Newhouse 1997; Anderson 1999; Jorgensen and Taylor 2000; Wuttunee 2002; Newhouse 2004). This approach has been called a 'zero-sum game' model of development (Hornborg 2009). The basis of this worldview is that the gains of one occur at the expense of another; inherently, these are games in which destructive competition is most prevalent (Stiglitz 1998). For example, when we attempt to develop enterprises in the zero-sum game, we have to compete against all other interests, i.e. the existing industry, new entrants, and neighbouring communities, for an allocation of wood supply from Ontario's Ministry of Natural Resources.

Ontario's current wood supply allocations and tenure agreements are administered through a variety of deeply entrenched practices, one of which is the wood supply competition. From time to time, these competitive processes will award a predetermined available volume of wood through an application and review process. This type of competitive economic mechanism emerges from the zero-sum model of development, whereby only a few proposals win at the detriment of the others. The winners can have access to Crown resources (wood) while the losers are left without, and without access to resources, primary production is impossible. These allocations, while focused on timber, are a part of a forest tenure system that licenses large land bases called Forest Management Units to a single user group. These users, while focused on timber, are tasked with the

responsibility to manage for the values of all other users. When planning, they are ultimately able to prioritize their values over others, continuously perpetuating the zero-sum development model.

It is apparent that since this development model that has been forced upon our community is focused on resource extraction, access to resources would be a critical element of our successful transition to participation in the imposed global capitalist system. If the imposed model of economic development in our communities is dependent on access to resources, why are they being allocated to external interests? We have certainly experienced the destructive nature of the zero-sum game development model and we are seeking to create new opportunities for our community members to return to reciprocal, mutually beneficial relationships with each other and our local environment. Caught in cycles of global economic systems and faced with significant external control, access to local resources is as important as ever for the members of our community, human and non-human alike.

Aroland Youth Blueberry Initiative

We collectively organized a non-profit buying depot for fresh blueberries in the summer of 2008 that continues to operate sustainably today. We have observed its positive contributions to the local community as it has expanded to become a resilient and effective community food hub. This initiative created a sustainable

social enterprise that enables the exchange of social, environmental, and financial capital within our community. This social enterprise is unique to us in many respects—it is voluntarily managed, sustainably self-funded, and connected to Ojibwe culture and traditions.

The first phase of the project involved learning from past similar attempts and developing a firm understanding of our potential markets; the second phase involved piloting the buying depot and distribution network. The third and ongoing phase of the project is constant reflection, adaption, and implementation. This never-ending final phase is the key to building resiliency into our model as it allows us to be responsive to change by adapting our practices in order to maintain the functionality of our food hub as a sustainable social enterprise.

Identification of Opportunities

In our community we have a knowledgeable and available workforce consisting of young families willing and able to work. However, the hard truth is that the extraction-based industries have little need for us anymore. When exploring possible community economic development opportunities, we recognized there were great opportunities available to us in the non-timber forest product industry and through participation in the growing local food markets. Blueberries and moose have formed a staple of our peoples' diets

since time immemorial and we have a long history of selling berries in local markets. Our elders have shared stories of family members selling berries to rail workers, train passengers, and even into Minnesota for use of dyeing blue jeans in a factory. We have also heard stories of trading preserved berries with the Ojibwe to the south and Cree in the north. Selling moose, on the other hand, is restricted by Ontario's food safety regime and is culturally discouraged. Fortunately, blueberries are not constrained by the same dietary, philosophical, or legislative prejudices and due to the timber focus of natural resource management regimes in Ontario, there are also literally zero regulations regarding the production, management, or sale of blueberries from Crown lands. The lack of a regulatory environment for NTFPs offers distinct opportunities that are not available under current forest management regulations.

The abundance of blueberries on the land upon which we have any authority[58] means our community members have access to raw resources that are under our collective title. This allows us to manage and utilize the resources as we see fit. The reserve lands are not the only ones from which we have rights to access resources. Our shared lands also have great natural wealth and our right to maintain our usual vocations and generate a livelihood is protected through our

[58] While decisions are made locally through Band Council Resolutions passed by the Chief and Council, all decision are subject to the approval of the minister as required under the Indian Act.

treaty. The greatest opportunity in the non-timber forest product (NTFP) market, from our perspective and experience, is that NTFPs are of little interest to the conventional 'development' actors. We have much greater access to these resources, as our intent to access is not subject to external reviewers and does not yet have to be granted by external decision makers. There is, however, the potential to develop a regulatory environment for NTFPs within the current natural resource management regime (Hillyer and Atkins 2004). Furthermore, subject to the decision in Grassy Narrows First Nation *v.* Ontario (Natural Resources) 2014, if Ontario were to provide that development NTFP industry were in the public interest, they can infringe upon our rights, subject to Crown's duty to consult.

The activities associated with natural resource extraction and management have left a heavy footprint on the land and we face a significant barrier posed by the application of herbicides that favour commercial trees. The actions of the Crown and the resource extractors they license to operate on our shared lands present significant challenges to the realization of our right to our usual vocations and have become a significant barrier to our expansion. Our rights to do so are protected by Treaty 9, the Constitution Act (1982), and the UN Declaration of Indigenous Rights.

The opportunity to market blueberries was apparent as we have a significant supply of wild berries on reserve land and the growing local food movement demonstrated significant demand. These areas are also within walking distance of the community, which makes the economic opportunity accessible to the entire population. There is also a significant supply of blueberries on nearby shared lands and an existing network of roads facilitates access by truck. In collaboration with the community's economic development officer and key community members, it was identified that in order to seize the opportunities available to us in the local food market, a non-timber forest product buying depot must be established. Together we identified goals to guide the initiative: that the initiative aim to build leadership and entrepreneurial skills in the community's youth and that the Indigenous worldview inform our actions. The Aroland Youth Blueberry Initiative began selling berries in regional markets in the summer of 2008.

Life-Projects, Social Enterprise, and the Indigenous Worldview

Like many communities in Northern Ontario, the forest industry has been the primary employer in the wage economy active in our community. Wages associated with harvesting, silivicultural, and processing jobs once supported many households. Recent downturns in conventional forest product markets and advancements in harvesting technology have lessened economic opportunities for

local people and have turned much attention to the development of 'value-added' timber products and non-timber forest products, as well as spurred a growing interest in community-based forest management. Government initiatives aimed at expanding the forest industry have identified diversification of the single commodity through value-added wood products, whereas community-based initiatives aimed at expanding the forest industry have identified diversification of management and decision-making structures so as to include and manage for diverse user groups. The multitude of values referred to as non-timber forest products incorporates all ecological, social, economic, and cultural values of the forest environment. There are many industries able to generate wealth through non-timber forest products; some are non-consumptive (recreation, tourism, etc.) and some are consumptive (food, fuel, and fiber production). The current natural resource management regime is linked to a single commodity group: those who extract trees.

Our Social Enterprise Model

The extraction of natural capital and accumulation of private wealth are deeply entrenched cultural routines of the Crown and its capitalist actors. Sharing resources and prioritizing others' values is inherently foreign to this system. This initiative is community-based and community-driven with local knowledge and

skills as the driving force. We enroll youth and other community members throughout all aspects of our social enterprise. In contrast to wage-based employment, anyone is able to contribute what they want, whenever they want. Throughout the years, many different individuals have participated in a wide variety of roles associated with the development, implementation, and operation of the Aroland Youth Blueberry Initiative. This initiative aimed to build leadership and social entrepreneurial skills in the community's youth and we also sought to have our actions be emergent from the Indigenous worldview. To us this means that:

- this initiative is undertaken through collective actions;
- we are sharing opportunities with each other;
- the labour and knowledge of pickers are respected through engagement as equals;
- we demonstrate reciprocity through fair prices paid both to the picker and by our customers;
- we provide real world experiential learning opportunities for our community; members to build practical skills that support life in this place; and
- we seek advice from local knowledge holders and we honour our responsibility to all creation by not taking more than we need.

The final point on taking what we need was of some debate within the community related to sustainable harvesting and the ethics of

marketing traditional resources. We quickly questioned whether it is acceptable to harvest food for sale and if harvesting food beyond personal consumption constitutes taking more than you need. While, like any human population we will probably never reach complete consensus on any issue, we have found common ground on this point.

As living beings, our needs are diverse. Through primary production, trading and bartering, and wage-based activities, we can meet our life needs in many ways. When harvesting blueberries we are converting a living being to a resource. We are able to consume that resource ourselves and/or convert it into other resources that help meet our needs. Berries sold in regional markets can be converted into cash and through trade the possibilities are endless. What matters most in this debate is how we engage with the non-human beings sharing the berries with us. If we respect these members of our community, they will continue to share their wealth with us.

In order to ensure respectful harvesting of the blueberry plants, we do not buy berries if the picker has used commercial harvesting rakes. These rakes maximize harvests while minimizing labour, without regard for the plant’s well-being. They remove berries indiscriminately, picking all berries at various stages of maturity along with some leaves and stems. In operations where rakes are used, the waste plant material is separated and discarded using

large fans. We only buy and sell hand-picked berries. Pickers selectively harvest ripe berries, leaving immature berries to ripen and knocking over mature berries to the forest floor. We do not cause damage to the plants when we harvest as we do not place our economic value over the well-being of the many species in our community.

Through this social enterprise, pickers are not only paid fairly, but the opportunity to participate is also shared widely within the community. We learned early on that there were limits to how much we could buy at one time. This per-buy volume was informed by both our cash flow and expected marketing opportunities in the days after the buy. We developed a contract mechanism to ensure the opportunities were shared amongst those wishing to participate. On the day prior to setting up the buying depot, ‘contracts’ are issued to interested community members. Based on our projected market, the opportunity to sell is shared by those who sign up for these contracts. For example, if we receive an order from one of our commercial buyers for 300 three-litre baskets and 100 community members sign up for contracts, each picker can sell nine litres on that particular ‘contract.’ This process continues throughout the season, with contracts being issued about three times a week during the fresh market season. We also purchase berries to be frozen and sold throughout the year, starting in mid-season. Through this open and participatory structure, all community members are able

to share in the opportunities presented by the buying depot. After buying from pickers, we then market berries throughout the region of Northern Ontario.

Since we began in 2008, our market share has grown significantly. We now purchase and distribute approximately 6000 litres of blueberries in the fresh market and an additional 1000 litres in the frozen market at a value of approximately $7.50 per litre. This means that through this social enterprise we are able to generate a shared value of approximately $50,000 over the course of a four- to five-week season each summer. With little data available on Ontario's blueberry industry, it is difficult to compare with others; however, it is clear to us as active participants in the regional market that there is no other supplier able to meet the market demand as we have. Aroland's blueberries can now be found in season at most farmers' markets in northwestern Ontario as well as at a co-operative storefront year-round.

Essentially all the expenses and income in the local food markets are variable. As an example, the prices paid to pickers varies, based on both environmental and temporal factors. Environmental conditions vary from year to year affecting the availability and location of blueberries, thus the energy expended by pickers varies and so does the price. Within one season the price also drops over time, with the first fresh berries to market drawing the highest

price. We then distribute berries to between 400-1000 kilometres across a number of markets. Gas prices fluctuate during the summer and various markets charge fees ranging from nothing $0-100 per day. On a number of occasions the First Nation has bought baskets for community members, which are used to sell to us as well as other buyers in the community. When there are no baskets, they are hard to come by and usually cost between $0.25 and $1.00 each. However, most instability comes from marketing. The price customers are willing to pay is often unpredictable. There are many factors that can be assessed and over time we have learned to navigate them well, having built a diverse customer base with balanced wholesale and direct market accounts. With a growing frozen berry market, we are able to divert unexpected overages in supply for later sales.

We faced some concern internally and debated the merits of formal business planning and registration as well as applying for external funding. Since our actions took place over the course of approximately five weeks in the summer and were non-taxable, it made little sense to register under any formal business structure. Furthermore, if we were to register a business, regardless of which model, we would be formally connecting it to an individual or group and this felt counterintuitive for a life project aiming to create leadership opportunities for others. As a result, this initiative is not registered as any legal entity.

When considering external funding sources, we knew from experience that we would have to apply for funding as some form of legal existing actor. We funded the initiative ourselves with $1500 and countless volunteer hours. We were able to pay ourselves back within a matter of weeks and have generated self-funded actions ever since. Whether termed a social enterprise, a business, an initiative, or a life project, what we do makes sense and works. Over the years, we have witnessed the many opportunities created for knowledge generation and sharing by engaging this social enterprise. We have seen leadership skills blossom in our community's youth as they provide positive contributions to our community's greater well-being while participating in traditional food-related activities and economic productivity. Informing our actions from the Indigenous worldview has proven in this case to have created unique opportunities on shared lands.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

If meeting the social, economic and environmental needs of present and future generations is the purpose of managing Crown forests, as stipulated in Ontario's Crown Forest Sustainability Act, then based on experiences of Indigenous land users, the paradigm in which natural resource management occurs should be re-evaluated. The limitations of current natural resource management models and theories are deeply rooted in colonialism and therefore inherently anti-Indigenous in nature. The perceptions and experiences of Indigenous land users in relation to natural resource management in Ontario suggest that their social, economic, and environmental needs are not being met by the sustainable forest management framework created in the Crown Forest Sustainability Act.

IMPLICATIONS FOR FOREST MANAGEMENT IN ONTARIO

Community-Based Management: A Need to Shift toward Quality over Quantity in Natural Resource Management

We live in complex socio-ecological systems, in forested systems intrinsically tied with social systems and vice versa. The complexity of our relationships with each other and the land is

managed for by individuals, communities, government, and industry at a variety of scales. While individuals and communities interact with the forest systems in which they live, little management authority is shared with these users. Under the current regime, management authority rests with government and industry; the knowledge creation and decision-making processes take place within contructs emergent from the the Western worldview. However, an increased awareness of the reductionist nature of natural resource management activities and various expressions of concerns, i.e. environmental degradation and sustainability, community resilience, and the distribution of wealth created with common property resources, has led to a greater interest in community-based management systems (Bullock and Hanna 2012). While "there is a growing recognition that Indigenous community-based involvement in natural resource management can bring significant economic and sociocultural benefits" (Altman and Whitehead 2003, 2), the same benefits are also needed and possible to achieve in non-Indigenous communities.

While quantitative management systems are informed by knowledge generated by those disassociated from the objects being manipulated, qualitative approaches humanize knowledge generation through empowerment of these objects as actors. Quantitative approaches gather knowledge about groups, i.e. a community, objectively from outside the system. The knowledge generated then informs

decision-making about the particular groups. If a forest system was purely ecological, the manipulation of objects to achieve management objectives and decisions regarding these objects could justifiably be informed through a solely quantitative approach. Privately held forests where single interests exist would be an example of such a system suitable for management through such an approach. The diversity of interests in the multitude of common property resources present in Ontario's Crown Forests necessitates a more comprehensive and inclusive management approach, such as community-based forestry.

A systematic transition to community-based management requires an equitable distribution of decision-making authority and a fundamental shift in the way knowledge is created and interpreted by managers as well as a broadening of the paradigm through the development of new theories and models. In the current system, forest management is essentially an economic development model. Economics is one pillar of development; the others are social, cultural and ecological. Through policies and guidelines, forest managers must consider and manage for the other pillars. Community-based management represents a means of restructuring the management system. The planning process can be repositioned to better represent values and considerations that are integral to the construction of the other three pillars. Empowering the community through the sharing of decision making authority and

respecting their autonomy can lead to a more compatible comprehensive forest management planning process and welcome, previously devalued knowledge to inform decision making.

Through this restructuring, forest-based corporations will not be unjustly disadvantaged; in fact, the opposite may be true. The movement towards community-based management relieves corporations of the responsibility and requirement involved in managing for the other three pillars. In the current system, forest-based corporations, which unarguably are economic actors, are required by public opinion and policy to plan and manage for multiple values and interests stemming from the other three pillars. This responsibility was transferred to forest-based corporations through licensing and planning requirements in the Crown Forest Sustainability Act (1994). Along with the responsibility associated with forest management comes enormous costs, most of which stems from the complexity of natural resource management, mitigating the conflicts that arise within the management unit, and managing relationships with communities through the process. It is unfair to charge forest-based corporations with this responsibility; it not only jeopardizes their viability as economic actors, but the imbalance that is created compromises the integrity of the other three pillars and thus the structure and sustainability of the socio-ecological system as a whole. Resilient socio-ecological systems are supported by strong mechanisms that

allow for dynamic relationships between actors, place, and each other.

In order to meet the purpose of the Crown Forest Sustainability Act (1994) in Northern Ontario, there must be balance in the planning process, with decision-making authority and responsibility shared between actors. The quantitative approach inherent in the current management system reduces communities land uses into areas treated as objects, representations of something to be managed rather than a way of life. A shift toward community-based management with a qualitative approach could provide opportunity for another perspective or way of life to inform decision making.

Application of a qualitative approach in natural resource management represents a fundamental shift in the way we do business. While the quantitative approach positions the manager outside of the system and allows management from afar, the qualitative approach positions the manager within the system, leading to management from within. Managing from within requires strong relationships with people and the land, which can only be achieved from within the systems. By utilizing a mixed methods approach, we may be able to reach a new perspective and shift natural resource management away from integration towards compatibility. The shift towards community-based management of natural resources will only be an effective means of achieving compatibility if the knowledge

creation and decision-making processes are inclusive, participatory, and humane. The quantitative approach of the status quo will not provide the tools capable of assisting the transition to management from within. As I the preceding participatory action research projects have demonstrated, a qualitative approach can provide such tools and bring new knowledge to the natural resource management; however, the outstanding challenge will be to decolonize the minds of authoritative decision-makers and to encourage an acceptance of other sources of knowledge and ways of sharing decision-making.

Rights- and Worldview-based Training for Authorities

On the surface, it makes sense to have authorities, such as Registered Professional Foresters, certify forest management plans because they are trained professionals. However, this commonsense approach to letting the professionals take care of forest management appears to be falling short of ensuring members of the only profession legally able to create forest management plans have the knowledge needed to meet the purpose of the Crown Forest Sustainability Act (1994). As outlined in Chapter 1, the academic requirements of certification as a professional forester do not include the comprehensive subject-based reflective of the complex socio-ecological systems they are responsible for managing. Simply

put, RPFs often lack the training, tools, or perspectives to achieve the desired outcomes put forward in the CFSA 1994 and the Forest Management Planning Manual to manage for social, ecological, and cultural values in Crown forests.

In order to include Aboriginal values in management decisions, there is a strong interest in traditional ecological knowledge as a source of information in Northern Ontario. However, this knowledge is not an object that fits well into the current management paradigm. The creation, retention, and distribution of this knowledge are rooted in a separate worldview from the current model. Attempts to integrate these forms of knowledge are unsuccessful because the relationship that structures the discussion forces Aboriginal knowledge to conform, assimilate, and change to fit into the existing natural resource management system. Natural resource managers follow their traditions and ways of knowing and ask Indigenous peoples to share their values by creating manipulable units through mapping so they can be managed for by the authorities. The classification of Aboriginal ways of knowing as traditional knowledge constrains the expression of the knowledge developed through this system. It is one part of a different way of knowing; it is a different worldview. True integration of Aboriginal knowledge requires us to look from a broad perspective at the knowledge we seek and redefine the relationship that mediates our discussions. In order to create management systems in which all

participants are valued, respected, and share responsibility, we need to look beyond the current colonial perspective.

Manage for Forest and Freshwater Food Systems

Finally, as outlined in Chapter 1, the management of Crown resources is a complexity of legislation and overlapping jurisdictions. Thus, the ability of land users to actualize their rights to access is subject to this multitude of authorities, plans, and competing interests. This thesis focused primarily on the actualization of the rights of Indigenous land users, though in reality many of the activities undertaken by Indigenous land users are not unique to them; for example, many individuals from diverse cultures exercise rights to harvest Crown resources like forest and freshwater foods for sale and personal consumption. While I was undertaking my research, Ontario passed the Local Food Act (SO 2013, c. 7). In the Act, the definition of local food includes "foods produced or harvested in Ontario, including forest and freshwater food." The purposes of the new law are as follows:

1. to foster successful and resilient local food economies and systems throughout Ontario

2. to increase awareness of local food in Ontario, including the diversity of local food; and

3. to encourage the development of new markets for local food.

The Local Food Act (2013) now adds another piece of legislation to the complex legal environment in which natural resource managers and land users operate. The recognition of forest and freshwater foods as local foods in a piece of legislation aimed at fostering successful and resilient food economies and systems throughout Ontario should cause a re-evaluation of the silvicultural practices, such as herbicide applications, employed by natural resource managers for which land users express concerns about food system resilience.

WAYS FORWARD FOR INDIGENOUS PEOPLES

As outlined in this thesis, Indigenous food systems have been deliberately disrupted in Northern Ontario and the imposition of colonial governance structures removed Indigenous ways of knowing from the management decisions that impact the realization of our right to food. Through recent legislative changes, some new doors are opening for the inclusion of our values, but are we ready and willing to fully participate and assert ourselves as sovereign peoples? In order to describe the stages observed in the participant community's efforts at rebuilding food sovereignty and to inform

the efforts of others, I have developed the 4 R's of Rebuilding Food Sovereignty:

1. Reclaim – Emergent from the desire to realize our rights to Indigenous food systems and the restoration of healthful living, we assert our role in the food system to reclaim sovereignty. This can be expressed in number of ways but the assertion of discretionary power is required. Examples of mechanisms to move from assertion to expression include, band council resolutions, land use plans, as well as community food plans, charter, or strategy. In this thesis project the co-development of the four research priorities was a critical element in reclaiming agency in the food system. The mapping activities contributed to a larger living document that support land users decision making when planning for change.
2. Reorganize – Involves building new means of producing and distributing foods that meet the needs of local peoples while utilizing local assets. Plans can include any number of initiatives, i.e. gardens, community freezers, buying depots, community markets, etc. However, contextual appropriateness is critical. In this study, the organization of the Aroland Youth Blueberry Initiative exemplified the reorganization needed to facilitate the new change mechanism. Community members inform the reorganization of local assets to facilitate change aimed at rebuilding food sovereignty.

3. Reskill – In support of the newly organized actions and in support of new systems, reskilling individuals is critical. Skills are selected to match the needs of the new system and based on the assets within the community. In this study, the desire to create local capacity to continually create land-use, maps as well as to distribute blueberries, required the reskilling of interested individuals to meet the needs of the new system. Reskilling individuals with a vested interest supports the broader goal of rebuilding sovereignty by empowering those most affected by the system.
4. Restore – In order to bring back the state of independence and self-reliance, we must strive to restore our roles as sovereign peoples. Restoring the paradigm that support sovereignty before destruction cannot happen in isolation of the role and impact of colonization.

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