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## Bridging Parallel Rows: Epistemic Difference and Relational Accountability in Cross-Cultural Research

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## **Abstract**

To what extent are non-Indigenous researchers invited to engage the knowledges of Indigenous peoples? For those working within a western paradigm, what is an ethical approach to traditional knowledge (TK) research? While these questions are not openly addressed in the burgeoning literature on TK, scholarship on Indigenous research methodologies provides guidance. Reflexive self-study - what Margaret Kovach calls researcher preparation - subtends an ethical approach. It makes relational, contextual, and mutually beneficial research possible. In my work on contested fisheries knowledge and decision-making systems in Ontario, Canada, a treaty perspective orients my mixed methodological approach. It reflects my relationships to Indigenous lands, peoples, and histories, and enables an ethical space of engagement through which relational accountability and respect for epistemic difference can be realized.

## **Keywords**

Indigenous research, mixed methodology, Two Row Wampum Treaty, fisheries

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## **Bridging Parallel Rows: Epistemic Difference and Relational Accountability in Cross-Cultural Research**

The knowledge held by Indigenous peoples as it relates to the environment is increasingly valued for its potential to contribute to sustainable natural resource management. In Canada, interest in what is often termed traditional knowledge (TK) emerged out of the land claims process (Nadasdy, 1999; Usher, 2000) and as a result of court decisions that call for consultation and the involvement of First Nations in resource management and environmental decision-making (Menzies & Butler, 2006; Wiber & Milley, 2007). Increasingly, provisions for the consideration of TK are being incorporated in the environmental and natural resource regulatory regime,<sup>1</sup> while top granting agencies fund TK research.<sup>2</sup> In this context, government agents, resource managers, industry proponents, academics, and other researchers continue to seek information from Indigenous Elders, knowledge holders, and practitioners. But, to what extent are non-Indigenous researchers invited to engage the knowledges of Indigenous peoples? How can researchers working from a Western methodological framework respectfully engage Indigenous communities in the field of TK? These and other related questions are not openly addressed in the TK literature, however vital they are to ethical research practice.

I address this gap through a discussion of my approach to community-based research on the relationship between knowledge and governance systems in the context of fisheries management. The central problematic is the ongoing legacy of harmful research whereby external interests drive extractive research on the knowledge of Indigenous peoples (Smith, 2012). Intended for researchers and Indigenous communities involved in collaborative research, in this article, I posit that an Indigenous research paradigm (IRP) offers guidance from which to construct cross-cultural research methodology. It centers the relationships and responsibilities researchers carry with respect to Indigenous lands, peoples, and systems of knowledge and governance. Researcher preparation (Kovach, 2009) integral to an IRP, helps researchers to navigate the politics of knowledge production in the field of TK. It fosters respect for difference, builds relational accountability into all stages of the research, and allows an ethical space of engagement to take shape (Ermine, 2007). In my mixed methodology, the treaty relationship emerged as a powerful orienting device. For all treaty people, the nation-to-nation relationship offers an invitation to engage knowledge systems in a spirit of respect and reciprocity.

Beginning with the research context, I discuss the politics of knowledge production in relation to TK and the situated geographies of settler-colonialism. Then, as a way of negotiating fraught terrain, I explore entry points through which Western-trained scholars might engage Indigenous research methodologies in their work with Indigenous peoples. I ground conceptual tools and practical mechanisms in examples drawn from my own experience and conclude with general comments about research design and implementation.

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<sup>1</sup> For instance, the Canadian Environmental Protection Act (1999); Species at Risk Act (2002); Canadian Environmental Assessment Act (2012); Ontario Great Lakes Strategy (2012); and Ontario's Provincial Fish Strategy (2014). See also McGregor (2009).

<sup>2</sup> For instance, the Social Sciences and Humanities Research Council of Canada funds my involvement in Fish-WIKS, a multi-sited research project on Indigenous knowledge systems, discussed below.

## Research in Context

My research is part of a larger project called Fish-WIKS (2015), which seeks to understand how Western and Indigenous knowledge systems can improve the sustainability of Canadian fisheries. Knowledge systems include the principles, ethics, and values underlying processes by which decision-makers acquire, value, and share knowledge. The project involves Indigenous communities from each of Canada's coastal region (Pacific, Atlantic, Arctic, and Inland), Indigenous governance and research institutions, and Indigenous and non-Indigenous researchers.

The research team, led by Principal Investigator Dr. Lucia Fanning, argues that current national level decision-making processes, premised on Western knowledge systems, have been inadequate for effective fisheries governance (Pauly et al., 2002). The current hierarchical governance regime is at odds with the expressed goal of both the federal and Ontario provincial governments to implement holistic, place-based ecosystem approaches to fisheries management (O'Boyle & Jamieson, 2006; Ontario Ministry of Natural Resources, 2014). In contrast, Indigenous knowledges are rooted in place-based worldviews and shared histories; they are holistic, experiential, and transmitted through means that are culturally dependent. Decision-making authority within Indigenous governance systems rests at the community or individual level (Berkes, 2012; McGregor, 2004a, 2009). Accordingly, the Fish-WIKS team hypothesizes that Indigenous Knowledge Systems (IKSs) offer a better framework for the implementation of ecosystem-based management of fisheries (Fish-WIKS, 2015). By understanding how IKSs can enhance the current regime for decision-making, the project seeks to provide mutually beneficial outcomes to Indigenous and non-Indigenous communities, improve the sustainability of fisheries, and, through the design of alternative governance models, enhance the processes by which decisions are made (Fish-WIKS, 2015).

The project does not seek to collect or distil discrete pieces of Indigenous knowledge, but rather to address knowledge gaps in fisheries governance (Food and Agriculture Organization of the United Nations [FAO], 2009; White, 2006) and the role of Indigenous knowledge in decision-making (King, 2004; McGregor, 2009). Yet, the desire to *know* and to catalogue IKSs on a comparative register could be interpreted as another expression of colonial ambivalence that leaves fundamentally uneven relations of power intact (Simpson, 2007).<sup>3</sup>

The study of knowledge systems inevitably encounters TK, a relatively recent construct of non-Indigenous origin (McGregor, 2004a). In fisheries, TK is regarded as a "tool to help revamp environmental management practices" (Shackeroff & Campbell, 2007, p. 344). Given the shift to ecosystems-based approaches, the dearth of historical marine ecological data, and recognition of the need to engage across disciplines, cultures, and multiple environmental perspectives, fisheries biologists and ecologists are turning to TK to "fill in the gaps" (Shackeroff & Campbell, 2007, p. 344). Globally, TK has received attention since the 1980s. It is valued for its potential to contribute to sustainable natural resource management, the conservation of biological diversity, protection of rare species and

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<sup>3</sup> Fish-WIKS aims to understand the Western and Indigenous knowledge systems that subtend fisheries management, as well as the commonalities and differences between distinct Indigenous knowledge systems in four coastal regions of Canada (Fish-WIKS, 2015). See Howard and Widdowson (1996) for an example of epistemic racism in the field of TK.

habitats, and the enhancement of adaptive capacity in the face of climate change (Johnson, 1992; United Nations, 1987; United Nations, 1992).

Yet, what occurs when holistic Indigenous knowledges, underpinned by cosmologies that recognize humans as “part of the land, part of the water” (Nadasdy, 1999, p. 4), are integrated with conventional, dualistic environmental and resource management regimes (Howitt & Suchet-Pearson, 2006)? Narrowly ecological perspectives on TK (Latulippe, forthcoming) reinforce the ontological dissonance that renders IKSs unintelligible and conceals mechanisms that maintain dominant resource governance (Nadasdy, 1999; Usher, 2000). Reduced to three of six “faces” (Houde, 2007), holistic Indigenous knowledge is often subjected to distillation, compartmentalization, and distortion; misappropriation; theft, and commodification (Berkes, 2012; McGregor, 2004a, 2009; Nadasdy, 1999; Turner, Boelscher Ignace, & Ignace, 2000).

Critical scholars ask whether or not the knowledge of Indigenous peoples *should* be integrated with conventional models of resource management (Shackeroff & Campbell, 2007). The same could be said of research—consider Fish-WIKS. The project narrowly avoids the pitfalls of depoliticized research on TK. In its desire to improve the sustainability of Canadian fisheries, the project could be interpreted as yet another effort to tap into, capture, and harvest Indigenous knowledge (McGregor, 2004a) primarily for the benefit and according to the normative standards of non-Indigenous populations (McGregor, 2004b). It works to consider Fish-WIKS and the politically fraught nature of research on the knowledges of Indigenous peoples in a situated research context.

### Grounding Research in Place

The Inland Fish-WIKS research partnership is comprised of Nipissing First Nation, the Assembly of First Nations, and researchers, including myself, from the University of Toronto and University of Guelph. Nipissing First Nation is located on the north shore of Lake Nipissing in northeastern Ontario, along a historic trade route linking Nipissing and Algonquin traditional territories. Nipissing peoples have always depended on the fishery for trade and self-sufficiency (Leatherdale, 2010). It continues to be an important part of the community. Traditional fishing practices are protected within the Robinson Huron Treaty of 1850, and, in 2005, under its authority as a nation, Nipissing First Nation passed its Fisheries Regulations (Fish-WIKS, 2015). Nipissing First Nation cooperates with neighbouring jurisdictions on fisheries management (Ontario Ministry of Natural Resources, 2014), and participates in the Lake Nipissing Summit, an annual event designed to create awareness and consensus on the need for shared ownership towards the future of Lake Nipissing.

Yet, not unlike other Indigenous fisheries in Ontario (Koenig, 2005), the Nipissing people have been subjected to decades of state-led antagonism, conflict, and criminalization (Ball, 1985; Boldt, 1971; Cowan, 1997; “Enough is Enough,” 2005; “Indians’ Right to Hunt,” 1938; Lamarch, 1985). The Indigenous fishery has been adversely positioned against the non-Native sport fishery on Lake Nipissing. Further, the community is situated within a regulatory framework that excludes First Nations from decision-making that impact lands and resources within their traditional territories (Linden, 2007). Subtending this exclusion are competing treaty interpretations, the foremost source of conflict between the Crown and First Nations (Linden, 2007).

In such a political context, and considering the insidious politics of recognition (Coulthard, 2014), the inclusion of TK within the environmental and natural resource regulatory framework can be read as an appeasement strategy that works to reconcile Indigenous claims to Crown sovereignty without addressing fundamental conflict over jurisdiction and the violation of treaty agreements (Chiefs of Ontario, 2006; King, 2014; Koenig, 2005). Even if IKSs offer a better framework for the implementation of ecosystem-based management, as Fish-WIKS pre-supposes, critical theorists would suggest that uneven relations of power render dissonant worldviews wholly unworkable. The comparison of knowledge systems is ill equipped to wrestle with settler-colonialism as an ongoing structure of dispossession (Wolfe, 2006) reinforced by patriarchy and gendered expressions of violence (Lawrence, 2003; Smith, 2010), private property and other spatial technologies of settler-colonialism (Harris, 2004), the cultural politics of race and nature (Baldwin, Kobayashi, & Cameron 2012; Thorpe, 2012), and the putative power of settler-state sovereignty (Rifkin, 2009). Research like Fish-WIKS that seeks to improve governance through increased interaction and policy recommendations is always already circumscribed by the structural imperatives of settler colonialism. It is unlikely to alleviate racist contempt for gillnetting on Lake Nipissing (Hamilton-McCharles, 2014), or equip Nipissing First Nation with greater decision-making authority at the provincial level.

Ultimately, Fish-WIKS embodies some of the tensions that characterize TK research; however, it also takes seriously the call to forge collaborative research partnerships with Indigenous organizations and communities and to follow their lead (Coombes, Johnson, & Howitt, 2012; Whyte, 2013). To navigate such contradictions, critical researchers must consider the power-laden field within which knowledge systems—as field of study *and* way of life—are embedded. Simultaneously, researchers are challenged to suspend damage-centered research and capture desire instead (Tuck, 2009). Indigenous communities sometimes choose to work with outside agents and researchers, to enact their vision and work through the “growing pains” of new institutional landscapes (Bowie, 2013; Whyte, 2013). As a researcher invited into a research partnership with Nipissing First Nation, it is my responsibility to avoid extractive research practice and to ensure that Indigenous knowledges are not uncoupled from social, political, and cosmological contexts. The subsequent section explores concepts and approaches that factor such considerations into research design, implementation, and interpretation. It privileges Indigenous methodology as an ethical basis from which to engage TK research in a cross-cultural context.

### **Exploring an Indigenous Research Paradigm**

The articulation of an Indigenous research paradigm (IRP) emerged in the wake of Linda Smith’s (2012) seminal work, *Decolonizing Methodologies* (see Kovach, 2009; Wilson, 2008). Unlike research on and for Indigenous peoples, Indigenous scholars are now driving research, shaping ethical protocols, and defining culturally relevant methodologies that are accountable to communities. Pushing back against extractive research, IRPs reflect and provide for the needs of Indigenous people (Wilson, 2008).

A set of underlying beliefs that guide actions, a research paradigm is broad, made up of ontology (the way we view reality), epistemology (how we think about or know this reality), axiology (ethics and morals), methodology (how we go about gaining more knowledge about reality), and tools (Wilson, 2008). Indigenous ontology is relational. The world is seen as a “web of connections and relationships” (Wilson, 2008, pp. 73-74). In this reality, ideas exist in a relational context. They develop through the formation of relationship and lose their integrity when taken out of context. There is no one fixed,

external reality or truth, only “different sets of relationships” (Wilson, 2008, p. 8). Indigenous axiology is based on relational accountability, or “being accountable to your relations” (Wilson, 2008, p. 77). In a research context, researchers fulfill their roles and responsibilities through their methodology, which is described simply as “the building of more relations” or constructing more “knots” in the web of relationships that produce knowledge (Wilson, 2008, p. 79). Relationships uncovered or constructed through research methodology coalesce into theory.

The elements of an IRP are not discrete, but form a circle, which provides a useful metaphor. Relationality “encircles” the elements of an IRP (Wilson, 2008). As Wilson (2008) stated,

Just as the components of the paradigm are related, the components themselves all have to do with relationships. The ontology and epistemology are based upon a process of relationships that form a mutual reality. The axiology and methodology are based upon maintaining accountability to these relationships. (pp. 70-71)

Wilson’s conceptualization is derived from a Cree worldview and the influence of other Indigenous peoples’ perspectives. Margaret Kovach (2009) employed Indigenous methodology, research framework, and inquiry interchangeably to describe “the theory and method of conducting research that flows from an Indigenous epistemology” (p. 20). Far from homogeneous, diverse Indigenous peoples nevertheless share values and socio-cultural perceptions “driven by an intimate relationship with the natural environment” (Kuokannen, 2007, p. 7; see also Royal Commission on Aboriginal Peoples, 1996). A common epistemological standpoint—that “everything is understood to be alive,” imbued with spirit or energy, and “connected in dynamic, interactive, and mutually reciprocal relationships”—roots diverse Indigenous perspectives (Shaw, Herman, & Dobbs, 2006, p. 270). Accordingly, the objective of knowledge is not to explain an objectified universe, but to understand one’s responsibilities and relationships and to engage in mutual reciprocity in the place in which one lives (Shaw et al., 2006). Other Indigenous peoples share forms of Wilson’s (Cree) relational accountability; for instance, *whanaungatanga* is described as kinship, relationships, or connectivity in a Māori research context (Mane, 2009). Respecting commonalities, from an IRP, knowledge is relational, neither static nor objective, and shared by all of creation, the cosmos, animals, plants, and the earth.

### **Cross-Cultural Research**

At first glance, an IRP seems like an appropriate methodological basis from which to appreciate, on its own terms, the breadth and depth of Indigenous knowledge. But the foundation of Indigenous research is the lived Indigenous experience (Weber-Pillwax cited in Wilson, 2008). Wilson (2008) wrote that Indigenous ontology, epistemology, and axiology need to be “followed through” at all stages of Indigenous research design and implementation (p. 15). Like TK itself, an IRP is lived; it is something one does (McGregor, 2004a). With this in mind, to what extent can the non-Indigenous, Western-trained researcher engage an IRP and forge a cross-cultural or mixed-methodological approach?

The extent to which researchers engage an IRP relates to the nature of the inquiry and to the researcher’s relationship to tribal knowledges (Kovach, 2009). Also informative is the relationship between Indigenous and post-positivist Western qualitative research paradigms. These research paradigms share important philosophical assumptions; both are relational, interpretive, and interactive (Creswell, 2007;

Kovach, 2009; Mansvelt & Berg, 2005; Wilson, 2008). They share conceptual space. Yet Indigenous methodologies originate from distinct Indigenous epistemologies that are constituted by relationships to and with Indigenous lands (Kovach, 2009). They are holistic, experiential, and related to place and person, whereas Western qualitative research derives from individualistic and essentialist Western thought, which propels the desire for standardization and universal application. Critical, less oppressive Western qualitative methodologies align with elements of Indigenous inquiry, but they are not based in Indigenous ways of knowing; for instance, in spirit and where spirit derives (Kovach, 2009). As such, Kovach (2009) writes that an Indigenous methodological approach, rooted in distinct epistemologies and relationships to land, is not appropriate for all research. It depends on the purpose of research and is contingent on relationships. But Kovach also writes that research is fundamentally about learning. In this way, there is space for mixed methodology.

In a context where Indigenous communities continue to be researched by non-Indigenous scientists pursuing Western research on Western terms, the appreciation of tribal epistemologies and Indigenous research methodologies on their own terms works to unsettle White privilege and the marginalization of alternative ways of knowing within the academy (Kovach, 2009). Non-Indigenous scholars are invited to engage in reflexive self-study and to consider a research paradigm outside of the Western tradition. Like Ahmed's (2004) double turn—to turn away from oneself towards others—and Kuokkanen's (2007) epistemic decolonization, Kovach (2009) compels the non-Indigenous scholar to “adjourn disbelief and, in the pause, consider alternative possibilities” (p. 29). As Borrows argued with respect to Indigenous law, in order to thrive, Indigenous research “must live in many sites” (cited in Kovach, 2009, p. 12).

What determines respectful engagement with Indigenous research? How is the distinction maintained between learned Indigenist philosophy (Wilson, 2012) and lived Indigenous methodologies (Martin & Mirraboopa, 2003)? Kovach (2009) suggested that researchers practice epistemological transparency in order to avoid subsuming Indigenous methods under Western ways of knowing, and vice versa (Kovach, 2009).<sup>4</sup> She also suggested that mixed research methodology meet three criteria: It should be accountable to Indigenous communities, appreciate Indigenous epistemologies as distinct, and work to bridge epistemic difference. Observing these conditions, in the next section I work through whether, the extent to which, and how I engage IRPs. I draw on my own experience to illustrate conceptual tools and community-based mechanisms that can be applied in other research contexts.

## **Mixed Methodology**

### **Relational Accountability**

Enacted through methodology, relational accountability first requires reflexive self-study. This rings true for all researchers, regardless of the extent to which they are grounded in Indigenous ways of knowing. Similar to positionality and reflexivity in qualitative Western qualitative inquiry (Mansvelt & Berg, 2005), reflexive self-study or researcher preparation takes up more space within methodologies that respect Indigenous epistemologies (Kovach, 2009). It involves reflection on self-location, purpose, and sources of knowledge (Geniusz, 2009; Kovach, 2009). Naming relationships and accounting for the

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<sup>4</sup> As one anonymous reviewer noted, attempting to infuse one methodological approach into the other is like making rabbit and moose stew. The flavour of the moose overwhelms the rabbit.



coming-to-know process prepares the critical researcher for the possibility of working with Indigenous peoples on contested Indigenous lands. It reveals privilege and fosters humility, responsibility, and accountability. Reflexive self-study compels important questions such as to whom am I accountable? To what extent have I been invited to engage Indigenous knowledges and for what purpose? What limits my ability to know? Researcher preparation helps to establish what and how we know, and how relationships can be enhanced across difference. In other words, researcher preparation fosters and strengthens relational accountability.

Negotiating my self-directed research in relation to the Fish-WIKS project provided me the opportunity to explore my relationships to Nipissing and Anishinabek Nation lands, peoples, and histories. Linked to the fur trade and the Métis through my paternal lineage, I grew up on land adjacent to a historically significant trade route connecting Georgian Bay and Lake Huron to the Ottawa River watershed via Lake Nipissing and the French River. My maternal ancestors are French Canadian and Indigenous from the Quebec side of the *Kiji Sibi*, or Great River of the Algonquins, misnamed by the English as the Ottawa River (Lawrence, 2012). While I carry historical and genealogical connections, my socio-cultural and political belonging to Anishinaabe communities has been fragmented, severed by the institutions of Indigenous removal and elimination including the church, racist and sexist legislation, dispossession, and propertization (Simpson, 2014). Given the relationship between positionality and methodology (Jankie, 2004), this gave rise to questions about the basis from which I could respectfully approach an IRP.

Here, a treaty perspective became generative. The lands and peoples with whom I am connected in a myriad of complex ways are party to a number of historic, mutually agreed upon covenants between sovereign nations, including the Robinson Huron Treaty, Treaty of Niagara, Great Peace of Montreal, and pre-contact treaties such as the Dish With One Spoon (Corbiere, 2013). Rooted in the land itself, these living agreements embody Indigenous law and diplomatic protocol signifying respect for autonomy and the stewardship of shared lands (Graham, 2002; Hallenbeck, 2015; Union of Ontario Indians, 2014). Treaties have been violated, but as Indigenous formulations of sovereignty, they continue to be held up as a “path forward” by Indigenous peoples (Hallenbeck, 2015, p. 4), including the Anishinabek Nation (“Canada Keeps Forgetting,” 2012).<sup>5</sup> While there is much to learn, a treaty perspective offers rich grounds from which to ethically approach the place, people, and politics of my research site.

### **Respecting and Bridging Epistemic Difference**

Reflecting my social location, motivations, and teachers (Kovach, 2009), a treaty perspective encourages relational accountability, acknowledges difference, and bridges interpretive communities. As a treaty person, I carry multiple obligations. On the one hand, I have been invited to work with Nipissing First Nation to understand the knowledge systems informing decision-making in fisheries management. It is fitting that I would privilege and seek to employ (not adopt) Anishinaabe ways of knowing. But, I am also driven to challenge the entitlement and assumed jurisdiction of the settler-colonial state. Here, a critical Western qualitative methodology would be productive. To orient my work in both directions, a

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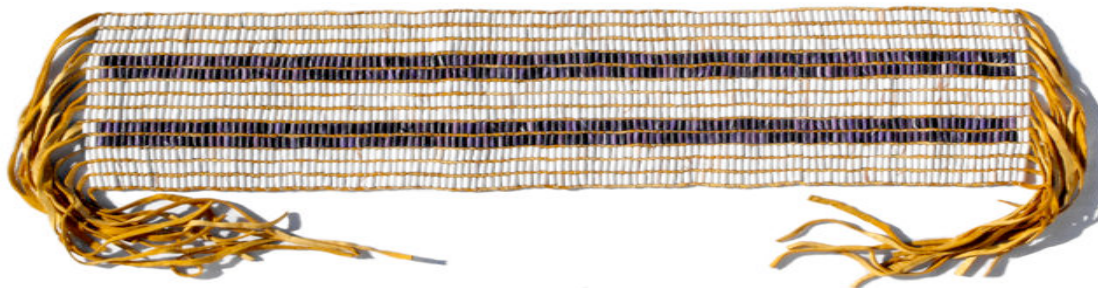
<sup>5</sup> Incidentally, I gained this perspective while employed with the Union of Ontario Indians, secretariat and political advocate for the Anishinabek Nation, with its head office on Nipissing territory.

treaty perspective allows me to pick up these twin threads in a spirit of respect and reciprocity. A treaty perspective orients my research through a conceptual framework, a useful organizational device.

A conceptual framework reflects the knowledge one privileges and gives focus to research methodology (Kovach, 2009). Rendering one's epistemology visible through a conceptual framework makes it possible to consider all research choices against it—to align objectives, methods, and interpretation with a particular way of knowing; orient the reader; and mitigate power differentials. The Two-Row Wampum Treaty belt serves as my conceptual framework.

The historic *Kaswentha*, or Two Row Wampum, is discussed in the findings of the Ipperwash Inquiry (Linden, 2007), foundational to my understanding of Indigenous-settler-land relations.<sup>6</sup> The beaded belt describes part of a friendship treaty between the Dutch and Haudenosaunee (see Figure 1):

It consists of two rows of purple beads separated by rows of white beads. The purple rows represent the different vessels of the Dutch (a ship) and the Haudenosaunee (a canoe) travelling side-by-side down the “river” of existence (the white beads). While the two vessels remain separate (i.e., the cultures remain distinct), the people from each vessel are meant to interact and assist each other as need be. (McGregor, 2004b, p. 63)



**Figure 1.** *Kaswentha* (Two Row Wampum Treaty belt). Source: “The Two Row Wampum Belt: An Akwesasne Tradition of the Vessel and Canoe,” by D. Bonaparte, n.d., <http://www.wampumchronicles.com/tworowwampumbelt.html>

Some erroneously view the agreement as a form of mutual isolation (see Cairns, 2000; Usher, 2000); however, the two vessels, representing distinct polities, share the same space. They are “inextricably entwined in a relationship of interdependence” (Turner, 2006, p. 54). Three rows of white beads between the vessels have very specific meaning: peace, respect, and friendship. According to Haudenosaunee philosophy, reciprocity and the renewal of ongoing relationships form the basis of communal notions of respect (Turner, 2006). Interaction, assistance, and reciprocal relations are meant to support peaceful coexistence and to facilitate mutual benefit.

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<sup>6</sup>Also discussed in the Royal Commission on Aboriginal Peoples (RCAP, 1996), it encourages mutual recognition, knowledge sharing, and collaboration for reciprocal benefit.

Applied methodologically, separate rows signify epistemic difference, while the shared space—the bridging rows of peace, friendship, and respect—mirrors the conceptual space shared by Indigenous and Western qualitative research methodologies. As a conceptual tool, the Two Row Wampum facilitates Kovach’s criteria for ethical engagement with Indigenous methodologies: relational accountability, respect for epistemic difference, and bridging work. As such, it guides my research objectives, theoretical framework, and research implementation.

**Research objectives and the Two Row Wampum.** Battise and Henderson (2000) wrote, “Eurocentric thought must allow Indigenous knowledge to remain outside itself, outside its representation, and outside its disciplines” (p. 38). They argued that Indigenous knowledge can only be understood through traditional pedagogy, including apprenticeship, ceremony, and practice. Disconnected from Anishinaabe ways of knowing and cultural frameworks, I am limited in what I can know. Without disavowing my own social location, how can I transcend my worldview and regard IKSs as *sui generis*? Enacting a double turn, what is knowable? My conceptual framework provides guidance.

The Two Row Wampum is regarded as a viable model for environmental co-governance (Berkes, 2012; McGregor, 2004b). It is employed contemporaneously by a coalition of Haudenosaunee Nations in the US and Canada to facilitate collaborative environmental protection based on mutual respect and cooperation (Ransom & Ettenger, 2001), and it carries meaning on Anishinaabe territories (Borrows, 1997), where I live and work. It encourages the exploration of ongoing commitments (Hallenbeck, 2015), long-term relationships, and collective processes needed to guide appropriate knowledge sharing and decision-making that engenders peace, friendship, and respect, while maintaining the integrity of each system.

Thus, the Two-Row Wampum frames my primary research objective: to explore the relationships between knowledge holders, resource users, and decision makers involved in the Lake Nipissing fishery and to understand how the current inland governance regime can it be enhanced to reflect a treaty partnership of sharing healthy ecosystems.<sup>7</sup> My research objective (and proposed research outcomes) aligns with community priorities, which include responsible stewardship, protection of natural resources, and enhanced governance capacity. It reflects the call for bridging work to link Western and traditional ways of knowing and allow for the development of bi-cultural resource governance models (Colorado, 1988). It also builds on recent scholarship by Potawatomi scholar Kyle Whyte (2013) on the progressive nature of TK: “care must be taken to show that [TK] invites participation to a long term process of mutually respectful learning. And more effort needs to be taken to understand what these processes should look like” (p.10). Based on the strengths and limitations of my research relationships, it expresses respect for Indigenous research methodologies.

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<sup>7</sup> My research sub-objectives are to: understand Lake Nipissing fisheries within historical, cultural, socio-economic, political and regional contexts; explore the interface between knowledge systems and fisheries decision-making between and across jurisdictions; identify barriers and opportunities for the expression of IKSs in fisheries governance; and identify governance mechanisms or models that reflect a nation-to-nation, or treaty, relationship. Proposed research outcomes are education and awareness, enhanced governance in the spirit of the treaty relationship, and the advancement of academic discourse and praxis. At the time of writing, I am at the data gathering and preliminary analysis stage of research.

**Theoretical framework and the Two Row Wampum.** Reflexive self-awareness emplaces the researcher in the research context, motivates research design, and also provides a theoretical tool, “a tool for meaning making” (Kovach, 2009, p. 50). My social location, motivations, and sources of knowledge align with a decolonizing or transformative theoretical base as centering epistemology. A decolonizing theoretical lens effectively analyzes power disparities, offers hope for transformation, and makes room for structural change and individual agency in resistance. It is an “integral component” of Indigenous inquiry, though not its epistemic basis (Kovach, 2009, p. 81). One of three possible ways of situating decolonizing theory within an Indigenous research framework,<sup>8</sup> a decolonizing theoretical approach draws on critical theory, “an allied Western conceptual tool for creating change” but does not attempt to integrate or appropriate distinctly Indigenous epistemologies (Kovach, 2009, p. 48).<sup>9</sup>

A decolonizing theoretical approach reflects the Two Row Wampum as decolonizing political practice (Hallenbeck, 2015) and, through the shared space or bridging rows, facilitates Ahmed’s double turn. It allows me to draw on critical colonial geographies and postcolonial theory to deconstruct the intersecting symbolic and material practices that reproduce state access to resources and settler resource entitlement, delegitimize Indigenous fisheries, and render Indigenous governance systems unintelligible. Then, to balance critical theory’s persistent focus on the “colonial impact” (Kovach, 2009, p. 48) and the “settler dilemma” (p. 80), I turn to Indigenous scholarship. Transcending damage-centered research, Indigenous theories, teachings, and cartographies reflect and prioritize distinct ways of knowing and being, and offer a viable basis from which to contemplate the historically, geographically, and spiritually embedded nature of Indigenous self-determination, which is central to the study of Indigenous knowledge (McGregor, 2004a). Employed together, critical and Indigenous theories empower powerful counter stories (Mutua & Swadener, 2004).

### Lessons Learned

Research on TK can perpetuate resource inequity and dispossession. Within this power-laden field, Indigenous and decolonizing methodologies help to foster accountability to Indigenous communities and respect for epistemic difference and relationality. Guided by inward reflection, the Two Row Wampum Treaty belt orients my research. An “alternative structure of law and sovereign authority” on contested Indigenous lands (Coulthard, 2014, p. 179), treaties and a treaty perspective politicize TK research. I have illustrated its utility given my particular social location, but a treaty perspective is not the only viable framework for cross-cultural research. Different socio-political contexts and research relationships warrant their own conceptual tools.

The point I wish to stress is that those pursuing research with Indigenous communities must be prepared to “do the work” required to honour tribal knowledges (Kovach, 2009, p. 38). They must be cognizant of TK as a contested field of study *and* living system of knowledge, practice, and belief (Reo, 2011). This means actively working to transcend extractive research practice through appropriate

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<sup>8</sup> Other orientations are tribal and tribal-centered methodologies. Both draw on distinctly Indigenous epistemologies separate from western ways of knowing. Neither centers the colonial relationship. For my purpose, both are inappropriate, as I am not rooted in the tribal worldview of Anishinaabe epistemology.

<sup>9</sup> It is possible to situate decolonizing methodologies under the “umbrella” of an Indigenous research framework, but it is aligned more closely with Western critical research methodologies (Kovach, 2009).

engagement with IRPs. Researcher preparation and a critical, decolonizing lens are essential prerequisites. Understanding whether, the extent to which, and how one might ethically employ Indigenous methodologies positions the researcher to “stay implicated” (Ahmed, 2004, p. 59) in what they critique, and to build research relationships, negotiate objectives, and develop mutually beneficial outcomes with Indigenous research partners.

My final comments concern the link between researcher preparation, community engagement, and the implementation of ethical research conduct. Relational accountability and respect for epistemic difference are not achieved through a sole principal investigator model (Kovach, 2009). Rather, ethical practice necessitates a research strategy based on collaborative partnership, similar to the Fish-WIKS model, transparency, accountability, and trust. Literature on ethical research with Indigenous peoples speaks of the need to mitigate power differentials (Kovach, 2009), avoid harm (Shackeroff & Campbell, 2007), protect TK from exploitation (Assembly of First Nations [AFN], 2009), and reciprocate learning (Weber-Pillwax, 2001). Theory, as well as policy statements, directives, and guidelines abound, but what does ethical research look like? How is it carried out?

Research agreements are one way to formalize partnerships and operationalize partnership-based research strategies. They prioritize the need to give back to communities in ways that are relevant, grounded in existing needs, and accessible (Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, & Social Sciences and Humanities Research Council of Canada, 2010; Kovach, 2009). They facilitate informed consent and help researchers gain an awareness of local norms and values (Shackeroff & Campbell, 2007). Their implementation encourages ongoing engagement and accountability at the community level. Grounded in pre-existing research protocol, cultural norms, standards of engagement, and priorities, I worked with Nipissing First Nation to establish a Collaborative Research Agreement.<sup>10</sup> It was an appropriate research implementation strategy given my outsider status and nascent research relationship, but formal agreements are not the only way.

Ultimately, communities and knowledge holders themselves set the “rules” for research through established standards of practice and research protocols (McGregor, 2009; Shackeroff & Campbell, 2007). Researcher preparation—involving reflection on the politics of knowledge production on contested lands, relationships to Indigenous epistemologies and methodologies, and one’s limits to knowing (Simpson, 2014)—creates a solid foundation from which to engage Indigenous research partners and participants. In my case, a treaty perspective affords the space from which to decolonize research practice, make connections, and develop mutually beneficial outcomes through the respectful and reciprocal interplay of distinct knowledge systems. A powerful representation of Indigenous sovereignty and law that is rooted in the land, the treaty relationship is a compelling invitation to all treaty people to engage Indigenous peoples, their knowledges, and methodologies in a spirit of respect and reciprocity.

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<sup>10</sup> Based on a National Aboriginal Health Organization (NAHO, 2007) template, it describes the research purpose and objectives, scope, methods and procedures, provisions to obtain informed consent from research participants, expected outcomes, benefits and risks, obligations and responsibilities of both the external researcher partner and the community partner, the dissemination of results, data ownership, communications, and dispute resolution.

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