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Traditional Knowledge, Sustainable Forest Management, and Ethical Research Involving Aboriginal Peoples: An Aboriginal Scholar's Perspective

Deborah McGregor

In the past, research concerning Aboriginal peoples has usually been initiated outside the Aboriginal community and carried out by non-Aboriginal personnel. Aboriginal peoples have had almost no opportunity to correct misinformation or to change ethnocentric and racist interpretations. Consequently, the existing body of research, which normally provides a reference point for new research, must be open to reassessment.

Royal Commission on Aboriginal Peoples (RCAP) 1993¹

Introduction

Indigenous people represent one of the most researched cultural groups in the world. The methods utilized for “studying” Aboriginal people over time have often contributed to their ongoing colonization. The underlying epistemologies, paradigms, approaches, and methods for such research remain problematic in terms of both the outcomes of the research and its treatment of Aboriginal people in the process.² As Aboriginal people begin to exert more and more control over the events that affect them, and as their desire to have their interests advanced through scholarly work increases, researchers are pushed towards altering their research relationships with Aboriginal peoples.³ Not only is there a movement to decolonize research approaches, but there is an equally important movement to advance Indigenous approaches and methods of research.⁴

There has been a broader shift in relationships between Aboriginal and non-Aboriginal peoples and institutions that has played a significant role in decolonizing research relationships. These broader Aboriginal/non-Aboriginal relationships have been shaped by Supreme Court of Canada decisions favouring the recognition of Aboriginal and treaty rights and the assertion of Aboriginal peoples’

right to self-determination.⁵ An important aspect of asserting self-determination is assuming greater control over research agendas.⁶

Research involving Aboriginal peoples in the forestry sector⁷ has begun to respond to this paradigm shift. This is in part due to the increase in Aboriginal involvement in the forestry sector over the past thirty years.⁸ For most of this period, a critical proponent and voice of Aboriginal involvement in forestry sector research has been the National Aboriginal Forestry Association (NAFA).⁹ NAFA has conducted research itself and been involved in numerous research projects with governments, academics, and industry. This association therefore has a wealth of experience to draw upon as the forestry sector tries to adapt to rapidly changing expectations with regard to the conduct of research involving Aboriginal peoples.¹⁰

This paper will provide a preliminary evaluation of how forestry-related research involving Aboriginal peoples has responded to the overall paradigm shift in Aboriginal research in Canada. The author will draw upon her own experience in this area as an Indigenous scholar in forestry. In so doing, discussion will range from a focus on shifting research paradigms, to involving Aboriginal traditional knowledge in resource management, to a more specific look at Aboriginal research in the forestry sector. Finally, recommendations for future direction based on the findings of the Royal Commission on Aboriginal Peoples (RCAP) and a “co-existence model” will be highlighted.

Context: The Paradigm Shift in Research Involving Aboriginal Peoples

Since Maori scholar Linda Smith’s book *Decolonizing Methodologies* was published a decade ago, Canada (along with many countries around the world) has seen a remarkable emergence of Indigenous research scholarship.¹¹ This research is closely linked to international initiatives such as the *UN Declaration on the Rights of Indigenous Peoples*, as Indigenous peoples face many similar challenges all over the world.¹² The groundbreaking work by Indigenous scholars around the world has created a community of scholars locally, nationally, and internationally who share research ideologies, theories, approaches, and methods.¹³ In Canada, Indigenous research paradigms are informed by a number of principles and values that seek to decolonize past and current research approaches. Such research paradigms have become more clearly articulated among Aboriginal organizations, Indigenous scholars, funding agencies, and non-Indigenous scholars alike.

The Royal Commission on Aboriginal Peoples also served as a catalyst for advocating a different research approach. RCAP, which released its final report in several volumes in 1996, called for research to be conducted in an “integrated, holistic” manner, rather than one fragmented along the lines of conventional academic disciplines.¹⁴ In living up to its own standards, RCAP ensured that during the fulfillment of its mandate, “appropriate respect [was] given to

the cultures, languages, knowledge and values of Aboriginal peoples, and to the standards used by Aboriginal peoples to legitimate knowledge.”¹⁵ RCAP also recognized and accommodated distinct groups involved in and affected by the research (e.g., women, northern residents, Inuit, Métis, First Nations people, youth, elders, etc.).¹⁶ Key aspects of RCAP’s approach included stipulations that the research must:¹⁷

- Be credible to Aboriginal peoples
- Include in its objectives a balance between “description of problems [and] discussion of solutions”
- Involve the participation of as many community-based people as possible
- Recognize the rapid changes that many Aboriginal communities are undergoing, often involving movement between traditional and Western colonial systems of organization

The terms of reference created by RCAP’s research advisory committee acknowledged the importance of the following:

- The broader context, including the “history of relations between Aboriginal peoples, the Canadian government and Canadian society as a whole.” In understanding the past, suggestions regarding reconciliation between Aboriginal peoples and Canadian society are possible.
- Recognition of Aboriginal self-government, not just in Canadian government-directed self-government initiatives, but in traditional government as well.¹⁸

The research agenda set by RCAP provided an important foundation from which many scholars, Aboriginal organizations, and funding agencies advanced an Indigenous research paradigm in Canada. Furthermore, many Canadian scholars involved in research with Aboriginal peoples conducted much of the background research for RCAP’s deliberations. This exercise alone, spanning five years, initiated a transformation in research involving Aboriginal peoples. In 2002, the Social Science and Humanities Council of Canada (SSHRC) (a federally funded research agency) undertook extensive consultations and developed a program specifically designed to advance Aboriginal research.¹⁹ A background report prepared by Craig McNaughton and Darrell Rock, *Opportunities in Aboriginal Research: Results of SSHRC’s Dialogue on Research and Aboriginal Peoples*, summarized findings from the consultations and found that a transformation in Aboriginal research was required; a paradigm shift was needed that called for research conducted *by and with* Aboriginal peoples, as opposed to research *for and on* Aboriginal peoples.²⁰ This research approach was institutionalized through SSHRC’s strategic grants program from 2004 to 2008.

In 2007, the Canadian Institute of Health Research (CIHR) finalized guidelines for health research involving Aboriginal peoples after several years of intensive consultation with scholars and Aboriginal agencies involved in health research.²¹ The Interagency Advisory Panel on Research Ethics is currently updating the

Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS), originally adopted in 1998. The policy is undergoing public consultations and a revised chapter, “Research Involving Aboriginal Peoples,” is under review.²² The revised chapter represents a dramatic improvement and provides considerable guidance to researchers, universities, and granting agencies for ethical considerations regarding research involving Aboriginal peoples. Marlene Brant Castellano, professor emerita and Indigenous scholar (Trent University), serves on the panel and has urged that it recognize “that Aboriginal or Indigenous traditions have much to contribute to our understanding of ethics.” The language Aboriginal peoples use to describe ethics may differ from official policy documents and instead refer to “spiritual responsibilities to maintain the right relationships.”²³ Castellano reflects upon the words of Elder Courchene as they apply to relationships between researchers and Aboriginal participants as follows:²⁴

- **Kindness** implies respect for the dignity of the others involved, not dominating or pressing our own agenda at the others’ expense.
- **Honesty** involves communicating our principles and intentions as the basis for relationships and ensuring free, informed consent for actions taken.
- **Sharing** recognizes that the common good requires give and take by all, with respect for the different gifts that each party brings.
- **Strength** is courage to stand firm for our principles; in some cases strength is resilience, as in the capacity to bend to circumstance while holding on to important values.

Brant Castellano adds,

Together, these virtues balance one another to maintain respect for self and others. All parties to a relationship are responsible for maintaining this ethical balance. While words to describe relationships differ, it is possible to see the harmony between the ethics of “respect for human dignity” endorsed by researchers and the ethics of “right relationships” embodied in First Nation, Inuit and Métis traditional teachings.²⁵

Research funding agencies and institutions are now beginning to recognize the important contributions that Aboriginal philosophical and ethical principles can make. Such insights and sharing of knowledge will provide much clearer direction for all parties involved. There have been significant efforts towards establishing ethical guidelines for conducting research involving Aboriginal people.²⁶ While none of these documents is without room for improvement or is able to provide a “one-size-fits-all” solution, each offers some crucial points that must be considered when working towards respectful research relationships with Aboriginal peoples.

Aboriginal Research Paradigms in Canada: Current Trends

Indigenous and non-Indigenous scholars committed to a paradigm of Aboriginal research²⁷ have advocated respect for traditional knowledges²⁸ and its careful consideration in research. Another important aspect of the Aboriginal research paradigm constitutes the high ethical standards expected of researchers and as part of the research relationship.

The establishment of Aboriginal-related journals reflects the increased interest and activity in Indigenous research, teaching, and community work. *Pimatisiwin*, published out of the University of Alberta since 2003, is an example of a recently established journal utilizing both academic and community peer reviewers to ground its scholarship. The National Aboriginal Health Organization's *Journal of Aboriginal Health*, established in 2004, is another excellent example. Such journals expand the scope of what constitutes "research" and recognize that traditional knowledges form a key aspect of sharing knowledge and research. Both journals encourage submissions from community-based researchers. This is an important way to challenge the view that universities are the only sites of Indigenous scholarship and research.

There is also an increase in the number of Aboriginal organizations that have incorporated research as a key component of their organizational mandate and objectives. For example, the National Aboriginal Health Organization (NAHO) has published influential research reports/tool kits that have found currency in mainstream research agencies' vocabulary. Most notable are NAHO's OCAP principles.²⁹ NAHO has also published research tool kits such as *Considerations and Templates for Ethical Research Practices* (2007) that embody the OCAP principles, and which include data-sharing protocols, collaborative research agreements templates, and codes of research ethics. These policies, guidelines, and tool kits all address traditional knowledge (TK) and the protection of such knowledge. Some Aboriginal organizations have developed specific policies to protect TK. For example, NAHO has also published a tool kit for traditional knowledge called *Sacred Ways of Life: Traditional Knowledge* (2005) with guidance provided for governance and setting policies to protect knowledge.³⁰ Regional Aboriginal organizations are also developing specific TK policies and guidelines. For example, the Gwich'in Renewal Resources Board created a document titled *Working with Sgwich'in Traditional Knowledge in the Gwich'in Settlement Region* (2004) and the Council of Yukon First Nations' produced *Traditional Knowledge Research Guidelines* (2000).³¹

With such developments in Indigenous research occurring in Canada, how has the field of environmental and natural resource management responded? How have Indigenous research paradigms influenced the field of natural resource management, particularly sustainable forest management planning, in Canada?

Traditional Knowledge and Environmental Management in Canada

Consideration of TK in environmental decision making in Canada has been gaining momentum for over two decades.³² Support for TK in sustainable development, including conservation efforts as well as environmental and natural resource management, has been part of international efforts as well. Key meetings of world political leaders, such as the World Commission on Environment and Development (1987) and the United Nations Conference on Environment and Development (1992), have stated that Indigenous peoples must be supported in their efforts to re-establish healthy, land-based communities, because the knowledge inherent in these communities potentially holds a great many answers to current ecological problems.³³ At the United Nations Conference on Environment and Development in 1992, the *Convention on Biodiversity* (CBD) was signed. The CBD is an international accord signed by a majority of the world's governments, including Canada, and sets out commitments for maintaining the planet's ecosystems. The CBD reiterated the important role of Indigenous people and their knowledge in achieving sustainable environmental and resource management. The CBD has had significant influence in terms of the inclusion of TK in environmental and resource management in Canada since 1992.³⁴

Agreements such as the CBD have contributed to increased recognition of Aboriginal people and their knowledge, roles, and rights with respect to environmental and resource management in Canada. The Government of Canada, as a signatory to the CBD with commitments to Aboriginal people and their knowledge, is motivated to formally include TK in environmental legislative and policy frameworks. As such, the Government of Canada has formally recognized the value of TK in the development and implementation of federal policy and legislative frameworks by referring to TK in the *Canadian Environmental Protection Act (CEPA)*, *Species At Risk Act (SARA)*, and *Canadian Environmental Assessment Act (CEAA)*. This interest in including TK in government decision making is not limited to such formal frameworks, but also extends to other policy frameworks such as those involving forestry and parks management.³⁵ TK in environmental and resource management has thus emerged as a field of study, complete with theory, research approaches, models, and applications.³⁶

In spite of rapid development and burgeoning areas of research, the state of TK research and application remains largely unsatisfactory.³⁷ Aboriginal peoples in Canada have been at the forefront of stating that TK should be an integral part of environmental governance and resource management decisions (with the precaution that it be understood that "traditional ecological knowledge is not another frontier for science to discover"³⁸). Thus far, while TK is receiving increasing recognition, there has not been widespread acceptance of TK and its consideration into environmental and resource management regimes. Nonetheless, interest in TK and resource management remains strong. The research continues to evolve

in response to demands by Aboriginal people for greater control over projects that occur in their communities and territories.

In forestry, the NAFA has played a key role in asserting the importance of forest-based TK in policy, research, and applications. NAFA was instrumental in ensuring TK formed an important part of national forest policies and strategies. Furthermore, NAFA has conducted its own research in relation to TK and forest management. At least two important NAFA papers have addressed the issue of the incorporation of Aboriginal TK in forest management planning in Canada. NAFA's *Aboriginal Forest-Based Ecological Knowledge in Canada*³⁹ report found that despite substantial interest in Canada regarding Aboriginal knowledge, little was being done in terms of ground-level changes. Incorporating Aboriginal knowledge remains largely at the documentation stage; a minimal amount of meaningful application has yet been achieved. In 1998, NAFA was commissioned by the Canadian Forest Service to produce another report, *Aboriginal Forest-Related Traditional Ecological Knowledge in Canada*, on the state of TK in Canada. The focus of this effort was to identify and describe mechanisms for the incorporation of TK into forest management planning in Canada. National in scope, the report's findings were similar to those of the 1996 effort. Aboriginal knowledge had not yet been applied on any meaningful scale and existing mechanisms for doing so provided little opportunity for improving this situation.⁴⁰

Over the past decade there has been more research relating to Aboriginal peoples, forestry, and TK, in part due to the establishment of the Sustainable Forest Management Network (SFMN) in 1995, which established sustainable Aboriginal communities (SAC) as a priority research area. However, the network will cease to be later this year, and with it will disappear Canada's primary centre of forestry-related research involving Aboriginal peoples. Over its fourteen-year existence, the SFMN managed to address TK issues in numerous projects. Such work is aptly summarized in Marc Stevenson's *Traditional Knowledge and Sustainable Forest Management*,⁴¹ which outlines the constraints and barriers that the incorporation of TK is faced with in environmental and resource management. Stevenson argues that the barriers are institutional, systemic, and structural, and therefore TK application has not realized its potential. Even with focused effort such as that offered by the SFMN's Aboriginal program focus, TK in forest management has failed to produce its much-anticipated results. While there are noteworthy exceptions, including research supported by the SFMN involving Pikangikum First Nation,⁴² such examples have not been the norm.

Aboriginal forest-related research will further evolve as the broader context for research continues to find expression in formal policies, guidelines, and protocols. Researchers will be expected by funding and Aboriginal agencies, organizations, and communities alike to respect Indigenous theories, paradigms, and approaches to research. This overall trend has slowly begun to permeate forest-related research, although it has not been formalized. The next section will highlight

necessary steps to bring researchers in the forest-related area in step with current broader initiatives in Aboriginal research in Canada.

Asserting an Aboriginal Forestry Research Paradigm: One Aboriginal Researcher's Experience

A decade ago, when I was writing my doctoral thesis, there was very little published literature upon which to draw in developing research frameworks and methods for forestry research relating to Aboriginal people. It was my intention at that time to root my work in Indigenous world view, my own experience, and those of my cultural traditions, but I found overall Indigenous theoretical frameworks to be non-existent in the forestry literature. I therefore decided to ground my work in the Aboriginal research frameworks described in the research plan and ethical guidelines set out by RCAP. A decade later, there is considerably more work accessible to researchers in Aboriginal forestry, yet there is still a relative absence of, specifically, Indigenous theory, approaches, and methods.⁴³

It seems environmental and natural resource management (ENRM)⁴⁴ could learn much from other disciplines, such as education and health, and from the needs and aspirations articulated by Aboriginal organizations, agencies, and communities. I recently reviewed the literature in Canada relating to Aboriginal peoples, TK, and forestry, and while indeed there is more research than there was a decade ago, this work generally does not draw on Indigenous theory, research paradigms, or methods in the same way as is occurring in other areas. (There are notable exceptions, such as the Whitefeather Forest Initiative and SSHRC/CURA⁴⁵ funded *Evolving Co-management Practice: Community Based Environmental Monitoring with Tl'aste'n Nation on the John Prince Research Forest*.) I would argue that health, education, law, and political science are far ahead of ENRM in terms of engaging Aboriginal peoples in research and drawing on Indigenous traditions to frame the research, as well as set the research agenda. There may well be reasons for this, such as Aboriginal health, education, and law all having their own journals in which issues relating to respectful and ethical research approaches/methods can be shared, debated, and discussed.⁴⁶ These research areas also have well-established and respected Indigenous scholars who exert considerable influence on their fields in relation to Aboriginal peoples.

Many of the sciences have been slower to take up the project of decolonizing their disciplines. To effectively decolonize such firmly entrenched areas of study, there needs to be active engagement in Aboriginal scholarship and with Indigenous scholars. The current lack of engagement is evident in the forestry-related published literature, where only a tiny number of Indigenous scholars are to be found. Even in the community-based, collaborative work conducted by some researchers in the forestry sector, there is little engagement with Indigenous scholarship. Few if any references are made to the canons of Indigenous thinkers who theoretically frame ENRM issues from Indigenous perspectives, such as the

late Vine Deloria Jr., Gregory Cajete, Marie Battiste and Sa'ke'j Henderson, John Borrows, Dale Turner, or Taiake Alfred.⁴⁷ The research orientation in forestry remains characterized by research *on* Aboriginal communities rather than *with and by* Aboriginal peoples.

The value of linking with Indigenous scholarship and scholars is undeniable for the decolonizing process in forestry. Aboriginal studies in Canada (also referred to as Native or Indigenous studies) is constantly evolving in response to the needs of Aboriginal communities. Furthermore, as Indigenous scholars begin to occupy leadership positions in academia while retaining their ties to their communities, we will begin to see more rapid and positive changes. Respect for traditional knowledge and Aboriginal languages is a core aspect of Aboriginal research. Aboriginal people need to be recognized for their role in knowledge production, not just as research participants, but also for their intellectual contributions for which others often take credit (by documenting and then publishing TK-related information). TK originates from within Aboriginal communities and it is not possible to conduct appropriate TK research without the meaningful involvement of these communities.⁴⁸ Aboriginal peoples need to retain control over traditional knowledge production and transmission.⁴⁹

The current Aboriginal research paradigm asserts that research must occur with the meaningful involvement of Aboriginal people, ideally utilizing Aboriginal research theories, approaches, and methods (or at the very least respecting them). Although in this paper I am focusing on forestry, this is not by any means the only discipline that requires decolonizing from an Aboriginal perspective. For example, the discipline of geography has also acknowledged its role in the dispossession of Aboriginal peoples from their lands and territories and is also embarking on processes to decolonize.⁵⁰ Decolonizing research calls for all disciplines to examine their own historical and current relationships with Aboriginal peoples and seek ways to move toward a relationship of mutual respect and reconciliation.

Toward a Paradigm of “Aboriginal Research” in the Forestry Sector

As noted earlier, there is a lack of discussion/acknowledgment of Indigenous theories and concepts in forestry research in Canada. While there are genuine attempts to incorporate Indigenous perspectives into the body of knowledge in forestry, these are not framed from an Indigenous theoretical or epistemological standpoint. Instead, Indigenous perspectives are described according to other theoretical frameworks, most often seemingly anthropological in nature. To aid a move toward the vision articulated in various Aboriginal research endeavours in Canada, i.e., that of self-determination in research,⁵¹ I offer the following suggestions:

Increase the number of graduate-level Aboriginal researchers in forestry. There is a lack of Aboriginal researchers who can bring Indigenous theories,

perspectives, knowledges, values, and ideas to forest-related research based on their own cultural traditions, communities, and experiences. Without Indigenous scholars to mediate, facilitate, and lead forest-related Aboriginal research, the burden will continue to fall on Aboriginal communities or community-based researchers who may lack the institutional capacity to conduct research on their own terms. Indigenous scholars, on the other hand, often remain fairly well-connected to Aboriginal communities, yet can facilitate engagement with forestry researchers from outside the communities. Indigenous scholars will both attract Indigenous students and assist in training non-Indigenous students in appropriate research approaches and methods regarding Aboriginal peoples. This movement is especially important because Aboriginal peoples in Canada are steadily gaining increased control over lands and territories through comprehensive land claims agreements, as well as self-government and other institutional arrangements, and increased Aboriginal research capacity will be required to ensure smooth transitions to these new governance systems.

Partner with Aboriginal organizations, agencies, and communities in research. Aboriginal organizations such as NAFA have a wealth of experience and expertise to share with governments, scholars, universities, and other institutions. Such organizations, however, require support in order to engage in research in a meaningful fashion. The training of community-based researchers and providing appropriate support forms an important part of building research capacity in Aboriginal organizations and communities.

Support Indigenous scholarship in forestry research. Some barriers are ideological and epistemological. For example, what is considered scholarship? What counts as knowledge? What counts as research? What requirements need to be met to qualify for research funding? Other research areas and disciplines are breaking down these barriers (health, geography, law, etc.) and some funding agencies are becoming more open to Aboriginal research paradigms (e.g., SSHRC Aboriginal program).

Increase support from non-Aboriginal researchers (and their institutions) in forestry. We need allies, people who are willing to support *Aboriginal research in forestry* as opposed to simply *forestry research on Aboriginal people*. There are already allies, but we need more explicit support through research partnerships and openness to new theories and methodologies. We need courageous partners who are willing to let go of their own biases and accept Aboriginal research on its own terms.

Continue to work on decolonizing research approaches and methods. Forestry as a discipline needs to address the task of decolonizing itself (as other disciplines have done or are in the process of doing). This requires respectful engagement with Aboriginal scholars and Aboriginal agencies, organizations, governments, communities, and peoples. This is a necessary step in transforming the nature of research relationships with Aboriginal peoples.

Accept greater accountability to Aboriginal communities involved in research. All researchers need to take the issue of accountability to Aboriginal peoples and communities in research seriously. Researchers have to be accountable for their work, and this is more than simply “reporting back” to communities on the results of the research. Specifically, it involves taking responsibility for outcomes. Indigenous researchers are often held accountable to Aboriginal communities through personal relationships including family, clan, community, etc. These kinds of accountabilities, however, are not often considered in current non-Aboriginal research processes (even where research agreements exist).

Practice reciprocity. The ethic of reciprocity is an oft-studied concept in Aboriginal forest-related research, but one that is not often acted upon during the research process itself. This is more than a discussion of the “benefits” of research for Aboriginal communities; it includes ideas about how knowledge is shared, the conditions by which it is shared, what knowledge is shared, and why it is shared. I have reviewed many research papers about what Aboriginal people have said (reported), but I rarely see anything about what Aboriginal people have learned or gained from the whole research process. In other words, I do not detect Indigenous “voice” in the forestry-related scholarship. Similarly, I have seen plenty of reports, papers, and maps summarizing information Aboriginal peoples already possess through direct relationships to the land and environment. But what of the researchers’ knowledge has been shared with the community? Research relationships must be based on reciprocity, with the knowledge that the research would not be possible without Aboriginal peoples.

Ensure accessibility. Researchers (whether academic or community-based) have to ensure that the research is accessible to communities so it can actually be used, with or without the assistance of the researchers. Many researchers are tasked with writing for other scholars as part of their institutional responsibilities. However, research also needs to be accessible to the participating community. This includes not just the results, but the data itself, as outlined in the OCAP principles. Academic writing on its own is often not accessible to community people who nevertheless may wish to access this work for their own goals/purposes. Resolutions to this issue must be negotiated with the community, and may involve presenting the information in various forms.

Make time for reflection. Needless to say, no research process is perfect. Reflection is an important part of the Aboriginal research process and sharing one’s insights with others will help everyone learn.

Focus on relationships and responsibilities. The current trajectory of formalizing Aboriginal research processes does pose some risks. One such risk is the loss of the most important aspect of the process—the relationships. The current trend toward promoting research agreements as instruments for negotiating and managing research relationships is sound on many fronts. However, they are *not* a replacement for the intense work required to maintain respectful and mutually beneficial relationships in research.

One of the primary goals of Aboriginal research in any area, including ENRM, is to develop respectful, mutually beneficial, and reciprocal relationships with the communities we serve (all of us, not just Aboriginal researchers). If we work on building, maintaining, and enhancing these relationships, we become part of the community. We continue to engage and work with the communities we serve whether we are engaging in research or not. Research agreements tend to be needed when these types of relationships do not exist and it becomes necessary to make the establishment of such relationships explicit. I would rather see researchers focus their efforts on building and maintaining constructive and respectful relationships with communities as a matter of course, so that when research is needed, you already have a relationship built on trust and reciprocity. Research just becomes one aspect of a relationship, rather than the only reason for the relationship. This then becomes part of the responsibility of a researcher: you are also responsible for cultivating and maintaining the relationship itself.

Such relationships can be especially critical when dealing with TK. Due frequently to unfortunate past experiences in dealing with outside agencies, Aboriginal peoples are sometimes reluctant to share their TK. While they may recognize the potential benefits of sharing such knowledge, they also know all too well the risks of cultural exploitation. It is therefore imperative that a level of trust be established and maintained between Aboriginal communities and outside organizations so that TK is not only shared but is treated and applied with dignity and respect. This can only occur through increased communication at all levels and a concerted effort at relationship building.

Nation-to-Nation Research Relationships: RCAP and the Co-Existence Model

In Canada we now have over two decades of experience to draw upon from which to begin exploring alternative models of respectfully and ethically considering Aboriginal people and TK in ENRM. Some models for collaboration are not new, but have been operating for hundreds of years. I believe the most interesting of such concepts raised in RCAP's presentation of research ethics is that of "the necessity of parallel development," as described by Brant Castellano and Hawkes.⁵² Referring to ideas behind the two-row wampum, Brant Castellano and Hawkes acknowledge that there is an unequal power relationship between Aboriginal and non-Aboriginal people in Canada. This compounds the problem of maintaining authentic Aboriginal voice. Research projects that simply try to "indigenize" dominant, non-Aboriginal institutions are seen as failures. Other models need to be explored. Brant Castellano and Hawkes suggest that a parallel process, or co-existence, is required. Brant Castellano and Hawkes⁵³ describe this process as "intercultural convergence and cohabitation." The two-row wampum enables two systems to exist that are independent, but linked by virtue of the task at hand. In the parallel system, authentic voice and representation can be asserted.

In this model, opportunities should be created such that Aboriginal initiatives can be developed and implemented *alongside* or *in parallel* to Western science-based projects. Instead of competing with one another, or having one dominate the other, the two systems can benefit from a mutual exchange of information and a sharing of lessons learned. This model has been taken up by different scholars and Aboriginal peoples, including James Ransom, as part of his work with the Haudenosaunee Environmental Task Force;⁵⁴ Marc Stevenson, as part of his work in the SFMN; and myself, as part of ENRM work in forestry and State of the Great Lakes Ecosystem Conference research.⁵⁵

Certainly, there are other theoretical approaches to addressing research and I would encourage exploring such approaches so scholars and Aboriginal communities have options from which to make informed choices. The points above are not exhaustive; there are lessons to learn from broader initiatives that continue to shape Aboriginal research in Canada. However, I believe the suggestions listed above will help create an Aboriginal forestry paradigm.

Endnotes

- 1 Royal Commission on Aboriginal Peoples (RCAP). 1993. Integrated Research Plan. Minister of Supply and Services Canada, Ottawa, p. 37.
- 2 See L. Smith, *Decolonizing Methodologies: Research and Indigenous Peoples* (New York: Zed Books, 1999); R. Pelletier Sinclair, "Indigenous Research in Social Work: The Challenge of Operationalizing Worldview," *Native Social Work Journal* 5 (2003): 117–35.
- 3 See M. Brant Castellano, "Ethics of Aboriginal Research," *Journal of Aboriginal Health* (2004): 98–114.
- 4 See E. Steinhauer, "Thoughts on Indigenous Methodology," *Canadian Journal of Native Studies* 26(2) (1999): 69–81; C. Weber-Pillwax, "Coming to An Understanding: A Panel Presentation: What Is Indigenous Research," *Canadian Journal of Native Education* 25(2) (2001): 166–177; C. Weber-Pillwax, "Indigenous Research Methodology: Exploratory Discussions of an Elusive Subject," *Journal of Environmental Thought* 33(1) (1999): 31–45.
- 5 See P. Doyle-Bedwell and F. Cohen, "Aboriginal Peoples in Canada: Their Role in Shaping Environmental Trends in the Twenty-first Century," in *Governing the Environment: Persistent Challenges: Uncertain Innovations*, ed. E. Parsons (Toronto: University of Toronto Press, 2001), 169–206; J. Wilson and J. Graham, "Relationships between First Nations and Forest Industry: the Legal and Policy Context," a report for the National Aboriginal Forestry Association, Forest Products Association of Canada, First Nations Forestry Program. (Ottawa: Institute on Governance, 2005), 87 pages.
- 6 See B. Schnarch. *Ownership, Control, Access and Possession (OCAP) of Self Determination Applied to Research: A Critical Analysis of Contemporary First Nations Research and Some Options for First Nations Communities* (Ottawa: First Nations Centre, National Aboriginal Health Organization, 2004), 37 pages.
- 7 By "forestry sector" I am referring to research involving Aboriginal peoples that may include forest policy, governance, planning, research, economic development, non-timber forest products, etc.
- 8 See the following articles for an overview of the Aboriginal involvement in the forestry sector over the past three decades. S. Wyatt, "First Nations, Forest Lands, and 'Aboriginal' Forestry in Canada; from Exclusion to Co-Management and Beyond," *Canadian Journal of Forest Research* 38 (2007): 171–180; C. Hickey and M. Nelson, "Partnerships Between First Nations and the Forest Sector: A National Survey," Sustainable Forest Management Network, Edmonton, Alberta, 30 pages.
- 9 In 1989, the National Aboriginal Forestry Association (NAFA) was created specifically to address this issue of Aboriginal exclusion from forestry. One of NAFA's main objectives is to increase the participation of Aboriginal people in forestry. See InfoLink Consultants Inc., *Native Forestry: Ethic to Reality*, proceedings of a conference held at the Vancouver Trade and Convention Centre, November 22–24, 1989 (Kelowna: Regatta Press, 1989) for background context for the establishment of NAFA. Claudia Notzke also provides an account of the formation of NAFA in C. Notzke, *Aboriginal Peoples and Natural Resources in Canada* Toronto: Captus Press, York University, 1994).
- 10 Please see the National Aboriginal Forestry Association website <<http://nafeforestry.org/publications/>> for list of publications.
- 11 See the following for excellent examples of the discourse on Indigenous research scholarship. L. Cardinal, "What is an Indigenous Perspective?" *Canadian Journal of Native Education* 25(2) (2001): 180–182; C. Menzies, "Reflections on Research With, for, and Among Aboriginal People," *Canadian Journal of Native Education* 25(1) (2001): 19–36; P. O'Riley, "Shapeshifting Research with Aboriginal Peoples: Toward Self-Determination," *Native Studies Review* 12(2) (2004): 83–102; R. Pelletier Sinclair, "Indigenous Research in Social Work: The Challenge of Operationalizing Worldview," *Native Social Work Journal* 5 (2003): 117–135; E. Steinhauer, "Thoughts on Indigenous Methodology," *Canadian Journal of Native Studies* 26(2) (1999): 69–81; C. Weber-Pillwax, "Coming to An Understanding: A Panel Presentation: What Is Indigenous Research," *Canadian Journal of Native Education* 25(2) (2001): 166–177; C. Weber-Pillwax, "Indigenous Research Methodology: Exploratory Discussions of an Elusive Subject," *Journal of Environ-*

- mental Thought* 33(1) (1999): 31–45; S. Wilson, “Self-As-Relationship in Indigenous Research,” *Canadian Journal of Native Education* 25(2) (2001): 91–92; S. Wilson, “What is an Indigenous research methodology?” *Canadian Journal of Native Education* 25 (2001): 175–179; S. Wilson, “Toward an Indigenous Research Paradigm in Canada and Australia,” *Canadian Journal of Native Education* 27(2) (2003): 161–178; J. Archibald, *Indigenous Storywork: Educating the Heart, Mind, Body and Spirit* (Vancouver: UBC Press, 2008).
- 12 United Nations General Assembly, “United Nations Declaration on the Rights of Indigenous Peoples,” 2007. <www.un.org> (accessed April 23, 2008).
 - 13 See S. Wilson, *Research is Ceremony: Indigenous Research Methods* (Halifax: Fernwood Publishing, 2008).
 - 14 RCAP, “Integrated Research Plan,” 1.
 - 15 RCAP, “Integrated Research Plan,” 37.
 - 16 RCAP’s influence has not waned—the Aboriginal Policy and Research Conference 2009 clearly laid out questions relating to similar issues, including OCAP (Ownership, Control, Access, and Protection) and ethical standards for research and the role of traditional knowledge in relation to Western-based scientific knowledge differences for First Nations, Métis, and Inuit peoples and contexts. Aboriginal Policy and Research Conference Program (www.aprc.crmpa.ca) 2–3.
 - 17 RCAP, “Integrated Research Plan,” 38–39.
 - 18 RCAP, “Integrated Research Plan,” 37.
 - 19 See C. McNaughton and D. Rock, “Opportunities in Aboriginal Research: Results of SSHRC’s Dialogue on Research and Aboriginal Peoples,” *Native Studies Review* 12(2) (2004): 37–60.
 - 20 See C. McNaughton and D. Rock, “Opportunities in Aboriginal Research: Results of SSHRC’s Dialogue on Research and Aboriginal Peoples,” Social Science and Humanities Council of Canada (2003): 38 pages.
 - 21 See Canadian Institute of Health Research (CIHR), *CIER Guidelines for Health Research Involving Aboriginal People* (Ottawa: Her Majesty The Queen Right of Canada) <www.cihr-irsc.gc.ca> 43 pages.
 - 22 Please refer to the Interagency Panel on Research Ethics website for the draft policy. Chapter 9, “Research Involving Aboriginal Peoples,” shows a dramatic improvement from the previous policy. <<http://pre.ethics.gc.ca/eng/policy-politique/initiatives/draft-preliminaire/chapter9-chapitre9/#toc09-1>>
 - 23 See Brant Castellano’s reflections on the work of the Interagency Panel on Research Ethics “Aboriginal Ethics Guide Ethical Research,” p. 1 <<http://www.heretohelp.bc.ca/publications/aboriginal-people/alt/2/>>.
 - 24 Brant Castellano, “Aboriginal Ethics Guide Ethical Research.”
 - 25 Brant Castellano, “Aboriginal Ethics Guide Ethical Research.”
 - 26 Some examples include: University of Victoria’s “Protocols and Principles for Conducting Research in an Indigenous Context,” (University of Victoria, Faculty of Human and Social Development, February 2003) <<http://web.uvic.ca/igov/uploads/pdf/protocol.pdf>>; Prairie Women’s Health Centre of Excellence, “Ethical Guidelines for Aboriginal Women’s Health Research,” (Winnipeg: Saskatoon Aboriginal Women’s Health Research Committee, 2004); Nuu-chah-nuth Tribal Council, “Protocols and Principles for Conducting Research in a Nuu-chah-Nulth Context,” (Nuu-chah-nuth Tribal Council, Research Ethics Committee, 2008) <<http://www.nearbc.ca/documents/2009/aboriginal/NTC%20Protocols%20and%20principles.pdf>>; Mi’kmaq Ethics Committee, “Mi’kmaq Research Principles and Protocols,” (Sydney: Mi’kmaq College Institute. Cape Breton University) <www.mrc.uccb.ns.ca>; S. Brascoupe and H. Mann. “A Community Guide to Protecting Indigenous Knowledge,” (Ottawa: Indian and Northern Affairs Canada/Minister of Public Works and Government Services, 2001).
 - 27 It is important to note that there is no single Aboriginal research paradigm in Canada, although a number of principles, values, and characteristics are shared. Aboriginal peoples are diverse in terms of governance, culture, language, and traditions and research paradigms must reflect this diversity.
 - 28 Traditional knowledge is a term used to refer to the knowledges that have sustained Indigen-

- ous peoples since time immemorial in their communities and territories. Other terms include Indigenous knowledge, cultural knowledge, elders knowledge, traditional ecological knowledge, or naturalized knowledge systems. It is important that each Indigenous nation or group define their knowledge in their own way using their own language.
- 29 B. Schnarch, "Ownership, Control, Access, and Possession (OCAP) of Self Determination Applied to Research."
 - 30 See First Nations Centre, "Considerations and Templates for Ethical Research Practices," (Ottawa: National Aboriginal Health Organization, 2007), 37 pages <www.naho.ca>; and C. Crowshoe, "Sacred Ways of Life: Traditional Knowledge," prepared for the First Nations Centre. National Aboriginal Health Organization (2005), 30 pages.
 - 31 Council of Yukon First Nations, "Traditional Knowledge Research Guidelines: A Guide for Researchers in the Yukon," The Council of Yukon First Nations (2000), 37 pages.
 - 32 See the following for an overview of the value of TK in environmental and resource management from a variety of perspectives: L. Clarkson, V. Morrisette, and G. Regallet, "Our Responsibility to the Seventh Generation: Indigenous Peoples and Sustainable Development," (Winnipeg: International Institute for Sustainable Development, 1992); M. Johnson, ed., "Lore: Capturing Traditional Environmental Knowledge," Ottawa: Dene Cultural Institute and the International Development Research Centre, 1992); L. Grenier, "Working with Indigenous Knowledge: A Guide for Researchers," (Ottawa: International Development Research Centre, 1998); D. McGregor, "Coming Full Circle: Indigenous Knowledge, Environment and Our Future," *American Indian Quarterly* (2004): 385–410; C. R. Menzies, ed., *Traditional Ecological Knowledge and Natural Resource Management* (Lincoln and London: University of Nebraska Press, 2006); F. Berkes, *Sacred Ecology: Traditional Ecological Knowledge and Resource Management* (Philadelphia: Taylor and Francis, 1999) 209; J. Shackerof and L. Campbell, "Traditional Ecological Knowledge in Conservation Research: Problems and Prospects for their Constructive Engagement," *Conservation and Society* 5(3) (2007): 343–60; N. Houde, "The Six Faces of Traditional Ecological Knowledge: Challenges and Opportunities for Canadian Co-Management Arrangements," *Ecology and Society* 12(2) (2007): 34.
 - 33 See P. Settee, "The Issue of Biodiversity, Intellectual Property Rights, and Indigenous Rights," in *Expressions in Canadian Native Studies*, eds. R. Laliberte, P. Settee, J. Waldram, R. Innes, B. Macdougall, L. McBain, and F. Barron (Saskatoon: University of Saskatchewan Extension Press: 2000), 459–72; G. Smith, "Protecting and Respecting Indigenous Knowledge," in *Reclaiming Indigenous Voice and Vision*, ed. Marie Battiste (Vancouver: UBC Press, 2000), 209–24; C. Higgins, "The Role of Traditional Ecological Knowledge in Managing for Biodiversity," *Forestry Chronicle* 74(3) (1998): 323–26; World Commission on Environment and Development (WCED), *Our Common Future* (Oxford: Oxford University Press: 1987), 454 pages.
 - 34 See National Aboriginal Health Organization (NAHO). *Handbook and Resource Guide to the Convention on Biological Diversity* (Ottawa: NAHO, 2007), 13 <www.naho.org>.
 - 35 See the National Forest Policy for an example of the inclusion of TK in national policy. National Forest Strategy Coalition (NFSC). *National Forest Strategy (2003–2008). A Sustainable Forest: The Canadian Commitment* (Ottawa: NFSC, 2003), 27 pages <http://nfsc.forest.ca>.
 - 36 See Grenier, "Working with Indigenous Knowledge"; D. McGregor, "Traditional Ecological Knowledge: An Anishinabe-Kwe Perspective," *Atlantis Women's Studies Journal* 29(2) (2005): 103–109; Berkes, "Sacred Ecology"; J. Shackerof, and L. Campbell, "Traditional Ecological Knowledge in Conservation Research: Problems and Prospects for their Constructive Engagement"; Houde, "The Six Faces of Traditional Ecological Knowledge: Challenges and Opportunities for Canadian Co-Management Arrangements"; Johnson, "Lore: Capturing Traditional Environmental Knowledge"; J. Inglis, ed. "Traditional Ecological Knowledge: Concepts and Cases." (Ottawa: International Program on Traditional Ecological Knowledge and International Development Research Centre, 1993).
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- Canada: A Critique of Current Theory and Practice,” in *Expressions in Canadian Native Studies*, eds. R. Laliberte, P. Settee, J. Waldram, R. Innes, B. Macdougall, L. McBain, and F. Barron (Saskatoon: University of Saskatchewan Extension Press, 2000), 436–458; M. Stevenson, “The Possibility of Difference: Rethinking Co-management,” *Human Organization* 65(2) (2006) 167–180; P. Nadasdy, “The Politics of TEK: Power and the ‘Integration’ of Knowledge,” *Arctic Anthropology* 36(½) (1999): 1–18; P. Nadasdy, “The Case of the Missing Sheep: Time, Space and the Politics of ‘Trust’ in Co-management Practice,” in *Traditional Ecological Knowledge and Natural Resource Management*, ed. C. Menzies (Lincoln: University of Nebraska Press, 2006), 127–151; L. Simpson, “Anti-colonial Strategies for the Recovery and Maintenance of Indigenous Knowledge,” *American Indian Quarterly* 28(3/4) (2004): 373–84.
- 38 R. Wavay, “International Workshop on Indigenous Knowledge and Community Based Resource Management: Keynote Address,” in *Traditional Ecological Knowledge: Concepts and Cases*, ed. J. Inglis (Ottawa: International Program on Traditional Knowledge and International Development Research Centre, 1993), 16.
- 39 See H. Bombay, “Aboriginal Forest-Based Ecological Knowledge in Canada,” (Ottawa: National Aboriginal Forestry Association, 1996a), 55 pages.
- 40 See D. Brubacher and D. McGregor, “Aboriginal Forest-Related Traditional Ecological Knowledge in Canada,” Contribution for the 19th Session of the North American Forest Commission, Villahermosa, Mexico, November 16–20 (Ottawa: National Aboriginal Forestry Association for the Canadian Forest Service, 1998), 21 pages; and D. McGregor, “From Exclusion to Co-existence: Aboriginal Participation in Ontario Forest Management Planning,” (Toronto: University of Toronto, Faculty of Forestry: 2000).
- 41 See M. Stevenson, “Traditional Knowledge in Sustainable Forest Management,” (Edmonton: Sustainable Forest Management Network, 2005).
- 42 See the following for more detailed descriptions of the collaborative research with Pikangikum First Nation. Pikangikum First Nation and Ontario Ministry of Natural Resources (PFN and OMNR), “Keeping the Land: A Land Use Strategy for the Whitefeather Forest and Adjacent Areas,” (PFN, Pikangikum, and OMNR, Red Lake, 2006); R. O’Flaherty, I. Davidson-Hunt, and M. Manseau, “Indigenous Knowledge and Values in Planning for Sustainable Forestry: Pikangikum First Nation and the Whitefeather Forest Initiative,” *Ecology and Society* 13(1) (2008): 6–16.
- 43 A notable exception is Peggy Smith, Lakehead University, and her work. See P. Smith, “Creating a New Stage for Sustainable Forest Management through Co-management with Aboriginal People in Ontario,” PhD thesis (Toronto: University of Toronto, 2007), 358 pages.
- 44 Environmental and natural resource management (ENRM) includes forestry.
- 45 Social Science and Humanities Research Council (SSHRC)/Community/University Research Alliance (CURA) program supports collaboration between communities and universities.
- 46 Examples include the following: *Indigenous Law Journal* <<http://www.indigenoulawjournal.org/>>. The journal is dedicated to developing dialogue and scholarship in the field of Indigenous legal issues both in Canada and internationally. Submissions are encouraged from all perspectives. Central concerns are Indigenous legal systems and legal systems as they affect Indigenous peoples; *Pimatisiwin: A Journal of Indigenous and Aboriginal Community Health*. The goal of the journal is to promote the sharing of knowledge and research experience between researchers, health professionals, and Aboriginal leaders and community members. The journal provides a forum for this diverse population to publish on research process and findings in a cross-disciplinary, cross-cultural setting. The primary focus is on health and health research in Indigenous communities, broadly defined <<http://www.pimatisiwin.com/>>; and the *Canadian Journal of Native Education* publishes papers relating to Indigenous education.
- 47 T. Alfred, *Peace, Power, Righteousness: An Indigenous Manifesto* (Don Mills: Oxford University Press, 1999a); M. Battiste and J. Henderson, *Protecting Indigenous Knowledge and Heritage: A Global Challenge* (Saskatoon: Purich Publishing, 2000); G. Cajete, *Look to the Mountain: An Ecology of Indigenous Education* (Durango: Kivaki Press, 1994); V. Deloria, *Spirit and Reason: The Vine Deloria, Jr., Reader*. (Golden: Fulcrum Publishing, 1994); V. Deloria, *Red Earth, White Lies: Native Americans and the Myth of Scientific Fact* (New York: Scribner, 1995); J. Borrows, *Recovering Canada: The Resurgence of Indigenous Law*, (Toronto: University of Toronto, 2002);

- D. Turner, *This is Not a Peace Pipe: Towards a Critical Indigenous Philosophy* (Toronto: University of Toronto Press, 2006).
- 48 K. Roberts, "Circumpolar Aboriginal People and Co-Management Practice: Current Issues in Co-Management and Environmental Assessment," Conference proceedings, Arctic Institute of North America and Joint Secretariat-Inuvialuit Renewable Resources Committees. Arctic Institute of North America, University of Calgary, 1996; McGregor, "Coming Full Circle: Indigenous Knowledge, Environment and our Future"; M. Battiste and J. Henderson, "Protecting Indigenous Knowledge and Heritage: A Global Challenge."
- 49 Schnarch, "Ownership, Control, Access and Protection."
- 50 W. Shaw, R. Herman, and R. Dobbs, "Encountering Indigeneity: Re-imagining and Decolonizing Geography," *Geografiska Annaler B.*, Swedish Society for Anthropology and Geography (2006): 267–76; J. Johnson, G. Cant, R. Howitt, and E. Peters, "Creating Anti-colonial Geographies: Embracing Indigenous Peoples' Knowledges and Rights," *Geographical Research* 45(2) (2007): 117–20; R. Louis, "Can You Hear us Now? Voices from the Margin: Using Indigenous Methodologies in Geographic Research," *Geographical Research* 45(2) (2007): 130–39. I have not seen this kind of scholarship in the forestry-related area yet.
- 51 RCAP, "Integrated Research Plan"; Brant Castellano, "Ethics of Aboriginal Research."
- 52 M. Brant Castellano and D. Hawkes, "An Overview of the State of Research in the Field of Aboriginal Affairs. Integrated Research Plan," (Ottawa: Royal Commission on Aboriginal Peoples, 2003), 41–58.
- 53 M. Brant Castellano and D. Hawkes, "An Overview of the State of Research in the Field of Aboriginal Affairs," 45.
- 54 See Haudenosaunee Environmental Task Force, "Words That Come Before All Else: Environmental Philosophies of the Haudenosaunee," (Cornwall: Native North American Travelling College, 1999); R. Ransom and K. Ettenger, "Polishing the Kaswentha: A Haudenosaunee View of Environmental Cooperation," *Environmental Science and Policy* 4 (2001): 219–28.
- 55 See D. McGregor, "From Exclusion to Co-existence"; D. McGregor, "Linking Traditional Ecological Knowledge and Western Science: Aboriginal Perspectives From the 2000 State of the Great Lakes Ecosystem Conference," *Canadian Journal of Native Studies* XXV11, 1 (2008): 139–58; M. Stevenson, "The Possibility of Difference: Rethinking Co-management," *Human Organization* 65(2) (2006): 167–180; D. McGregor, "Aboriginal Involvement in Ontario Sustainable Forest Management: Moving Toward Collaboration," *Recherches Amerindiennes au Quebec* 36(2/3) (2006): 61–70.