Exploring the Common Ground Between Social Innovation and Indigenous Resurgence: Two Critical Indigenist Case Studies in Indigenous Innovation in Ontario, Canada

by

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Author's Declaration

I hereby declare that I am the sole author of this thesis except where noted. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Declaration of Co-Authorship

This thesis incorporates material that results from collaborative research efforts. I (Erin Alexiuk) was responsible for articulating the methodological approach, compiling the literature review, developing the conceptual framework, and synthesizing research findings into Chapter 4 and 5. Dr. Daniel McCarthy's critical role facilitating and supporting my relationship with colleagues in Timmins, MNCFN, and WIFN made this research possible. Further, he was directly involved in guiding the thesis development and supervising the research process. Dr. Leela Viswanathan played an important role managing the university team's relationship with MNCFN and WIFN, coordinating planning and research meetings, and providing advice and guidance that informs this research.

Abstract

Social innovation is defined as "an initiative, product, process or program that profoundly changes the basic routines, resource and authority flows or beliefs of any social system" (SiG Knowledge Hub, 2013b). Social innovations are introduced to meet a critical social and, when successful, have broad and lasting durability (Mulgan, 2012; Westley et al., 2006; Westley & Antadze, 2011; Young Foundation, 2007). Indigenous resurgence may be similarly considered a process for social change as it focuses on the (re)emergence of Indigenous Knowledge and Practice through healing by (re)connecting with the land through Indigenous cultural and social institutions under the guidance of Indigenous Knowledge Guardians (Alfred, 2005; Alfred, 2009; Alfred and Corntassel, 2005; Corntassel, 2012; Simpson, 2008; Simpson, 2011). Shawn Wilson (2008) explains Indigenous systems of knowledge are based in sets of relationships and depend on the context in which they are understood and applied, therefore Indigenous Knowledge is coupled with the protocols and pedagogies that provide direction for practice. The expressly political and change-oriented message of social innovation resonates with recent work in articulating an ongoing resurgence of Indigenous Knowledge and Practice. However, complications arise when social innovation and Indigenous resurgence intersect in intercultural contexts. Westley et al., (2011) explain a tension between balancing the unparalleled improvements in human health and wellbeing afforded by material progress towards modernity and the inevitable consequences of this growth-oriented paradigm. Applying this problem to Indigenous contexts, the question becomes whether social innovation can provide appropriate strategies for Indigenous innovation processes.

Preliminary reading and research with *Anishanaabe Maamwaye Aki Kiigayewin* and the Mississaugas of the New Credit First Nation (MNCFN) indicated that integrating Indigenous Knowledge and Practices into existing social innovation strategies is not always sufficient to provide useful tools for

Indigenous innovation process. However, it became clear that social innovation shares common ground with the Indigenous resurgence movement and, when considered along with critical indigenist research strategies, can provide direction for Indigenous innovations at multiple scales. Therefore, the purpose of this thesis is to provide a preliminary exploration of social innovation from a critical indigenist perspective to increase its utility in Indigenous contexts.

This research was conducted as part of ongoing exploratory case study research (Yin, 2009) with *Anishanaabe Maamwaye Aki Kiigayewin*, an emerging Indigenous resource governance body in Timmins, Ontario, Canada and the Mississaugas of the New Credit First Nations (MNCFN) in southern Ontario, Canada. Together with *Anishanaabe Maamwaye Aki Kiigayewin* and MNCFN, and following Indigenous scholars, I have strived to implement critical indigenist methodologies by linking critical and Indigenous methodologies through action-oriented research to address the asserted needs and interests of Indigenous partners (Absolon, 2011; Battiste, 2000; Kovach, 2010; Denzin et al., 2008; Smith, 1999; Steinhauer, 2002; Struthers, 2001; Wilson, 2008). I follow Regan (2010) in using the term *settler* to refer to those individuals, long-established Euro-Canadians or more recent immigrants, who identify as being part of contemporary society established through the settler colonization of Canada. Through this critical indigenist approach, I have strived to implement participant observation, reflexivity, and settler storytelling to fulfill my research objectives. My intent is to identify risks to perpetuating colonial assumptions within conventional social innovation and address these assumptions by contributing an alternative perspective.

Through a discussion of current initiatives undertaken by *Anishanaabe Maamwaye Aki Kiigayewin* and by identifying common ground between the conventional social innovation framework and Indigenous resurgence, I demonstrate that major themes and strategies of social innovation are useful

in supporting the resurgence of Indigenous Knowledge and Practices. This discussion results in the conclusion that Indigenous innovation is a unique type of social innovation informed by Indigenous Knowledge to promote the resurgence of Indigenous Knowledge and Practices. From this position, I propose a conceptual model for Indigenous innovation that links resilience, social innovation, Indigenous resurgence, and critical indigenist research strategies with the intent to lay a foundation for further development of a historicized, culturally appropriate model that promotes the resurgence of Indigenous Knowledge and Practice. I demonstrate the utility of this model by using it to organize a description of current initiatives underway in MNCFN and then using it to speculate on future initiatives that may foster successful innovation(s).

The findings emerging from this research emphasize the roles of Indigenous Knowledge Guardians and settler allies in Indigenous innovations. Specifically, Indigenous Knowledge Guardians play a critical role in providing guidance and direction for the ethical and respectful development of Indigenous innovations. Settler allies within governments and industry can help build capacity within these institutions for intercultural understanding, contributing to the durability and impact of emerging Indigenous innovations. In conclusion, articulating Indigenous innovation as a unique type of social innovation may lead to developing approaches to relationship building and knowledge integration that are culturally appropriate and ultimately more useful for Indigenous innovators looking to implement them.

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Chapter One: Introduction

Growing concern regarding the sustainability of linked social and environmental systems has led to increasing interest in frameworks that describe change towards greater health and wellbeing. One such framework, social innovation, is a tool used to address seemingly intractable social problems and provide strategies for fostering positive social change (Biggs et al., 2010; Nicholls & Murdock, 2012; Westley et al., 2006; Westley & Antadze, 2011; Young Foundation, 2007). Social innovation may be defined as, "an initiative, product, process or program that profoundly changes the basic routines, resource and authority flows or beliefs of any social system. Successful social innovations have durability and broad impact" (SiG Knowledge Hub, 2013a). This framework for change resonates with the work of Indigenous Peoples leading initiatives that contribute to the resurgence of Indigenous Knowledge and Practices (Alfred, 2005; Corntassel, 2012; Simpson, 2008; Simpson, 2011; Turner, 2005). Indigenous resurgence has been described as the (re)emergence of Indigenous Knowledge and Practice through healing by (re)connecting with the land through Indigenous cultural and social institutions under the guidance of Indigenous Knowledge Guardians (Alfred, 2005; Alfred, 2009; Alfred and Corntassel, 2005; Corntassel, 2012; Simpson, 2008; Simpson, 2011). In this thesis, I use the term *Indigenous Peoples* as opposed to Aboriginal following the United Nations Declaration of the Rights of Indigenous Peoples (UNGA, 2007) and Alfred and Corntassel (2005) to draw attention to the colonial implications of the term Aboriginal, which flow from the Canadian legal terminology used to classify Indigenous Peoples (Alfred & Corntassel, 2005). The positive and change-oriented message of Indigenous resurgence shares broad goals with social innovation – perhaps most notably, movement towards sustainability for linked human-environment communities.

However, complications arise when social innovation and Indigenous resurgence intersect in intercultural contexts. If social innovation is used to

ensure continued neoliberal political and economic progress, then it is unlikely to achieve necessary social transformations leading to lasting sustainability and equity. For example, caution must be used in moving forward with strategies that may facilitate the continued appropriation and commodification of traditional lands for the purpose of building resilience in the status quo, or fostering changes that continue to promote the token inclusion of Indigenous Peoples and Indigenous Knowledge (Nadasdy, 2007; Porter, 2010; Turner, 2005). Here, resilience is defined as "the capacity of a system to absorb disturbance and reorganize so as to retain essentially the same function, structure, and feedbacks - to have the same identity" (Walker & Salt, 2012: 22). Westley et al. (2011: 763) describe a related paradox of innovation, "innovation is both a contributing cause for our current unsustainable trajectory and our hope for tipping in new more resilient directions". Nadasdy (2007: 218) states this underlying problem in another way – "it is precisely the relations of capitalist resource extraction and agro-industry that are most responsible for the marginalization of [I]ndigenous peoples and the dispossession of their lands and resources". Therefore, there is a tension between balancing the unparalleled improvements in human health and wellbeing afforded by progress towards an idealized, technologically advanced modernity and the inevitable consequences of this growth-oriented paradigm (Westley et al., 2011). Applying this problem to Indigenous contexts, the question becomes whether social innovation - developed using western conventions of social organization to either maintain or transform social systems to maintain the political-economic status quo - can provide appropriate strategies for Indigenous-led innovation processes.

In conclusion, there is a need to evaluate the social innovation framework and its application in Indigenous contexts. Through this thesis, I argue that in environmental planning and management, social innovations pursued by Indigenous Peoples that support the resurgence of Indigenous Knowledge and Practices must provide the conceptual and practical space for holistic and culturally appropriate ways of healing the lands, waterways, animal and human communities affected by unsustainable development. I intend for this

evaluation to identify embedded colonial assumptions, ensure that these detrimental assumptions are not perpetuated through its application and, perhaps most importantly, contribute an alternative perspective to the conventional social innovation framework.

1.1 Research Purpose and Objectives

The purpose of this thesis is to provide a preliminary evaluation of the efficacy of social innovation in Indigenous contexts. My first research question – is the conventional approach to social innovation sufficient to describe and provide direction for Indigenous-led innovations that promote the resurgence of Indigenous Knowledge and Practice? – explores the nature of social innovation as an allied theory of change. This question sets the stage for the second – can elements from social innovation, resilience, critical indigenist research methodologies and Indigenous resurgence inform a multi-scalar model for Indigenous innovations? This second question aims to make space within western academic research for Indigenous Knowledge and Practice in social change processes while providing recommendations for settler allies involved in Indigenous innovations. Accordingly, this thesis has three major objectives:

- From a critical indigenist perspective, review the social innovation and resilience literatures to identify (if any) common ground with Indigenous resurgence;
- Distinguish Indigenous innovation from conventional social innovations;
- Propose a conceptual framework for describing and informing Indigenous innovations.

These objectives were addressed through ongoing exploratory case study research (Yin, 2009) using a critical indigenist approach (see Chapter 2) with *Anishanaabe Maamwaye Aki Kiigayewin* and the Mississaugas of the New Credit First Nations (MNCFN) in central and southern Ontario, Canada, respectively. The findings presented in this thesis are intended to respond to questions and concerns brought to our attention by Indigenous research partners - to respect this relationship, we prioritize the relevance and utility of the research process

to identified needs and concerns. See Chapters 4 and 5 for a discussion of the role of each manuscript.

1.2 Rationale for the Research

The explicitly political motivations of any social innovation and the emphasis placed on the value of marginalized knowledge systems to their success indicates that social innovation may be useful as an allied theory of social change. However, key areas must be addressed in the context of Indigenous-led innovation processes:

- The inclusion of Indigenous-specific projects for fostering success;
- Roles for individuals, Indigenous Knowledge and sacred pedagogies that allow for flexibility between contexts; and
- A historicized discussion of the motivation behind Indigenous-led social innovations to place the need for change within the context of ongoing settler colonialism and the resurgence of Indigenous Knowledge and Practices.

Articulating Indigenous innovation as a unique type of social innovation will introduce approaches to relationship building and knowledge integration that are culturally appropriate and ultimately more useful for Indigenous innovators looking to implement them. Contributing to the theoretical and practical space for Indigenous innovation strategies in parallel with conventional innovation strategies will contribute to achieving desired changes and lower the risk of further perpetuating the influence of colonial policy. In a similar way, the conventional social innovation framework may benefit from insights from the Indigenous resurgence movement and critical indigenist methodologies, resulting in reciprocal knowledge sharing.

Writing on the requirements for lasting sustainability in the content of Indigenous nations of the Pacific Northwest, Nancy Turner (2005: 215-216) eloquently explains the potential for systems thinking and Indigenous resurgence to mutually inform transitions towards more sustainable futures:

Many elements need to come together for positive change to prevail, but

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three key ingredients are necessary: skilled teachers who hold the cultural knowledge, wisdom and values; willing, interested learners who have the opportunity and desire to become skilled at and practice environmental stewardship, and access to intact, productive environments, or environmental capital, on which to build and practice. If any one of these crucial elements is missing, the system cannot be sustained or sustaining.

1.3 Format and Structure of the Thesis

This thesis is organized into six chapters and follows a manuscript format. Chapter 2 reviews several authors' writing on critical, decolonizing, and Indigenous methodologies, with a particular emphasis on the implications of this work for settler researchers. I explain the critical indigenist approach to exploratory case study research applied in this thesis and describe the methods I have strived to implement in this research: participant observation, reflexivity, and settler storytelling. The chapter concludes with a discussion of validity, ethics, and limitations to the research.

Chapter 3 encompasses both the formal literature review and an expanded discussion of the conceptual framework. The literature review focuses on providing historical context for a critical indigenist approach and the theoretical foundations of the social innovation framework. In this chapter, I position social innovation as an allied framework for change by identifying common ground between social innovation and Indigenous resurgence. Finally, I introduce a conceptual framework, or model, for Indigenous innovation.

Chapters 4 and 5, entitled "Mine Reclamation Informed by the Knowledge and Wisdom of the Ancestors: A Case Study in Indigenous Innovation with *Anishanaabe Maamwaye Aki Kiigayewin* of Timmins, Ontario" and "A Critical Indigenist Approach to Social Innovation: Building Municipal-Indigenous Relations in Southern Ontario, Canada" are manuscripts intended for publication in *Decolonization: Indigeneity, Education & Society* and *Ecology & Society*, respectively. Chapter 4 discusses the common ground between social innovation and Indigenous resurgence in relation to an emerging Indigenous resource governance body in Timmins, Ontario, Canada, *Anishanaabe*

Maamwaye Aki Kiigayewin. Chapter 5 links strategies from social innovation and critical indigenist research methodologies to propose a multi-scalar model for Indigenous innovation. We demonstrate the utility of the Indigenous innovation model by describing current activities and speculating on future initiatives that may foster innovation in the implementation of the duty to consult with the Mississaugas of the New Credit First Nation. To conform to the format of this thesis, the section headings and numbers of these manuscripts have been modified. In addition, references to Chapters within this thesis are included in the manuscripts to take advantage of the opportunity to link back to concepts and ideas throughout the work. I have tried to minimize repetition in the manuscripts for ease of reading.

Chapter Two: Methodology & Methods

2.1 Reflection

As I piece together my understanding critical indigenist research and begin to implement it into my research, I have come to realize the extent of the difference between settler and Indigenous worldviews, particularly as they apply to research and meaning making. The intersection of Indigenous and settler knowledge systems has, among other things, been described as jagged worldviews colliding (Little Bear, 2000), tricky ground (Smith, 2007), and the hyphen (Jones with Jenkins, 2008). At the beginning of my research in this field I feel similar to Evelyn Steinhauer (2002) as she began her journey into Indigenous methodologies: "suddenly the task...seems a little overwhelming, and I wonder if perhaps I am doing something that I shouldn't be doing yet". I've learned that research is one of the dirtiest words you can say to an Indigenous person (Smith, 1999) and that many Indigenous scholars have questioned whether non-Indigenous people should be inquiring into Indigenous methodologies (Kovach, 2005; Rigney, 1999; Smith, 1999; Steinhauer, 2002; Struthers, 2001; Wilson, 2008). The question that has troubled me most - and that I have yet to fully resolve, perhaps I never will - is stated best by Steinhauer (2002), "If an Indigenous research methodology is about Indigenous reality, then how could this methodology be used by anyone other than an Indigenous person?". At this point I feel incredibly unprepared to face the challenges ahead and I find myself asking these questions over and over, "is her spirit clear? Does he [sic.] have a good heart?...Are they useful to us?...Can they actually do anything?" (Smith, 1999: 10). Using what I have learned from Indigenous scholars and trying my best to oppose the exclusionary tendencies of traditional research methodologies, I adopted the term critical indigenist research rather than a strictly Indigenous research. Shawn Wilson (2007) notes that, "It is my belief that an Indigenist paradigm can be used by anyone who chooses to follow its tenets. It cannot and should not be claimed to belong only to people with 'Aboriginal' heritage". This makes me feel a bit more comfortable, but still uneasy about the task ahead - though, I know I need to embrace this uncertainty. I want to distance myself from the objective lens I was trained to use and instead reveal a more personal perspective, allowing my personal biases and beliefs to assert themselves through the cultural and political process of research "because [research is] about coming clean (explicitly or not) about values and designing research methods based on those beliefs" (Kovach, 2005). Needless to say, I've continued with my research and I try my very best because I was taught that, "when I commit to something, then I must do it the best way I know how" (Steinhauer, 2002: 69).

2.2 Introduction

Early on in my research process, I was handed a copy Linda Tuhiwai Smith's seminal book, *Decolonizing Methodologies* (1999). After struggling through the first few chapters, it became apparent that our research builds upon the work of Indigenous and allied settler scholars throughout the *Decade of Critical Indigenous Inquiry* (Denzin et al., 2008) in articulating research methodologies that privilege Indigenous interests and perspectives (Kovach, 2010; Battiste et al., 2000; Martin, 2003; Denzin et al., 2008; Regan, 2010; Smith, 1999; Wilson, 2007; Wilson, 2008). As a young researcher trained in the natural sciences, I had an interesting journey familiarizing myself with critical theory, Indigenous methodologies, participatory action research, and literature that speaks to a role for allied settler researchers under an *indigenist* methodology (for example: Absolon, 2011; Battiste, 2000; Denzin et al., 2008; Johnson, 2008; Kemmis & McTaggart, 2005; Kovach, 2010; Regan, 2010; Simpson, 2008; Smith, 1999; Steinhauer, 2002). I use Shawn Wilson's (2007) term *indigenist* to remain inclusive while recognizing the limitations settler researchers face when engaging Indigenous methodologies and Indigenous Knowledge. The approach to research explained in this chapter contributes necessary historical context for research with Indigenous Peoples and outlines how I intend to examine the lingering colonial assumptions within the social innovation framework to increase its utility in Indigenous contexts.

This chapter begins with a review of existing literature on critical, decolonizing, and Indigenous methodologies, with a particular emphasis on the implications of this work for settler researchers. Through this review, I explain the importance of relationality, power, decolonization, and settler unsettling to a critical indigenist approach. Then, I describe the decolonizing methods I have struggled and strived to implement throughout the research process: participant observation, reflexivity, and settler storytelling. Finally, I conclude the chapter with a discussion of validity, including ethical considerations, and the limitations inherent in my approach.

2.3 A Critical Indigenist Research Approach

I define critical indigenist research as linking critical and Indigenous methodologies through action-oriented research to address Indigenous interests by supporting self-determination (Kovach, 2010; Denzin et al., 2008; Smith, 1999; Wilson, 2008). Under a critical indigenist research paradigm, the research agenda is set by or with the community such that establishing and maintaining a relationships becomes central to the entire research approach (Johnson, 2008). Further, research is focused on opportunities (as opposed to problems) and processes are holistic, iterative, and inclusive (Johnson, 2008; Kovach, 2010; Smith, 1999; Steinhauer, 2002; Wilson, 2008). Clearly stating the purpose and explaining the intent of the proposed project is also central to critical indigenist research, highlighting its moral component. Finally, critical indigenist research embodies a critique of neoliberal political and economic progress generally – it is situated in the "wider framework of self-determination, decolonization and social justice" (Smith, 1999). A critical indigenist approach shares many characteristics with community-based, participatory and action-oriented research approaches, emphasizing real-life events over abstract phenomenon to produce practical knowledge and benefits for community research partners (Kemmis & McTaggart, 2005; Reason & Bradbury, 2010; St. Denis, 2004). Another point of commonality is that critical indigenist research manifests itself differently in varying contexts – we must be flexible and adaptive to what is/is not appropriate or respectful from case to case. Kemmis and McTaggart's (2005) characterization of participatory action research resonates with a critical indigenist approach as they are both social process that are practical and collaborative, emancipatory, critical, reflexive, and transformative in both theory and practice. However, the emphasis on Indigenous Knowledge and Practice through the application of Indigenous methodologies within a critical indigenist approach differentiates it from these traditional research methodologies.

Shawn Wilson (2007) notes that, "it is my belief that an Indigenist paradigm can be used by anyone who chooses to follow its tenets. It cannot and should not be claimed to belong only to people with 'Aboriginal' heritage". Identity issues regarding whether or not one needs to identify as Indigenous in order to carry out research from this perspective has been compared with the issue of gender in feminist research (Smith, 1999; Wilson, 2007). Just as one can be a man and also a feminist, one can identify as a settler and follow an indigenist paradigm (Wilson, 2007). However, many Indigenous scholars have questioned settlers' roles in indigenist research, including Wilson himself (Kovach, 2005; Smith, 1999; Steinhauer, 2002; Struthers, 2001; Wilson, 2008). After a year struggling to understand my role as a settler researcher, I believe Paulette Regan best describes the task set out for allied settler researchers:

> It became obvious to me that we are still overly focused on researching, analyzing, and interpreting Indigenous experience. What is missing is a corresponding research emphasis on understanding our own experiences as the descendants of colonizers and the primary beneficiaries of colonialism (Regan, 2010: 33).

I will discuss this approach later on in this chapter, however it is important to clarify here that I intend to contribute a decolonizing settler counter-narrative, not as yet another privileged academic (though I recognize that my position includes this perspective), but as an uncertain, uncomfortable, unsettled young researcher and emerging Indigenous ally. Shawn Wilson suggests that, "it is the use of an Indigenist paradigm that creates Indigenous knowledge" (Wilson, 2007: 194). I disagree with Wilson in the context of settler researchers – settler researchers cannot produce Indigenous Knowledge using solely an indigenist research approach. However, following a critical indigenist approach as a settler researcher can have a powerful transformative impact on the way in which research is conducted within the academy and can also help to describe how relationships with Indigenous Peoples beyond research can be meaningful and productive.

I differentiate a critical indigenist approach from case study as "case study is not a methodological choice but a choice of what is to be studied"

(Stake, 2005: 443). Accordingly, Yin (2009) defines case study as a form of empirical inquiry that examines a phenomenon in its current, real-life, and practical context, necessary when there are uncertain boundaries between the phenomenon and the context of the case. Following Yin (2009), two case studies were conducted - the context of each *Anishanaabe Maamwaye Aki Kiigayewin* and the Mississaugas of the New Credit First Nation is critical to understanding Indigenous innovation as presented in this thesis and, although generalizable, this concept should not yet be discussed as separate from the cases.

2.3.1 Relationality and Relational Accountability
If research doesn't change you as a person, then you haven't done it right (Wilson, 2008: 135).

The first time I moved beyond complete confusion in thinking about Indigenous worldviews and relationality was at a lecture by Opaskwayak Cree scholar Shawn Wilson in early 2012 at Ryerson University. He articulated indigenist research paradigm as built on the relationships that one has to other people, the land or environment, the cosmos, and the ideas being researched, sequentially yet holistically addressing our emotional, physical, spiritual and mental selves (Wilson, 2008). Indigenous worldviews are based on relationships or sets of relationships; therefore "reality is not an object but a process of relationships" (Wilson, 2008: 73). This active relationality may be described using a chair as an example - in the Cree language, there is no word for *chair*, it is instead *the thing that you sit on* (Wilson, 2008). Therefore, the relationship between the chair and the person who might sit on it is what matters, not the chair itself. Similarly, Indigenous Knowledge is based on the relationship between objects, not the objects themselves – that is, "our systems of knowledge in their context, or in relationship" (Wilson, 2008: 74). To put it another way, "nothing could be without being in relationship...our systems of knowledge are built by and around and also form these relationships" (Wilson, 2008: 77). There is no hierarchy between relationships – people are no more

important than the environment, the cosmos, or ideas and knowledge – all "are equally sacred" (Wilson, 2008: 87).

Statements about relationships made by indigenist and Indigenous scholars are now understood with deeper meaning. For example, in the previous section I stated that research relationships developed with Indigenous colleagues are critical to the research process. This implies more than simply communicating with a partnering community, it involves relational accountability. Relational accountability refers to the ethical responsibility every indigenist researcher has to answer to his or her relations – other people, the land or environment, the cosmos, and the ideas being researched – throughout the research process (Wilson, 2008). Building on the work of Verna Kirkness (Kirkness & Barnhardt, 2001) and Cora Weber Pillwax (2001), Shawn Wilson (2008) explains that the 3 R's of Indigenist research, *respect*, *reciprocity* and *responsibility* emphasize the ethical obligations researchers have to maintain and nurture healthy relationships throughout the research process. Therefore, indigenist research has a clear purpose – to create new relationships (Wilson, 2008).

I am slowly learning the implications of adopting a relational perspective. Steinhauer (2002) states that, "we must never think of ourselves in isolation. Everything we do, every decision we make, affects our family, our community, it affects the air we breathe, the animals, the plants, the water in some way". Under an indigenist paradigm, we are accountable to all our relations – since everything exists relationship, we are accountable to everything. Research, then, must extend beyond the institution, beyond the office, and enter into everyday life.

2.3.2 Power and Research

If you don't know what you don't know, it's difficult to recognize your own level of ignorance (Absolon, 2011: 147).

Obtaining knowledge through the research process is an act of power – research "is not an innocent or distant academic exercise but an activity that

has something at stake and that occurs in a set of political and social conditions" (Smith, 1999: 5). For example, the ways in which knowledge about Indigenous Peoples has been collected, interpreted, categorized and communicated ensured the colonial domination of Indigenous Knowledge systems:

> *History is about power. In fact history is mostly about power. It is the story of the powerful and how they became powerful, and then how they use their power to keep them in positions in which they can continue to dominate others. It is because of this relationship with power that we have been excluded, marginalized and 'Othered'* (Smith, 1999: 34).

Through this statement, Smith (1999) clearly demonstrates one of Foucault's central theses, "the exercise of power perpetually creates knowledge and, conversely, knowledge constantly induces effects of power" (Foucault, 1980: 52). Narratives are key to enforcing social order through the language and discourse used to describe the world. Settler researchers have a responsibility to critically analyze the narratives they engage with through the research process as even the best intentioned among us may "be viewed as an instrument of postcolonial hegemony and control" (Robbins, 2012: 71).

In the context of resource and environmental management, it is important to mention the ease with which colonial wilderness narratives arise, particularly as they relate to Indigenous Peoples, knowledge, and the land. In Canada, Indigenous Peoples have been characterized as living in anachronistic spaces – uncivilized, savage, and inhuman – allied with nature and a barrier to European economic and political progress (Braun, 2002; McClintock, 1995). Writing on the political ecology of forestry on Canada's west coast, Braun (2002) explains the recent shift in this narrative as environmentalists adopted the preservation of indigeneity as a rationale for environmental protection. Although more romantic, this narrative retains problematic assumptions and binaries embedded in its predecessor, that is, to identify as Indigenous one must live traditionally, in harmony with nature and in opposition to modernity (Braun, 2002; Cruikshank, 1998). Summarizing this shift in perspective Braun (2002: 92-93) states, "modernity's Other now comes to be seen not as that which stands in

the way of modernity, but as those people and cultures who hold the key to its sustainable future". In this way, adopting a critical perspective explicitly recognizes intentional and unintentional exercises in power as knowledge over Indigenous identities within the narratives emerging from historical resource conflicts (Braun, 2002; Nadasdy, 2003). Therefore, the link between indigenist research and advocacy, activism and empowerment becomes clear when put into this context – research in Indigenous communities should identify embedded political agendas by critically examining the narratives used to inform and describe research outcomes.

Within the university system, scholarly research is primarily subject to approval funding agencies and university departments whose express mandate is to regulate research quality, though there is movement to involve the community with which the research is conducted in this process (Kovach, 2010). In order to be published – a fixed requirement for any researcher functioning within academia – research must undergo rigorous scrutiny by *experts* in their field. Manuscripts forging ground in journals where Indigenous or indigenist research is uncommon are often "measured against a contrasting worldview that holds a monopoly on knowledge and keeps divergent forms of inquiry marginalized" (Kovach 2010: 84). In struggling against the powerful status quo, self-reflection becomes critical to avoid "being absorbed by Western thought once inside colonial spaces" (Kovach, 2010: 85). Porsanger (2004) presents a list of questions based on Smith's (1999) work to help guide this reflection throughout the research process, "Whose research is this? Who owns it? Whose interests does it serve? Who will benefit from it? Who has designed its questions and framed its scope? Who will carry it out? Who will write it up? How will the results be disseminated?" (113). In this way, creating space for advocacy and activism through Indigenous and allied settler counter-narratives may ease some tension between conventional academic and indigenist approaches to research.

2.3.3 The Decolonization Project

Decolonization is not 'integration' or the token inclusion of Indigenous ceremony. Rather, it involves a paradigm shift from a culture of denial to the making of space for Indigenous political philosophies and knowledge systems as they resurge, thereby shifting cultural perceptions and power relations in real ways (Regan, 2010: 189).

2.3.3.1 Beyond Post-Colonial

Indigenous communities around the world continue to experience colonialism through political-economic situations that perpetuate inequalities in education, health care, income and opportunities (Denzin et al., 2008; Kovach, 2010; Smith, 1999; Wilson, 2008). Ongoing colonial realities necessitate a brief review of the term *post-colonial*. Smith states that, "naming the world as 'post-colonial' is, from [I]ndigenous perspectives, to name colonialism as finished business" (1999: 98). Further, the term implies a linear progression of history that both dominates alternative interpretations and further perpetuates dualism in both power and time – "colonialism returns at the moment of its disappearance" (McClintock, 1992). Approaching critical indigenist research from post-colonial narratives masks the social and environmental injustices perpetuated by contemporary political and economic preoccupations with progress and material gain (Gibson, et al. 2005; Smith, 1999). Instead, critical indigenist research actively and explicitly addresses inequalities in power, opportunity and equity to promote respect for Indigenous Knowledge and Practices (Smith, 1999). Kovach (2010: 29) calls for the, "non-Indigenous scholar to adjourn disbelief and, in the pause, consider alternative possibilities" under a decolonizing approach. In establishing these alternative spaces, settler researchers may find a deeper understanding of Indigenous self-determination and be able to contribute a role for allied settlers in pursuing decolonizing research agenda.

2.3.3.2 Including a Decolonizing Approach

A decolonizing approach to research is about opening space in academia for decolonizing theories and about action, in the form advocacy and activism

(Denzin et al., 2008). Settler researchers need to begin to turn a critical gaze upon themselves and their role in the academy and ask how engaging in research with a decolonizing approach (or that which we claim to be decolonizing) has transformed theory and praxis at the personal level. Speaking out or back to the academy through subjective, critical personal narratives can provide several useful insights regarding: the relational accountability (ethics) demonstrated by the researcher (Wilson, 2008), the individual transformations made possible through decolonizing methods (Denzin et al., 2008; Regan, 2010), and the importance of coming out as a researcher (Absolon, 2011; Regan, 2010). Decentralizing the research from the privilege of academia and creating space for Indigenous ways of knowing are key goals of the decolonizing research project (Denzin et al., 2008). It is also clear that acting on or performing decolonizing methodologies is a critical component – actively pursuing social justice with Indigenous Peoples demands practical results from the research process (Kovach, 2010). There are several ways to fulfill the responsibility to advance decolonization through the research process. For example, Kovach (2005) describes decolonization within the context of her physical, emotional, mental and spiritual relationships as an Indigenous woman. Others have expressed decolonization as part of the ethical responsibilities associated with indigenist research; respect, responsibility and reciprocity (Wilson, 2008). Writing her perspective as an allied settler researcher and practitioner, Paulette Regan situates decolonization in the context of healing: "To some degree the very concept of healing has become analogous with decolonization" {Regan 2010: 175}. Therefore, the lesson is that there is not one definition or one *right way* to engage in decolonization. I believe decolonization is about self-determination and celebrating the survival of Indigenous Peoples while actively promoting the recovery, resurgence, and development of Indigenous Knowledge and Practices (Smith, 1999). As settler researchers, we must be humble in our approach and "begin from where we are, not from where we want to be, remembering that decolonization is a lifelong struggle filled with uncertainty and risk taking" (Regan, 2010: 218).

2.3.4 A Role for Settlers in Critical Indigenist Research

Sometimes we are offered a gift that we do not want to accept. Perhaps we do not recognize the gift because it feels like a burden, like a heavy responsibility that we don't quite know how to carry. And we are afraid that we will do so poorly. I now see that part of the struggle of this writing is to make sense of my own unsettling in a way that honours the gift. So I write as honestly as I can about what I have learned as a Settler in order to share it with other Settlers, in the hope that it might serve as some small catalyst. This is my truth (Regan, 2006: 222; italics removed).

2.3.4.1 Critical Indigenist Research: A Burden and a Blessing

I have come to understand that as an emerging allied settler researcher, I have a responsibility to recognize the colonial assumptions and beliefs that persist within me. To minimize our contribution to perpetuating colonial narratives, critical indigenist researchers must engage in personal decolonization by continually reading and employing the strategies (within reach) laid out by Indigenous scholars, engage in unsettling experiences, and continually reflect on and respond to the ways colonial assumptions creep into our research (Denzin et al., 2008; Nicholls 2009; Porter, 2004; Regan, 2010). This task is less than straightforward, and it has led to considerable personal anxiety throughout the research process. I often find myself asking why I didn't just do a degree in the natural sciences, or at the very least, why I didn't take on a more straightforward project. Anishnaabe scholar Kathleen Absolon encountered similar sentiments among students engaged in an Indigenous methodology, "At times it would be quicker to do re-search that was non-involved and detached. That really isn't an option though, because once knowledge is achieved we can't go back to ignorance" (Absolon, 2011: 148). Decolonizing oneself through the research process is not to be taken lightly – borrowing a word from my mother's ancestors, it takes *sisu*[1] and demands commitment and personal responsibility beyond what is normally required from a research endeavor. As settler critical indigenist researchers, we have responsibilities to both our own communities and the Indigenous communities with which we work. Through research and

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1. Sisu is a Finnish word that roughly translates to being strong, resilient, and with perseverance.

practice, inside and outside the academy, we are working to build stronger relationships by re-envisioning research with Indigenous Peoples and developing shared meanings to articulate what a critical indigenist approach is.

2.3.4.2 Unsettling Pedagogy of Discomfort

I, as Paulette Regan (2010) did, found Boler and Zembylas' (2003) pedagogy of discomfort helpful in understanding the transformative power of unsettling, emotionally intense experiences. This pedagogical approach is particularly helpful to articulate a role for settler learning in critical indigenist research:

> *To engage in critical inquiry often means asking students to radically reevaluate their worldviews. This process can incur feelings of anger, grief, disappointment, and resistance, but the process also offers students new windows on the world: to develop the capacity for critical inquiry regarding the production and construction of differences gives people a tool that will be useful over their lifetime. In short, this pedagogy of discomfort requires not only cognitive but emotional labor* (Boler & Zembylas, 2003: 111).

The unsettling pedagogy discussed by Regan (2010) and the pedagogy of discomfort outlined by Boler and Zembylas (2003) builds on the critical pedagogy outlined by Paulo Freire (2006). In *Pedagogy of the Oppressed*, Freire (2006: 49) notes that, "solidarity requires that one enter into the situation of those with whom one is solidary; it is a radical posture". Witnessing the communication, exchange and performance of Indigenous Knowledge and Practices can involve overwhelming vulnerability when learning from a place of uncertainty and a pedagogy of discomfort. In early 2012 I was invited to attend a multi-day Traditional Conference – an Anishinaabe Teaching Lodge – in Timmins, Ontario. Kathy Absolon's describes these sacred ceremonies and communicates their importance: "Our teaching lodges and sacred medicine lodges belong in the community for our people and children and they are protected from the academy. We must be careful what sacred knowledge methods we bring into the academy. We have to be very careful about what we say or write about. There are sacred pathways that can't be scrutinized by the

academy" (Absolon, 2011: 160). My experience in Teaching Lodge taught me that to fully experience the transformative power of ethical witnessing as a settler, one has to surrender to vulnerability and holistically embrace a state of being where the heart is open. In describing her experience on the Canadian Truth and Reconciliation Commission, Paulette Regan describes listening as a settler in these spaces as "engaging our whole being, using silence not to deny but to welcome and recognize the transformative possibilities" (Regan 2010: 192) – we have to leave our analytical brains at the doorway and enter as *vulnerable not-knowers*. Expanding on the transformative potential of the pedagogy of discomfort, Boler and Zembylas (2003: 132) posit that this approach "creates both its critical effect (making it more difficult and perhaps discomforting for educators and students to think, feel, and act in accustomed ways) and its positive emotional labor (clearing a space for a collective process of thinking otherwise and considering the conditions for a transformation of what individuals are supposed to be)". The spaces that emerge from positive emotional labour flowing from discomforting experiences may open the decolonizing space necessary to unsettle colonial assumptions within settlers. It is from these spaces and their transformative power that the relationship between colonizers and colonized may begin to heal (Regan, 2010).

2.3.4.3 Competing Voices - Uniting Voices

Finally, I will return to identity and privilege within a critical indigenist approach. I am aligned with Kathy Absolon (2011: 162) in believing that "non-Indigenous people can employ some shared elements, such as respect, community benefit, relationship building and so on, but might not locate from similar cultural, spiritual, historical, personal or political experiences as an Indigenous methodology would entail". I also believe there is a great deal to learn from Indigenous methodologies and Indigenous ways of knowing; therefore I have chosen to include lessons from these methodologies to the extent possible to fulfill the decolonizing aims of this research. In addition, I recognize Indigenous scholars' authority on Indigenous issues and, following

Kathy Absolon (2011: 150), I include these voices "as a political and academic act of validation [with the] goal to 'lift up' Indigenous knowledge". My voice as a settler researcher appears in this thesis to describe the methodology, conceptual framework, and to tie together the personal narratives. The Indigenous voices emerge both through the cited Indigenous scholars and in the case studies directly through the writing process and indirectly through discussions that guide my interpretation of the findings in each context. The multiple voices within this work are neither actively competing, nor do they necessarily convey the same message. As emphasized above, settler researchers must be comfortable in the uncomfortable, uncertain, vulnerable not-knowing that embodies a critical indigenist approach. The space occupied by difference demands respect, thus there may be occasions in which two perspectives are reported to honour my relationships with Indigenous collaborators in this research project.

2.4 Methods

2.4.1 Participant Observation

One of the fundamental methods of any participatory research project is participant observation. Bryman (2006: 402) describes the task of participant observation for the researcher as immersing him or herself in a "group for an extended period of time, observing behaviour, listening to what is said in conversations both between others and with the researcher, and asking questions". Throughout interactions and dialogue with community partners, my status as a researcher was known at all times. This is particularly important to note in the context of critical indigenist research because private, sacred, or otherwise privileged knowledge may be shared but must be treated with respect - as settler researchers it is important to critically reflect on what we have learned without assuming the ability to understand and interpret Indigenous Knowledge (Absolon, 2011; Creswell. 2009; Regan, 2010).

Along with observations and conversations during planning and research meetings, I have participated in focus events with both *Anishanaabe Maamwaye*

Aki Kiigayewin and the Mississaugas of the New Credit First Nation (MNCFN). In Timmins, *Anishanaabe Maamwaye Aki Kiigayewin* continues to hold regular Traditional Conferences that involve intercultural knowledge exchanges and healing (spiritually, mentally, emotionally, and physically) to promote more holistically responsible mine reclamation and closure. It is through unsettling experiences with the *Anishanaabe Maamwaye Aki Kiigayewi's* Knowledge Guardians and Traditional Practitioners that I have begun to understand the need to contribute to Regan's (2010) call for settler narratives that tell of unsettling, transformative experiences.

The Mississaugas of the New Credit First Nation are currently tackling ongoing structural colonialism at a different scale – they seek to directly address the Ontario government's policies regarding land use and development. Specifically, this involves building relationships between Indigenous nations and neighbouring municipalities to cope with increasing administrative tasks associated with the legal duty to consult. A workshop series is planned for summer 2013 to articulate MNCFN planning and development concerns.

Participant observation in both contexts has helped me to understand how social innovation can be used to describe efforts by Indigenous Peoples to promote the resurgence of Indigenous Knowledge and Practice and determine potential roles for settler allies in these processes.

2.4.2 Mindfulness and Awareness: Reflexivity in Critical Indigenist Research

The power dynamic inherent in the research process may be partly addressed through an iterative process of self-reflection. Emerging from feminist attempts to attain greater power balances between research*er* and research*ed,* reflexivity as a qualitative research method uses self-awareness to analyze the experiential aspect of research, explicitly situating researchers within their research (Finlay, 2002a; Nicholls, 2009). As a qualitative method, it has been described as tapping "into a more immediate, continuing, dynamic, and subjective self-awareness" (Finlay, 2002a), eliciting deep inward knowing in the meaning-making process (Kovach, 2010), and yielding insight into

assumptions, behaviours, ideologies and beliefs that shape our own, individual perception of reality (Cunliffe, 2004). A primary motivation for using critical reflexivity is to address power imbalances, therefore engaging in critical reflexivity must remain purposeful at all times (Finlay, 2002a; Nicholls, 2009). Linda Finlay stresses that researchers should, "use personal revelation not as an end in itself but as a springboard for interpretations and more general insight" (Finlay, 2002a: 215). Accordingly, *coming out* as a researcher through reflexive analysis is a powerful and political tool - one must always be cautious to ensure it is executed in way that meets the intended purposes (Finlay, 2002b). Reflexivity should commence at the same moment as the desire to conduct research to ensure reflexive practice throughout the research process (Finlay, 2002b; Kovach, 2010).

Using an indigenist lens, Kovach (2010) states that reflexivity goes well beyond explicitly stating subjectivity in research – it is empowering others (living and non-living) through reflection that honours, "the primacy of direct experience, interconnectedness, relationship, holism, quality, and value" (Kovach, 2010: 34). Taking my first steps into critical reflexivity as a young researcher has been less than straightforward. Johnson (2008: 134) offers insight into the method's practicalities in Indigenous contexts, "generally I discovered my own ignorance and arrogance through self-reflection, but occasionally research partners have confronted me with my arrogance". In this daunting and sometimes painfully revealing task, I take comfort in Smith's (1999: 5) words, "Indigenous research is not quite as simple as it looks, nor quite as complex as it feels!".

2.4.3 Settler Storytelling

Storytelling and methods like personal narrative also fit the epistemology because when you are relating a personal narrative, you are getting into a relationship with someone. You are telling your (and their) side of the story and you are analyzing it. When you look at the relationship that develops between the person telling the story and the person listening to the story, it becomes a strong relationship (Wilson, 2001: 178).

I have embedded critical personal narratives, or settler stories, in this thesis to contribute to my decolonizing aims (Denzin et al., 2008). Including a decolonizing approach involves going beyond participant observation and reflexivity – I needed to include a critique of my own experience as an emerging settler ally to understand the personal transformation that became apparent to me as I engaged in the research process. Therefore, to complete the unsettling pedagogy described in the previous section, I have chosen to use settler storytelling in this work to honour and document the experiences and insights I gained throughout my thesis research (Regan, 2010).

By telling pieces of my own story, I do not intend to tell the story of *Anishanaabe Maamwaye Aki Kiigayewin*, the Mississaugas of the New Credit First Nation, or the Indigenous colleagues with which I work. In contrast, settler storytelling is "not undertaken from the position of experts who impart knowledge to passive listeners. Rather, storytellers share their own life experiences with humility as a way of provoking critical reflection in others, while continuing to learn themselves" (Regan, 2010: 32). By interpreting social innovation from a critical indigenist perspective, I intend to turn an analytical lens on myself and ask how I (as a settler) understand the transformative potential embodied by the resurgence of Indigenous Knowledge and Practice.

Finlay (2004b: 533) identifies the central challenge of reflexivity as the desire to "identify that lived experience that resides in the space between subject and object". This lived experience may be connected to both Regan's (2010) settler storytelling and Wilson's (2008) description of the sacred space between relationships. Engaging in critical reflexivity and fostering awareness and analysis of the lived experience are ways that critical indigenist researchers can honour the responsibilities they have to their relationships with other people, the land or environment, the cosmos and ideas as these relations come closer together. Anishanaabe scholar Roxanne Struthers concludes her discussion of Indigenous research with this insight:

> *Being present throughout the process, keeping it whole, and not breaking it into parts affords the research the possibility of fluidity, innovation, and*

freshness. Thus, an inclusive, holistic level of knowing can transpire as the researcher and the research participants travel the journey together (Struthers, 2001: 132).

The reciprocal nature of settler storytelling is one way to honour the relationships made between the ideas generated through research and the people who helped with the learning process: "decolonizing stories told in this manner are an interactive exchange between teller and listener in which both learn and teach" (Regan, 2010: 32). For the purposes of this thesis, I have interpreted the task of writing critical personal narratives as producing counter-narratives to conventional qualitative approaches - a very personal, subjective, and emotional exercise - and reporting a critical account of what I have learned through my unsettling experiences. This point of commonality between reflexive analysis, settler storytelling, and relational awareness is an interesting area for further exploration and understanding.

2.5 Validity & Ethical Concerns

Drawing on Shawn Wilson's (2008) explanation of relationality described above, relational accountability may be described as the ethical responsibility every indigenist researcher has to answer to all his or her relations – other people, the land or environment, the cosmos, and the ideas being researched – throughout the research process (Wilson, 2008). The three R's of Indigenist research, *respect*, *reciprocity* and *responsibility* emphasize the ethical obligations researchers have to maintain and nurture healthy relationships throughout the research process (Wilson, 2008). Incorporating a participatory approach, *coming out* through critical reflexivity, and incorporating decolonizing settler stories contributes to an ethical approach (Creswell & Miller, 2000; Finlay, 2002b; Nicholls, 2009; Regan, 2010).

Some requirements for validity are similar between critical indigenist and conventional research approaches. For example, validity is addressed in this research by triangulating methods, collaboratively reviewing findings and interpretations, co-authoring resulting manuscripts with Indigenous colleagues

and the university team (Creswell & Miller, 2000; Kovach, 2010; Wilson, 2008). In addition, under a critical indigenist approach, seeking validity and ethical conduct in research flows from relational accountability – to the ideas and knowledge produced, to Indigenous research partners, to the spirits and supernatural beings (particularly when sacred knowledge is considered), and to the land or environment from which knowledge flows (Wilson, 2008).

Validity under a critical indigenist approach is judged by the academic system, Indigenous colleagues, and the inward knowing and trust which flows though the integrity of the researcher (Kovach, 2010; Regan, 2010; Wilson, 2008). A tension arises with the task of evaluation because adhering to the lessons of relationality means critiquing or judging another's ideas is inappropriate - "one person cannot possibly know all of the relationships that brought about another's ideas. Making judgment of others' worth or values then is also impossible" (Wilson, 2008: 92). It is particularly difficult to follow this lesson from within a *critical* indigenist approach. I chose the critical components of this research to areas in which I am presenting information solely from my own perspective as a settler researcher - for example, in my personal reflections, in writing critical personal narratives, and in evaluating social innovation theory. To be critical when ethically witness to Indigenous Knowledge and Practices is wholly inappropriate and would disrespect the relationships formed between the speaker and her or his understanding.

2.6 Acknowledging the Limitations of a Settler Perspective: Bringing the Metaphysical to Academia

Despite recent acceptance of subjectivity, a dualism between spirituality and science is actively upheld in higher education institutions. Kovach states "sacred knowledge is not really accepted in Western research, other than in a peripheral, anthropological, exotic kind of way (Kovach, 2010: 67). However, several Indigenous scholars share their personal experiences with the metaphysical world throughout their research journeys (for example, Graveline, 2000; Kovach, 2005; Struthers, 2001; Weber-Pillwax, 2001). Roxanne Struthers

describes the interaction between the physical and metaphysical worlds as *the norm* within Indigenous communities, stating that "internal institutions such as spirit messengers, guides, teachers, mentors, tradition, ritual, dreams and visions" are part of a holistic system based on spiritual order (Struthers, 201: 128). Reflecting on how to incorporate her spiritual experiences into her written research, she comments, "no absolute scientific process depicts how this type of knowledge is transmitted" (Struthers, 2001: 129). Margaret Kovach reflects similarly on her spiritual insights, "while I can't cite these experiences using APA format or validate them according to a standard research protocol, they are huge in my own construction of knowledge" (Kovach, 2005: 16). Perpetuating the dualism between spirituality and scientific knowledge allows for the continued domination of Indigenous methodologies. If "Indigenous people get information from many sources including spiritual places", then knowledge and insights obtained from spiritual experiences must be considered valid under a critical indigenist approach (Kovach, 2005: 13). Accepting spirituality through mindfulness and awareness "affords the 'space' to decolonise western research methodologies, then harmonise and articulate Indigenist research" (Martin, 2003: 14). Embracing holism on this level, respectfully and in a good way, will enhance the knowledge gathering and meaning-making processes under a critical indigenist approach. The importance of spirituality is clear, however questions still remain – how can we write about spiritual experiences within the context of academia while still respecting these relationships? More practically, how best can a critical indigenist researcher engage his or her spiritual relations?

By engaging in a critical indigenist approach, I do not expect to achieve spiritual acumen (to expect this sort of revelation in such a sort timeframe would be inappropriate, if not ignorant), however I do hope to gain greater understanding of others' perspectives, perhaps uncovering meanings and interpretations otherwise inaccessible under a traditional research approach. This leads to a central insight: I am limited by my position as a Canadian, a woman, and an English-speaking settler researcher trained at a western

university. I know only what I can understand considering my position and prior experience and do not expect to fully understand all that has been shared with me by Indigenous colleagues. Accepting the difference and uncertainty that lies between the knowledge systems I encounter is fundamental to my approach.

2.7 Conclusion

This Chapter began by positioning critical indigenist research at the intersection of critical and Indigenous methodologies and identifies its primary aim as advancing social justice for Indigenous Peoples through the decolonization of conventional research practices. Therefore, I define critical indigenist research as linking critical and Indigenous methodologies through action-oriented research to address Indigenous interests by supporting self-determination (Kovach, 2010; Denzin et al., 2008; Smith, 1999; Wilson, 2008). I explain a critical indigenist approach through the themes of relational accountability, power and the research process, decolonizing methodologies, and a role for settler allies in indigenist inquiry. By engaging in participant observations, reflexivity, and settler storytelling, I strive to conduct research that is robust and ethical while respecting my limitations as a young, Canadian settler researcher. The metaphysical components of this research - though not discussed in detail - are ongoing and ever-present, particularly when in the company of Indigenous colleagues. By learning and researching through a critical indigenist approach, I aim to contribute space for alternative means of knowledge production and expand on what it means to learn from unsettled, uncomfortable position as an emerging settler ally.

Chapter Three: Literature Review

3.1 Introduction

The research questions posed in this thesis engage the ongoing resurgence of Indigenous Knowledge and Practices, and therefore require particular care with respect to the methodologies involved in academic inquiry. Accordingly, I chose to present the methodology and methods framing this research before this literature review to explicitly state my perspective, outline my major methodological influences, and make explicit my intentions for research.

The following discussion yields insight into the need for social innovation in Indigenous communities and why conventional approaches may be problematic. This chapter contains two major sections: a literature review and a conceptual framework. I begin the literature review by providing historical context for critical indigenist research. I also explain case law, legislation, and varying interpretations of collaboration as they relate to environmental planning and management with Indigenous Peoples living in Canada. I conclude the first component of the review by describing key themes in the Indigenous resurgence movement. The second component explains the theoretical foundations of the social innovation framework. Minding the space constraints in this thesis, I chose to restrict the synthesis to resilience in social-ecological systems, Giddens' theory of structuration, key themes in social innovation, and a summary of how novelty is used in the social innovation literature to engage multiple knowledge systems.

I conclude this chapter by introducing a conceptual framework, or model, for Indigenous innovation. First, I explain the common ground and areas of concern within the social innovation framework from a critical indigenist perspective. The information presented in this section is explored in relation to the *Anishanaabe Maamwaye Aki Kiigayewin* case study in Chapter 4. I then link Smith's (1999) 25 Indigenous Projects, as well as projects suggested by other scholars, to the key themes, roles, and processes of social

innovation. The resulting multi-scalar model for Indigenous innovation is discussed in relation to the Mississaugas of the New Credit case study in Chapter 5. Through the following literature review and conceptual framework, I aim to describe social innovation from a critical indigenist perspective with the intent to engage the social innovation framework in a more useful way for Indigenous communities.

3.2 On Indigenous Peoples Living in Canada

3.2.1 The Development of Critical Indigenous Research

Many indigenist scholars chose to include links to critical theory and feminist inquiry in their methodologies to address unequal power relations with the aim of emancipation and social justice for Indigenous Peoples (Johnson, 2008; Kovach, 2010; Smith, 1999; Smith, 2005). Creswell and Miller (2000: 126) describe critical theory as, "a challenge and critique of the modern state...researchers should uncover the hidden assumptions about how narrative accounts are constructed, read, and interpreted". Therefore, individual political, economic, social, historical, gendered and ethnic heritage ultimately shape the perspective and resulting narratives presented through research (Creswell & Miller, 2000; Denzin & Lincoln, 2008). Actively situating oneself as a gendered observer to critically disrupt and deconstruct cultures – most often neoliberalism – as perpetuated through the dominant education system is a form of critical pedagogy (Giroux, 2006). Reflecting on his seminal *Pedagogy of the Oppressed*, Paulo Freire (1994: 9) states that hope is important to maintaining action towards more positive futures: "Without a minimum of hope, we cannot so much as start the struggle". This struggle indicates a significant role for practical research outcomes - this resonates with the need for action under Indigenous and decolonizing methodologies (see Chapter 2). By examining the nature of knowledge production and dissemination, critical pedagogy seeks to empower and emancipate subjugated knowledges with the aim of establishing a more just and democratic society (Denzin et al., 2008).

Critical theories - especially post-colonial theory – have further strength in their critique of binaries and dualism prevalent in the discourse of imperial science (Robbins, 2012). For example, binaries such as humans/nature, modern/primitive, us/them are absent from Indigenous perspectives, thus their deconstruction is useful in progressing toward an Indigenist research paradigm. However, identifying these binaries and dualisms as an individual trained under the dominant education system is not a simple task – "how to think/be in non-binary terms is a challenge when we live in a binary world" (Kovach, 2005). The issue of identity in research tends to include multiple binaries. Who may conduct feminist and Indigenist research? What are the underlying assumptions of privileging these perspectives? Researchers must exercise caution in this area - there may be a tendency to consider women as closer to nature or more knowledgeable than men (Robbins, 2012). Similarly, there may also be a tendency to consider Indigenous Knowledge(s) as more valuable or accurate than those arising from western academic research (Robbins, 2012). These binary assumptions may be examples of the inability of conventional academic research alone to achieve the goals of self-determination, emancipation and social justice, in other words, "seeking social emancipation – or the escape from social injustices – cannot be achieved by using existing forms of scientific knowledge as a guide to these injustices" (Forsyth, 2003: 205).

Critical theory and critical pedagogy as forms of research are set in the historical context of imperialism. Research is considered to be a fundamental mechanism in perpetuating imperialism, dictating the ways in which knowledge about Indigenous Peoples is collected, categorized, and communicated to settler societies (Smith, 1999). Denzin et al. (2008: 4) summarize the link between research and colonial power:

> *Research, quantitative and qualitative, is scientific. Research provides the foundation for reports about and representations of the other. In the colonial context, research becomes an objective way of representing the dark-skinned other to the White world. Colonizing nations relied on the human disciplines, especially sociology and anthropology, as well as their field note-taking journaling observers, to produce knowledge about strange and foreign worlds.*

Therefore, the colonial connection to conventional forms of scientific inquiry, truth and power is intimately linked to research. Smith (1999) explains that Indigenous and decolonizing research can be a site of colonial resistance - it may be viewed as a local positioning of critical theory that includes the historical, political, and economic contexts of a critical indigenist research project. However, not all indigenist scholars believe that indigenist research should be discussed in relation to the dominant paradigm (Wilson, 2008). Comparing indigenist and western research approaches, or differentiating between them, may be perceived as justifying the use of an indigenist approach, reaffirming the dominance of the academy (Wilson, 2008). However, I believe Indigenous and settler allies may come together with a shared goal of situating research as a site for resistance and to elevate Indigenous Knowledge and Practice as sources of Indigenous resurgence.

3.2.2 A Brief Note on Case Law and Legislation

3.2.2.1 The Duty to Consult

Recognizing and clarifying the duty to consult in Canada began with the protection of Aboriginal rights under section 35 of the Constitution Act, 1982 (*The Constitution Act,* 1982*)*. Aboriginal rights arise from the prior occupation of Indigenous Peoples on the land and are a result of the unique social organization and cultures of the Indigenous Peoples claiming those rights (*R. v. Van der Peet*, 1996). Specifically, Aboriginal rights are defined as, "collective rights which contribute to the cultural and physical survival of Aboriginal peoples" (*R. v. Van der Peet*, 1996). Similarly, Treaty rights are defined in historical and modern day treaties signed between Indigenous Peoples and the Crown. In 2004, the Supreme Court clarified that the Crown is required to consult with Indigenous Peoples, "when the Crown has knowledge, real or constructive, of the potential existence of the Aboriginal right or title and contemplates conduct that might adversely affect it" (*Haida Nation v. BC*, 2004). The duty to consult flows from the honour of the Crown and requires

meaningful consultation at the strategic level to take "steps to avoid irreparable harm or to minimize the effects of the infringement" on identified Aboriginal or treaty rights (*Haida Nation v. BC*, 2004). The strength of the claim and the magnitude of the infringement on the right in question will determine the level of consultation that should accompany the proposed undertaking (*Haida Nation v. BC*, 2004). Although consultation does not grant veto power to Indigenous Peoples, both parties must work in good faith to understand potential infringements and act in a meaningful way to reduce or mitigate any impacts (*Haida Nation v. BC*, 2004).

The approach to Aboriginal rights described above is often the subject of critique from advocates of Indigenous resurgence and resistance (see for example, Alfred 2008; Simpson, 2008). The rights-based interpretations outlined above flow from a colonial legal, political, and economic context represented by the Canadian Supreme Court system and associated federal and provincial government policies, legislation and law. Furthermore, the formal treaties signed between Canada and Indigenous nations are considered nation-to-nation agreements (RCAP, 1996). Therefore, requiring Indigenous Peoples to adhere to federal and provincial legislation (such as the Mining Act or the Planning Act discussed below) without meaningful nation-to-nation negotiation is not consistent with these treaties. Alfred and Corntassel (2005: 601) state that, "living within such political and cultural contexts, it is remembering ceremony, returning to homelands and liberation from the myths of colonialism that are the decolonizing imperatives". Therefore, the persistently strained relationship between Canada and Indigenous Peoples living in Canada may be attributed an overall misunderstanding of historical context and failure to acknowledge a colonial present despite clear recommendations to address these conditions, perhaps most notably in the 1996 Royal Commission on Aboriginal Peoples (Alfred, 2009; Alfred and Corntassel, 2005; RCAP, 1996).

3.2.2.2 The Mining Act

Recent amendments to Ontario's Mining Act have raised several concerns regarding the implementation of the legal duty to consult. For example, the amended Mining Act suggests that the Ontario government intends to delegate consultation responsibilities for the most part to the private sector (Pardy & Stoehr, 2011; Mining Act, 2010). While the Crown is legally permitted to delegate consultation responsibilities, the duty to ensure meaningful consultation rests with the Crown, not the private sector (Pardy & Stoehr, 2011; *Haida Nation v. BC*, 2004; Simons & Collins, 2010). Notably, the amended Mining Act only refers to consultation in the context of proposed mining activities after staking has occurred, indicating that the ability to lay claim to mineral rights on Indigenous lands may proceed without prior consultation (Mining Act, 2010; Simons & Collins, 2010). Finally, the Mining Act does not make reference to the duty to accommodate known infringements on Aboriginal and Treaty rights as directed by the Canadian Supreme Court (*Haida Nation v. BC*, 2004; *Taku River Tlingit First Nation v. BC*, 2004; *R. v Sparrow*, 1990). The Sparrow decision (1990) clarified that the Crown must take steps to reach consensus through consultation and, if consensus is not reached, the Crown must justify projected infringements, act to mitigate potential impacts, and ensure fair compensation is made available for any rights infringements (Simons & Collins, 2010; *R. v Sparrow*, 1990). Failing to comply with Supreme Court direction and acting in the absence of good faith diminishes opportunities for meaningful relationship-building between the Crown and Indigenous Peoples.

3.2.2.3 The Provincial Policy Statement (PPS)

Ontario's Provincial Policy Statement (PPS), issued under the *Planning Act,* gives province-wide policy direction regarding development and land use (MMAH, 2012). The PPS undergoes a review process every 5 years as indicated under the *Planning Act* - the PPS was in a review period at the time of writing. Because the PPS is a clear statement of Ontario's stance on matters relating to

development and land use, it is useful in evaluating Ontario's approach towards Indigenous Peoples and their land. Notably, the last iteration of the PPS (2005) did not mention Indigenous, Aboriginal, or First Nations Peoples and lacks mention of both the duty to consult and accommodate and section 35 of the Constitution Act (Newman, 2009; *The Constitution Act,* 1982). This lack of direction raises concerns with respect to how Ontario intends to uphold the honour of the Crown in the context of development and land use and also increases tensions between government, industry and Indigenous Peoples in Ontario by raising uncertainties associated with decision-making.

Through insights obtained through collaborative research meetings, I have synthesized key points of interest from the 2012 draft PPS. First and foremost, the 2012 draft of the reviewed PPS includes significant amendments regarding clarification of the Crown's duties to Indigenous Peoples (MMAH, 2012). For example, the *Highlights of Proposed New Policy Directions* includes an explicit statement to improve relationships by "recognizing Aboriginal interests" (MMAH, 2012: 5). Here, the use of the term *Aboriginal interests* - though not defined in the document - demonstrates the strength of the proposed amendments because the term is inclusive in its potential scope and is not limited by definition in existing legislation. Section 1.2.2 of the draft PPS states, "planning authorities are encouraged to coordinate planning matters with Aboriginal communities, where appropriate" (MMAH, 2012: 17). However mild, the inclusion of these statements in a document that previously had no mention of Indigenous, Aboriginal, or First Nations Peoples is a step forward for planning in Ontario.

Areas for improvement in the draft PPS include the lack of clear definitions, pervasive use of exclusionary clauses, and the exclusion of Indigenous Peoples in several key sections. For example, rural areas and settlement areas are defined, however, reserve lands and Treaty lands are neither defined nor mentioned within the document (MMAH, 2012). This raises concerns regarding direction for cross-jurisdictional land use planning and may lead to conflict regarding the responsibilities of municipalities, provincial, and

federal government in consultation with Indigenous Peoples. As illustrated in section 1.2.2 quoted above, the use of exclusionary clauses - in this case, *as appropriate* - hinders the progress made in the 2012 iteration of the PPS as it deems the inclusion and consideration of Aboriginal interests voluntary. Finally, clear direction for cemeteries are critical to ensuring burial grounds are respectfully handled by Indigenous Peoples; this includes both known sites and those uncovered through construction, archeological excavation, or other means. In conclusion, although significant progress had been made through the 5-year review of the PPS, there are still major gaps in moving towards equitable and just planning in Ontario.

3.2.3 Collaboration & Difference

Institutional changes, including the case law and legislation discussed in the previous section, are leaning toward more participatory and inclusive forms of governance that emphasize environmental integrity. However, these changes still flow from the western knowledge framework of colonial Canada; identifying humans as separate from nature and valuing the certainty, simplicity, and predictability of scientific knowledge in managing the production of commodities from the landscape (Berkes, 2010). This approach is fundamentally incompatible with an Indigenous worldview - the inclusion Indigenous Peoples in resource governance and land use planning scenarios that operates to advance the appropriation and commodification of traditional lands is unlikely to address underlying inequalities in power (Porter, 2010). It is not uncommon for Indigenous People to refuse to comply with the terms of engagement set by the dominant group and when they decline to participate or:

> *When the [I]ndigenous person fails to address the needs or wishes of the well-meaning, would-be collaborator-colonizer, the latter experiences a shock...the resulting anxiety for the new outsider is not from loss of social power so much as loss of ability to define the conditions or the social-political space within which, they believe, getting to know each other becomes possible. The terms of engagement are no longer controlled by the dominant group* (Jones & Jenkins, 2008: 477).

Through this passage, Jones and Jenkins (2008) address the importance of understanding governance and planning as a process requiring ongoing participation and consultation. Adaptation and flexibility to variable perspectives and interpretations are also identified as essential characteristics in the development and maintenance of meaningful relationships between Indigenous Peoples and settler planners, government officials, or industry representatives. Despite the common ground shared with emerging, inclusive forms of governance (for example, Olsson et al., 2004; Armitage, 2007), most models are inherently embedded in the neoliberal market economy, which increases the challenges associated with establishing meaningful power sharing with Indigenous Peoples (Nadasdy, 2007). Though the power to make decisions, design processes, and implement the terms of engagement for including Indigenous Peoples is increasingly more inclusive, power is still held primarily by the dominant group, in other words, "inclusion means they – the Others – must be brought in to the center by us – the powerful" (Jones & Jenkins, 2008: 478). The conclusion here is similar to the critique of rights-based Canadian case law and legislation - including Indigenous Peoples in the dominant system through participatory governance and planning process may be a step in the right direction, but will be unsuccessful in establishing equal power sharing and the inter-cultural understanding necessary for a meaningful nation-to-nation relationship to emerge.

3.2.4 Indigenous Resurgence

Indigenous resurgence is a relatively recent term introduced to describe the emerging focus on living "an authentic Indigenous existence and the recapturing of physical, political, and psychic spaces of freedom" for Indigenous Peoples (Alfred, 2008: 11). Leanne Simpson explains resurgence as moving "from trying to transform the colonial outside into a flourishment of the *Indigenous* inside" (Simpson, 2011: 17). This interpretation helps to differentiate between decolonization and resurgence, two major themes in this thesis. I believe that everyone has a responsibility to participate in decolonizing projects

- those activities that challenge colonial institutions and assumptions that perpetuate inequalities for Indigenous Peoples. However, Indigenous resurgence, in my understanding, is a purely Indigenous movement that flows from restoring, practicing, and celebrating Indigenous Knowledge and Practices (Alfred, 2009; Alfred & Corntassel, 2005, Corntassel, 2012; Simpson 2008; Simpson, 2011).

In summarizing the themes of Indigenous resurgence, I have drawn from the work of Indigenous scholars Taiaike Alfred, Jeff Corntassel, and Leanne Simpson (Alfred, 2008; Alfred, 2009; Alfred & Corntassel, 2005; Corntassel, 2012; Simpson, 2008; Simpson, 2011). To add balance, I have included settler scholar Nancy Turner's thoughts on eco-cultural restoration (see section 3.8.2.1) as it contributes an explicit recognition of the need for ecological integrity in performing Indigenous Knowledge and Practice (Turner, 2005). The following list represents common objectives and projects for Indigenous resurgence evident in the writings of these scholars:

- *Spiritually-driven actions* - The experience and wisdom of Elders and Indigenous Knowledge Holders is critical to the (re)emergence and maintenance of Indigenous Knowledge and Practice within communities as they are familiar with the teachings and wisdom of the ancestors, cultural protocols (including appropriate pedagogy) and language. Through spiritually-driven actions guided by Elders and Indigenous Knowledge Holders, Indigenous Peoples may "transcend the controlling power of the many" to confront colonial existence (Alfred & Corntassel, 2005: 613);

- *Strong cultural and social institutions* - (Re)acknowledging cultural and social institutions as central authorities within Indigenous communities may lead to individual, familial, and community transformations as the teachings and wisdom of the ancestors is shared;

- *Connection with the land* - Humans and the environment are inseparable. Individual and community healing is made possible by re(connecting) with Traditional Territories and re(storing) Indigenous Knowledge and Practices

under the guidance and wisdom of Elders – this requires a healthy environment;

- *Inter- and Intra-generational Indigenous Knowledge transmission* - Educating younger generations and knowledge-sharing between communities ensures cultural continuity, individual transformations through direct experience, and "self-esteem, self-confidence and self-reliance" such that when youth become Elders, they are able to "impart their own vision, energy, knowledge and experience to educating the next generations" (Turner, 2005: 231);

- *Traditional languages* - Local languages embody subtleties and nuances specific to the local environment and often incapable of translation to English. Maintaining Indigenous languages is critical to both understanding and communicating Indigenous Knowledge;

- *Traditional diets* - Decreasing reliance on store-bought foods and emphasizing traditional foods and medicines can strengthen relationships with the land and address health issues associated with the conventional food system;

- *Community solidarity* - Building relationships in this way can take many forms: seeking epistemological diversity (integration of Indigenous and western Knowledges) to transcend knowledge boundaries, forming individual learning-teaching relationships between Elders and youth, or renewing relationships between Indigenous communities to develop local and regional economies founded on traditional and contemporary land-based practices.

In reviewing these themes, it becomes clear that there is a critical role for Indigenous Knowledge Guardians and Practitioners in building resurgence. This also leads to perhaps the most critical task in building Indigenous resurgence - the transmission of Indigenous Knowledge between communities and across generations. Simpson (2008) cautions that the process of knowledge transmission is perhaps more important than the result, suggesting that, "the

first thing we must recover is our own Indigenous ways of knowing, our own Indigenous ways of protecting, sharing, and transmitting knowledge, our own Indigenous intellectual traditions" (Simpson, 2008: 74). In its focus on beginning from places of emergence, celebration, and flourishment of Indigeneity, resurgence represents an alternative to more aggressive revolutionary approaches to confronting the colonial present. Recent critiques suggest that revolutionary approaches will continue to be ineffective in overcoming colonialism because revolution is sought from a position of disadvantage and is fought within the confines of the colonial system (Alfred & Corntassel, 2005; Simpson, 2008). Alternatively, resurgence is founded in Indigenous ways, views, and practices and focuses on an individualized celebration of Indigeneity - transformation is fostered at an individual level such that, over time, a mutually beneficial alternative becomes clear for Indigenous and settler communities. In his recent writing, Alfred (2009: 44) notes, "decolonization starts becoming a reality when people collectively and consciously reject colonial identities and institutions that are the context of violence, dependency and discord in [I]ndigenous communities". In this way, resurgence and decolonization may be understood as linked in a multi-scalar Indigenous initiative to confront colonial realities. Although resurgence is an Indigenous task, there is a role within the decolonization project for settler allies, for example, by exploring a critical indigenist research approach.

3.3 Social Innovation

I now turn to a review of the literature on social innovation, a conceptual framework that describes the process of systemic social changes. The Social Innovation Generation (SiG) at the University of Waterloo defines social innovation as "an initiative, product, process or program that profoundly changes the basic routines, resource and authority flows or beliefs of any social system" (SiG Knowledge Hub, 2013b). Social innovations are introduced to meet a critical social and, when successful, have broad and lasting durability. The explicit intent of a social innovation to have positive social impact is one of

the distinguishing factors of social innovation from other forms of innovation (Nicholls & Murdock; 2012; Phills et al., 2008; Westley et al., 2006; Young Foundation, 2007). The expressly political stance of social innovation has been described as a critique of conventional social systems and their "inherent inability to deliver social and environmental outcomes" and "a process of recontextualization within socially (re)constructed norms of the public good, justice, and equity" (Nicholls & Murdock, 2012: 2). Interventions associated with the development of a social innovation disrupt established power and belief structures that characterize the status quo to increase value to society at multiple scales (Biggs et al., 2010; Westley et al., 2006; Westley & Antadze, 2011; Young Foundation, 2007). Philis et al. (2008) explain social innovation as being comprised of four key elements: the process of developing an innovative idea; designing the innovation as a replicable product, process, or procedure; diffusing the innovation to increase traction and durability; and the resulting change(s) to society, indicated by increases in sustainability or equity. Innovations (social or otherwise) are rarely new in the true sense of the term – they are a recombination of existing ideas, mixed with new insights, to derive a novel approach that addresses an underserviced area or undesirable scenario (Arthur, 2009; Biggs et al., 2010). Rogers (1983) describes the diffusion innovation as a unique form of communication concerned with how new ideas are introduced by the innovation process. Insights from complexity theory are apparent in strategies for the development and diffusion of innovations, for example the use of feedback loops and concepts such as the emergent behaviour of complex systems, non-linearity in social processes, and basins of attraction are used to describe the impact of new ideas on a social system (Mulgan, 2012; Westley et al., 2006). Significant contributions to research as well as support for the public and private sector in understanding and fostering innovation are coming from Stanford University (home of the Stanford Social Innovation Review) in the United States, Nesta in Britain, and the SiG network in Canada. Interesting developments in transition theory and practice through the Dutch Research

Institute for Transitions (DRIFT) are fostering innovation and providing support and practical strategies for communities embarking on socio-economic transition toward sustainable development principles.

Considering the transdisciplinary nature of social innovation and the space constraints of this thesis, I have chosen to restrict my review of the social innovation literature to the contribution of resilience concepts for social-ecological systems, Giddens' theory of structuration, four major concepts in social innovation (agency and roles, scaling up and out, preparing a system for change, and identifying a successful innovation), and a summary of how novelty is used in the social innovation literature to describe the importance of multiple knowledge systems in system transformation.

3.3.1 Resilience in Social-Ecological Systems

The seminal work of C.S. Holling on ecosystem resilience beginning in the 1970s and, more recently, by the international collaboration organized through the Resilience Alliance has had a significant impact on understanding complex social-ecological systems (for example, Gunderson & Holling, 2002; Holling 1973; Holling, 2001). Holling's work was influenced by the work of economist Joseph Schumpeter (Schumpeter, 1942) and his ideas on multiple stable states, nonlinearity, and creative destruction in the context of economic systems. Further insights from ecology, engineering, disaster relief, and psycho-social disciplines were incorporated to inform the current understanding of resilience (Walker & Salt, 2012).

In their recent book, *Resilience Practice*, Walker and Salt (2012: 22) define resilience as "the capacity of a system to absorb disturbance and reorganize so as to retain essentially the same function, structure, and feedbacks - to have the same identity". This is a clear departure from the conventional approach to resource management – a resilience approach assumes that multi-stable equilibria exist in complex linked social-ecological systems that are continuously undergoing cycles of disturbance and renewal -

humans and the environment must be managed together in order to adapt (or transform) to inherent uncertainty and change (Berkes & Folke, 2003; Folke, 2006; Gunderson et al., 1995; Gunderson & Holling, 2002; Holling, 2001; Walker et al., 2004; Walker et al., 2006; Walker & Salt, 2006; Walker & Salt, 2012).

However, in the field of resource and environmental management, revenue-generating strategies still strive for optimum yields through the highly controlled and replicable production of a few key resources. This approach has been heavily critiqued because it situates humans outside of the environment system in a command-and-control role, assuming stable ecosystem dynamics in order to optimize growth and efficiency - all too often for the economic gain of a powerful few (for example, Berkes, 2010; Walker & Salt, 2006; Walker & Salt, 2012; Westley et al., 2011). Central to this critique from a resilience perspective is that this approach can not only lead to devastating environmental consequences, it is fundamentally in opposition to the disruptive, unpredictable, and dynamic character of social-ecological systems (Berkes, 2010; Berkes & Folke, 2003; Gunderson, Holling, & Light, 1995; Gunderson & Holling, 2002; Holling, 2001; Walker et al., 2006; Walker & Salt, 2006; Walker & Salt, 2012). Resilience and its associated heuristics (to be discussed in the next section) offer a perspective that includes rich descriptions of linked social and ecological systems and accepts that disruption within dynamic systems as inevitable and continuous. The argument made through this body of literature is that conventional resource managers (and, I would argue, western society more generally) must shift its focus from one of controlling nature through reductionist scientific methods to managing for uncertainty using an interdisciplinary, systems approach to problem solving.

3.3.1.1 Key Themes Under a Resilience Approach

The Adaptive Cycle

To help describe his ideas on resilience, Holling adapted a heuristic, now commonly know as the adaptive cycle, as a tool to describe the characteristic stages of exploitation, conservation, release and reorganization in complex adaptive systems (Holling, 2001; Gunderson & Holling, 2002). In developing the adaptive cycle, Holling drew upon Schumpeter's (1942)(originally seen in Schumpeter's (1942) work, and clearly incorporating insights from complex systems theory), The adaptive cycle has three key properties: potential, connectedness, and resilience (Holling, 2001). In the exploitation and conservation phases (known as the "front loop"), potential and connectedness are slowly built up as the system accumulates capital (ex. social, ecological, economic) and becomes increasingly efficient (Holling, 2001). This highly integrated system state is characterized by increased rigidity and predictability - this is the system state favoured by conventional resource managers (Gunderson & Holling, 2002; Holling, 2001). However, the conservation phase is also accompanied by losses in resilience due to decreased flexibility in the system. When the inflexible conservation phase is disturbed, the system is unable to bounce back from disturbance and the system collapses. The qualitative characteristics and organization of the original system are released - the potential energy, resources, and capital previously locked up in the rigid conservation phase are rapidly reorganized in the "back loop" of the adaptive cycle (Gunderson & Holling, 2002; Holling, 2001). At this point, new or innovative ideas and arrangements are tested (creative experimentation) and a new system state may result, or, a similar organization can re-emerge. In the back loop, potential and resilience are high, whereas connectedness is low - this reflects the flexibility inherent in a relatively disorganized system (Holling, 2001). The back loop and the front loop work in coordination with each other through the pursuit of stability followed by uncertainty, thereby assuring a constant flux of innovation and change in the system (Gunderson & Holling, 2002; Holling, 2001; Walker et

al, 2006). In the context of the adaptive cycle, a complex adaptive system is resilient if it can absorb the disruption brought by navigating these four phases, continuously and simultaneously at multiple scales, while maintaining the overall structure and function that defines the regime (Gunderson & Holling, 2002; Gunderson et al., 1995; Holling, 2001; Walker & Salt, 2006).

Panarchy

System types with a tendency to demonstrate behaviour that fits the adaptive cycle are often linked to other systems at different temporal and spatial scales. Therefore, to fully understand a focal system, it must be placed in a hierarchy of scales, referred to as a *panarchy* (Gunderson & Holling, 2002; Holling, 2001). The scale above the focal system tends to be on a slower cycle and can constrain the potential for novelty and invention in the scale below (Gunderson & Holling, 2002). Conversely, the scale below the focal system tends to be on a faster cycle and can introduce novelty and invention in the scale above (Gunderson & Holling, 2002). These two cross-scalar interactions referred to as *remember* and *revolt* connections (Gunderson & Holling, 2002). Revolt connections infuse novelty and innovation across scales during intense periods of creative destruction (Gunderson & Holling, 2002). In this case, key changes in the focal system are scaled up, potentially leading to the collapse of larger and slower cycles.
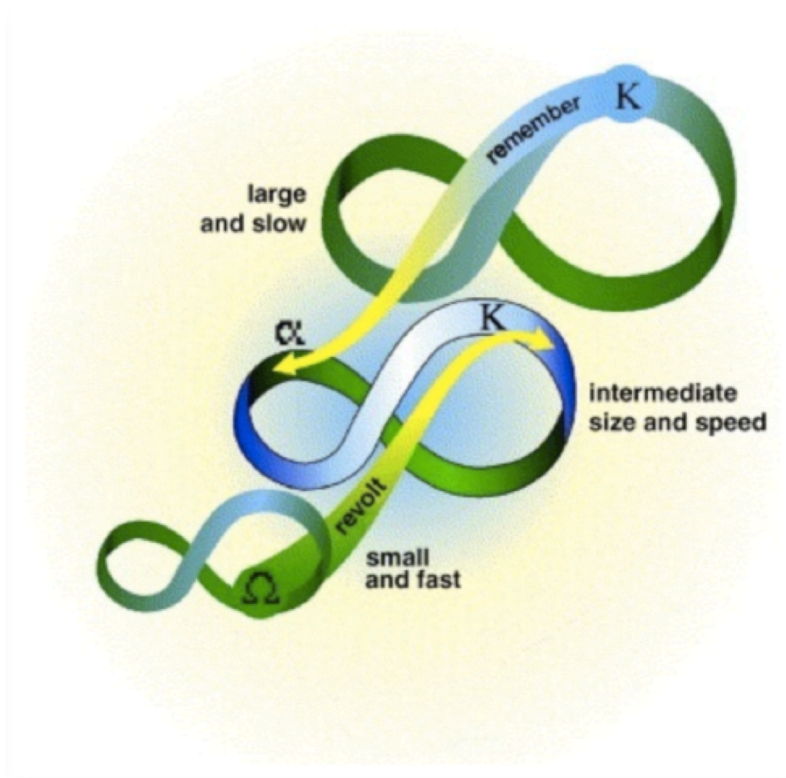
Figure 1: The Panarchy Cycle as it appears in Folke (2006).

In contrast, remember connections function as sources of renewal and constrain the amount of novelty or innovation transferred across scales (Gunderson & Holling, 2002). Understanding a focal system involves understanding the cross-scalar interactions that act to constrain and contribute to both novelty and renewal.

Adaptability

> *Adaptability is the capacity of a social-ecological system to manage resilience - to avoid crossing thresholds, or to engineer a crossing to get back into a desired regime, or to move thresholds to create a larger safe operating space* (Walker & Salt, 2012: 47).

Actors within the system are able to intentionally manage resilience by exercising various capacities - human actors have a significant influence on whether a system remains in the existing system state, undergoes a transformation, or otherwise impacts the availability or number of alternative system states (Walker et al., 2006). Adaptability is primarily

driven by the human actors within the system because of our tendencies to influence ecological systems through social structures, notably the structures of signification (see section 3.2.2) which bring symbolic meaning to resources and the environment (Walker et al., 2006; Westley, 2002). In their review of resilience literature in the context of Indigenous Peoples, Fleming and Ledogar (2008) found that sources of adaptive capacity are found at the family, community, society, or cultural scales and generally include links to environmental conditions.

Transformability
> *Transformability is the capacity of a system to become a different system, to create a new way of making a living* (Walker & Salt, 2012: 47).

Transforming a system involves fundamentally reorganizing the context, components, and structure from the initial state. Sometimes, system transformation is unintended - under this scenario it is often the case that a critical threshold has been crossed (for example, the degree of water uptake for agriculture and livestock) that causes the system to suddenly and unexpectedly transform into an alternate state (salinization of agricultural lands) (Walker & Salt, 2006). In other cases, transformative capacity enables actors within a system to influence how and into what the system ultimately transforms (Walker & Salt, 2012). In the social innovation literature, transformative innovations are those that cascade across scales and radically alter the underlying rules and resources that define the system (Biggs et al., 2010; Westley & Antadze, 2011). The concept of transformation, both at an individual level (Regan, 2010; Simpson, 2008) and at higher scales (Smith, 1999; Simpson, 2011) is said to be necessary in fostering resurgence across scales.

3.3.2 Structuration

Giddens' (1984) theory of structuration is founded on the notion that social structures are neither independent of the actors within them nor are they able to guide or shape the actions of actors. Similarly, actors are not

independent of the social structures in which they carry out their day-to-day activities. Instead, Giddens (1984) identifies social *structures* as being comprised of rules and resources that are produced and reproduced by the interactions of actors within contextualized social systems. Contextualized actors in a particular setting routinely apply these social structures and thus make up the social system (Giddens, 1984). Therefore, to analyze the *structuration* of social systems is to study how social structures are produced and reproduced by knowledgeable actors whose agency is both enabled and constrained by existing rules and resources (Giddens, 1984; Giddens, 2005; Turner, 2003). This summarizes Giddens' *duality of structure*: actors will carry out their daily activities in the context of current rules and resources, but through repeated interactions simultaneously act to either produce new rules and resources or reproduce the old ones (Giddens, 1984; Giddens, 2005). In this way, social structures are perpetually both enabling and constraining individual actors.

Social systems may be divided into three fundamental structures: signification, legitimation, and domination (Giddens, 1984; Giddens, 2005; Turner, 2003). Signification and legitimation are linked to the ways in which rules are interpreted and normalized by actors within a social system and represent the ways in which actors demonstrate their *knowledgability* though social interactions (Giddens, 1984; Giddens, 2005). When rules are associated with meaning-making and symbolism, they impact the ways in which actors interpret and then communicate events - this contributes to signification within the social structure (Giddens, 1984; Giddens, 2005). When rules are associated with procedures for ethical conduct and appropriate behaviour in day-to-day activities, they lay the foundation for norms and obligations that contribute to sanctioning social interaction between actors - this contributes to legitimation within the system (Giddens, 1984; Giddens, 2005). Finally, the possession and distribution of resources is linked to the concept of domination (Giddens, 1984; Giddens, 2005).

Describing the rules and resources of social structures in this way clarifies Giddens' (1984) message that structures themselves are not capable of

determining actor behaviour - the rules and resources characterizing a social system cannot be separated, nor can the actors within the system be separated from the rules and resources that characterize their daily activities. In his summary of Giddens' theory of structuration, Turner (2003: 480) states, "structuration is, therefore, the dual process in which rules and resources are used to organize interaction across time and in space and, by virtue of this use, to reproduce or transform these rules and resources". In practice, these interactions play out simultaneously and continuously; they are separated here only to describe the interaction.

All social systems have boundaries in time and space and are characterized by the social structures that are routinely reproduced by actors within the system. *Institutions* are said to exist when certain rules and resources are continually reproduced with within bounded social systems (Giddens, 1984; Giddens, 2005). Some of the most common institutions across social systems are those related to politics, economics, the law, and culture. Recall that because of the duality of structure, institutions cannot exist independently of the actors that continually reproduce the rules and resources that define the institution.

When social structures, social systems, institutions and actors are described under the theory of structuration, it becomes clear how social innovation can have impact across scales. Social innovations can be scaled out (within a certain scale) and up (across scales) because of the mutual influence that actors have social structures and vice versa (see section 3.3.3.3 for further discussion). In order to initiate transformation within society, the rules and resources that comprise the social structure must be disrupted. The tension between agents and structures inherent in the innovation is rooted in Giddens' (1984) duality of structure - individual agents have the capacity to influence social structures, but they are simultaneously and continuously constrained by the same structures they seek to change. At the conversational scale, between individual actors, reflexivity becomes a critical component in how agents interact with social structures. Giddens (1984) emphasizes the importance of knowledgeability held by all actors in terms of how they rationalize their

actions (both implicitly and reflexively) and the unconscious motivations that are used to respond to events. Therefore, a direct intervention into the knowledge that actor's have regarding particular rules or resources may impact the way in which social structures are produced or reproduced. For example, engaging in a pedagogy of discomfort or an unsettling pedagogy may have a direct impact on colonial social structures. In conclusion, structuration provides a theoretical foundation for the transformation of social systems on multiple scales.

3.3.3 Key Concepts in Social Innovation

The previous two sections provide necessary theoretical background to discuss key themes in social innovation. In the following section, I explain the common roles in a social innovation process, the importance of preparing the system for change, strategies for scaling up and scaling out an innovation, and indicators for understanding if and when an innovation has achieved broad impact and durability.

3.3.3.1 Common Roles Seen in the Social Innovation Process

Within the process of developing a social innovation, key roles have been identified that outline the importance of individual agency. *Social innovators* are people who take action to address seemingly intractable social problems – they are often deeply connected to the problem they seek to solve. Westley et al. (2006) stress that social innovation must be understood from a complex systems lens, therefore social innovators should not be viewed as leaders in the traditional sense. Social innovators are not able to control or manipulate the system; however, they do tend to have a greater capacity to navigate uncertainty and foster new interactions or relationships (Westley et al., 2006). Similarly, *social entrepreneurs* are able to translate the ideas of social innovators into a tangible innovation – for example, an organization, program, or other value-added product that addresses the social need (Dees, 1998; Martin & Osberg, 2007; Peredo & McLean, 2006; Westley & Antadze, 2011; Zahra et al., 2009). Social entrepreneurs share many characteristics with business entrepreneurs,

however they are differentiated by their adoption of a social mission, willingness to take financial risks to achieve their mission (which may mean incurring financial losses), and relentless determination to transform the current system to better serve the social need (Dees, 1998; Martin & Osberg, 2007). In terms of specialized skills, social entrepreneurs tend to have an "exceptional ability to see and seize upon new opportunities" (Martin & Osberg, 2007: 31), the capacity to ensure that necessary resources are accessible (for example, generating and leveraging funding), and can connect to networks of like-minded individuals and organizations to increase the impact of a social innovation (Martin & Osberg, 2007; Westley & Antadze, 2011). *Institutional entrepreneurs* fill a complementary role in monitoring and interpreting the institutional climate to anticipate and recognize opportunities within economic, political, or cultural contexts (Westley & Antadze, 2011).

Each role described above plays an important part in the success of a social innovation, but not all span the life of the development process. Roles can appear, and then may disappear as the social innovation (or the organization or community supporting its development) changes and the nature of the capacities needed for success evolve (Westley et al., 2006; Young Foundation, 2007). In the initial phases when the idea is maturing, social innovators provide the motivation for further development. Social entrepreneurs come in later on, as resources are needed to foster growth. Institutional entrepreneurs are able to aid in reaching across scales, identifying and capitalizing on established networks and connections within and between institutions. By recognizing windows of opportunity for cascading effects, institutional entrepreneurs are critical to achieving transformative change within systems (Westley & Antadze, 2011). The roles described in this section outline the various ways actors can influence social structures - the focus on identifying opportunities for action emphasizes the constraints imposed by the institutional contexts from which they operate.

3.3.3.2 Preparing the System for Change

Many potentially system-changing innovations fail. There are several reasons why this occurs; however, one of the most common is that ideas are introduced at the wrong time – the entrepreneur mis-judged the window of opportunity (Biggs et al., 2010; Westley et al., 2006; Westley & Antadze, 2011). This is not necessarily negative because failure can lead to better understanding the system and further developing the strategy for introducing the innovation (Westley et al., 2006). It has been shown that social innovations are more likely to succeed if: 1) the focal system is prepared to accept the new idea, 2) a window of opportunity arises, and 3) a practice a of *patient urgency* is exercised (Biggs et al., 2010; Westley et al., 2006; Westley & Antadze, 2011). In order to know when the larger system is ready to accept a new idea, social innovators and entrepreneurs must exercise patient urgency – staying aware of larger political, economic, and social-cultural trends and also monitoring and making connections between scales (Westley et al., 2006; Westley & Antadze, 2011). This can help to gain traction at higher scales when a window of opportunity opens. In this way, social innovation in complex systems is achieved through the combined effect of agency (monitoring the system and reflexive practice) and opportunity (in political, cultural or economic contexts) (Biggs et al., 2010; Westley et al., 2006; Westley & Antadze, 2011). Westley and Antadze (2011: 13) summarize the process of successful social innovation as: "a good idea, the resources to develop it, leadership capacity, and drive - all must be combined with opportunity, which can be recognized and seized but not directly controlled". Biggs et al. (2010: 4) emphasize the importance of being comfortable in unpredictable and uncertain planning environments when they state that, "social innovation cannot be directly planned and produced; it can only be stimulated by creating an environment conducive to the emergence of innovation". Monitoring the system and, wherever possible, working to dismantle barriers to social innovation that contribute to rigidity and cementing the status quo makes change more attainable (Westley et al., 2006).

3.3.3.3 Scaling Up and Out

Efforts to increase durability and impact of a social innovation should be focused both within and between scales. The first step is to *scale out* the social innovation by gaining traction within a specific community by replicating the innovative product, program, or process, and then building a like-minded network of communities who have adopted the approach (Westley & Antadze, 2011). Scaling out may be defined as "working to make a good initiative happen in more places in order to increase and spread its impact on managing a problem…scaling out occurs at the same level of a system" (SiG Knowledge Hub, 2013a). The next step is to *scale up* by reaching from this network of communities to the scale above, often the regional or organizational level (Westley & Antadze, 2011). Scaling out may be defined as "increasing an innovation's impact in the broader system in order to address the root causes of the problem…scaling up occurs across one or more levels of a system" (SiG Knowledge Hub, 2013a). Cascading across scales in this way is the cornerstone of transformative innovations. However, the process of scaling out and up is rarely straightforward or easy - "eventually, there must be a disruptive encounter with power, routine, and beliefs, though this may be subversive as opposed to revolutionary" (Westley & Antadze, 2011: 13). To achieve transformative change requires that social innovators and entrepreneurs intimately know and work within the system they seek to change. Reframing the perspectives of potential allies within the system is a strategy to enable transformation because it decreases conflict, contributes to trust building, and begins to generate motivation towards a new way of doing things (Biggs et al., 2010; Westley et al., 2006).

3.3.3.5 Unveiling an Innovation

Recall that the success of a social innovation cannot be predicted; they are rife with uncertainty and are often preceded by a considerable amount of failure. However, following insights, such as those discussed above, from academics and practitioners of social innovation can increase the likelihood of

eventual success. An interesting conclusion to this review of social innovation is that social innovations are only known to be successful after the fact. The ultimate goal of social innovation is to manage the expectations and context in which it develops such that the end result does not seem innovative, radical, or otherwise out of the ordinary – "when social innovation succeeds, it is no longer innovation, but business as usual" (Westley, et al., 2006: 212).

3.3.4 Novelty from the Margins

The vulnerability of the whole Earth system is increased by the continual exclusion of a substantial portion of the world's population from the essential components of lasting wellbeing (Westley & Antadze, 2011). In Canada, a disproportionate percentage of the Indigenous population occupies marginalized political and economic spaces, hindering the resurgence of Indigenous Knowledge and Practice and further contributing to colonial realities (Wilson & MacDonald, 2010). From a resilience perspective, this practice of exclusion is linked to a decrease in overall system resilience and further declines in wellbeing, which continues in a positive, or reinforcing, feedback loop (Walker & Salt, 2006). In their discussion of resilience, Walker and Salt (2006) posit a list of valued attributes in a resilient world, identifying innovation as a valued component and suggesting that any action that fosters innovation will lead to increased resilience. To intervene in this feedback of declining wellbeing and increase resilience, Westley and Antadze (2011) argue for the inclusion of marginalized populations into social institutions as active participants in collaborative projects. Further, it is argued that incorporating marginalized voices into conventional political, economic or social dialogues will introduce novelty into the system, therefore altering the social structures that characterize the system (Walker & Salt, 2006; Westley & Antadze, 2011). In turn, the consideration of new perspectives, ideas, and knowledge may lead other actors to reframe their perspectives (Biggs et al., 2010; Westley & Antadze, 2011). Building on this idea, Walker and Antadze (2011) state that excluding marginalized populations and diminishing the contribution of diverse voices

and perspectives to the broader social system represents a significant loss of novelty, an essential component of overcoming barriers to reorganization in the back loop of the adaptive cycle. Therefore, engaging marginalized voices in efforts to transform the current, unsustainable social-ecological system regime represents a potential source of radical innovation - "social innovation not only serves vulnerable populations, but is served by them in turn" (Westley & Antadze, 2011: 5).

3.4 Reflection

The idea of applying Linda T. Smith's (1999) Indigenous Projects to social innovation began while on a lunch break at the Social Innovation Generation (SiG) in the MaRS Discovery District in Toronto, Ontario. I was expressing my confusion and frustration in attempting to go about critical indigenist research with an Indigenous colleague attending the same meeting. My friend, who is familiar with Smith's (1999) work, looked at me said, "You've read Linda Smith, she tells you what to do!" I felt a bit silly, and her advice didn't sink in until I actually started to think about trying to indigenize the discourse and strategies for social innovation.

As I think about it now, the Indigenous Projects represent ways that Indigenous and settler researchers can work towards establishing and fostering initiatives geared towards Indigenous resurgence and settler decolonization. However, I still feel uneasy about merging these two bodies of work. Most of this unease is rooted in the caution expressed by some Indigenous scholars who disagree with mingling ideas from Indigenous and dominant paradigms (Wilson, 2008; Simpson, 2008; Alfred, 2008). In particular, Leanne Simpson's writing on cultivating Indigenous resurgence causes me to question whether this approach is appropriate, "everything that makes us Indigenous as individuals and as nations resides in our knowledge systems…we must be prepared to blatantly reject the colonizer's view of our knowledge and we must embrace strategies based on our own distinctive Indigenous intellectual traditions" (Simpson, 2008: 75-76). So, I keep asking myself whether social innovation is useful, or even appropriate, as a framework for social change in Indigenous contexts. The direction for how to cultivate change is best provided by Indigenous Knowledge Holders, so why bring social innovation into the discussion?

I keep coming back to my intentions – at this point I feel as though social innovation is a useful framework in communicating to people and organizations unfamiliar with Indigenous Knowledge systems for the purpose of building relationships and fostering action that flows from the wisdom of Indigenous Knowledge Guardians. In this way, this research is important because it can reach Indigenous and non-Indigenous audiences in the academe and inject positive indigenizing language and projects into these persistently colonial spaces.

In a recent meeting with an Indigenous scholar, I asked her opinion on the idea of merging social innovation and critical indigenist research. I was surprised by her enthusiasm about the idea and I felt relieved to have her confirm the direction of the research. She noted that although there are issues with the discourse and narratives of decolonization, innovation, and critical theory in general, by merging these bodies of literature together, they can help to infuse the academic literature with alternative, potentially more useful frameworks for confronting colonialism within the Indigenous experience. Developing a way of communicating how Indigenous initiatives that promote resurgence founded in the teachings and wisdom of Indigenous Knowledge Holders is critical in contributing to settler decolonization. I want to draw attention to the responsibility I feel to communicate what I have learned to be an appropriate way to conceptualize activities rooted in Indigenous ways, views, and practices. I see this as being a resource not just for research, but also for developing relationships between Indigenous and settler communities more broadly.

3.5 Building a Conceptual Framework for Indigenous Innovation

Together we have all of the pieces. In Nishnaabeg thought, resurgence is dancing on our turtle's back; it is visioning and dancing new realities and worlds into existence (Simpson, 2011: 70).

The following conceptual framework represents a preliminary exploration of what it may mean to describe social innovation from a critical indigenist perspective. It begins to describe social innovations that are initiated, developed, and implemented by Indigenous Peoples for the resurgence of Indigenous Knowledge and Practices. By presenting this conceptual framework for Indigenous innovations, I hope to enter into discussions of how to indigenize social innovation, making this body of literature more useful for Indigenous Peoples and engaging settlers in building a more sustainable, equitable social system. The proceeding review of the literature on Indigenous, decolonizing, and critical methodologies coupled with a brief synopsis of Indigenous resurgence and social innovation provide the necessary theoretical background. Chapters 4 and 5 explain elements of the model in relation to ongoing case study research.

I begin the remainder of this chapter by describing the key points of intersection between social innovation framework and Indigenous resurgence (see Figure 2). Next, I provide a brief critique of social innovation from a critical indigenist perspective, identifying power, novelty, and collaboration as areas of concern with respect to Indigenous contexts. Then, I link Smith's (1999) 25 Indigenous Projects, as well as projects suggested by other scholars, to the key themes, roles, and processes of social innovation. These 25 Indigenous Projects are used as tools to indigenize the discourse of social innovation while providing direction for fostering Indigenous innovations at multiple scales. Finally, I propose a multi-scalar model for Indigenous innovation, describing roles and strategies likely to emerge at each the interpersonal, organizational, and system scale. My aim in doing this is to interpret social innovation in a more useful way for Indigenous communities

while providing recommendations for settler allies involved in Indigenous innovations.
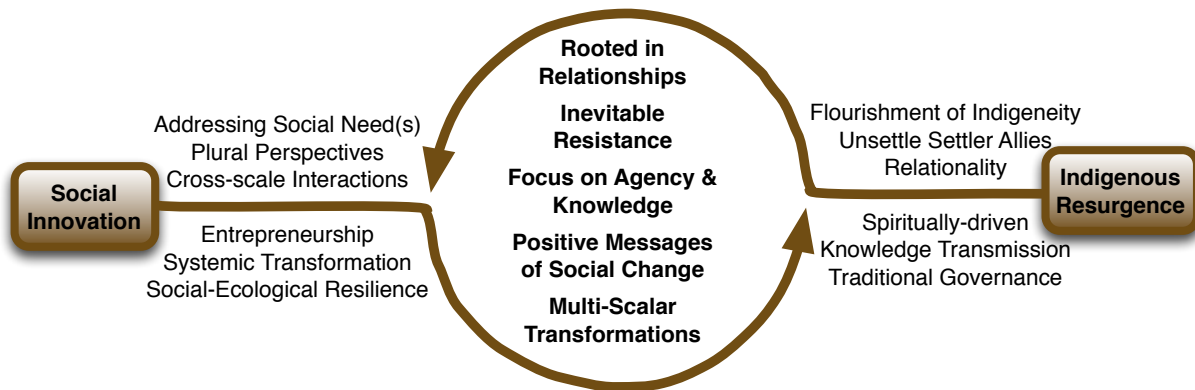
Figure 2: **Linking Social Innovation and Indigenous Resurgence.** Key themes and concepts from each framework for change share common ground in five areas: relational perspectives, inevitable resistance, a focus on agency and knowledge, positive and change-oriented messages, and a call for multi-scalar transformations. This figure summarizes insights from sections 3.2 and 3.3, particularly the work of Westley et al. (2006), Gunderson and Holling (2002), Simpson (2008; 2011), Regan (2010), and Corntassel (2012).

3.6 Indigenous Resurgence and Social Innovation: Key Points of Intersection

3.6.1 Rooted in Relationships: Viewing Humans *with* the Environment

The processes of resurgence and social innovation are rooted in cultivating strong relationships. Recall that resilience scholars argue that conventional perspectives on resource and environmental management lead to a linear, objective, and static interpretation of human-environment interactions (Berkes, 2010; Gunderson & Holling, 2002; Walker & Salt, 2006). In contrast, a socio-ecological systems approach advances a holistic perspective and suggests that dominant strategies to control and manipulate the environment hinder effective resource management (Holling, 2001; Holling & Gunderson, 2002; Walker & Salt, 2006; Waltner-Toews et al., 2008). Acknowledging the interconnections between and across scales in linked social and ecological systems advances an understanding of humans and the environment closer to the relational perspectives discussed by Indigenous scholars (Battiste, 2000; Kovach, 2010; Simpson, 2008; Simpson, 2011;

Wilson, 2008). In the context of sustainability, Turner (2005) explains that viewing humans *with* nature cultivates a deeper understanding of the necessary components for a lasting wellbeing. In this way, situating humans within a reciprocal relationship with nature places limits on biophysical capacity and "fosters a different understanding of what we really need for our sustenance" (Turner, 2005: 229). Finally, through reflexive interactions with components of a social-ecological system, social innovation posits that actors can influence the fundamental social structures of both current and emerging systems and thus may intervene or direct cross-scalar changes (Biggs et al., 2010; Young Foundation, 2007; Westley et al., 2006; Westley & Antadze, 2011). The increasing acceptance of holistic, systems understandings of the human-environment relationship situates social innovation as an allied theory of change for Indigenous innovation processes.

3.6.2 Inevitable Resistance: Disrupting and Confronting

Instigating changes to the status quo involves considerable struggle and requires disruptive encounters with dominant power and authority structures (Westley et al., 2006). Continual reflection throughout confrontation ensures that conventional values and beliefs are challenged in accordance with the original intent (Simpson, 2008; Simpson, 2011; Westley et al., 2006). Specifically, Indigenous Peoples may "transcend the controlling power of the many" to confront colonial existence through the wisdom and direction of Indigenous Knowledge Guardians (Alfred & Corntassel, 2005: 613).

Confronting the pursuit of material wealth and wellbeing in the context of resource and environmental management, although a highly political exercise, may contextualize the implications of seeking transformative change. Westley et al. (2006: 120-121) remind us that "one of the challenges facing those who wish to transform society is that money and power are so often linked…social innovation involves - indeed, requires - redistributing power". Throughout the process of social innovation, empathy for powerful strangers

can be an important tool in building relationships:

> *whether you have power or you don't, chances are that you need to confront your own fanatic heart - your suspicions of and anger with the other. To release new energy, your own or that of others, you need to empathize with the other (and your own potential for otherness) and reclaim their sentiments as your own* (Westley et al., 2006: 125).

Here, Westley et al. (2006) discuss the other with respect to the concept of a nemesis - the suppressed characteristics or messages associated with individuals, organizations, or institution that represent what we most dislike about ourselves. When apparent in potential allies, the characteristics or messages that characterize our nemesis perpetuate barriers to collaboration and accentuate aspects of difference that stem from misunderstanding, anger, or distrust. To confront these barriers, people involved in social innovation are encouraged to confront their nemesis - *to know and be known* (Westley et al., 2006). In this way, empathy for one's nemesis can be developed and open space for new relationships, potentially transforming individuals in the process (Westley et al., 2006). This resonates with the pedagogy of discomfort (Boler & Zembylas, 2003) and unsettling pedagogy (Regan, 2010) as a process for honestly confronting difference while exploring assumptions and responses within ourselves to dismantle barriers to building relationships with those that we have other*ed* from ourselves.

3.6.3 Focus on Agency and Knowledge

Intervening in the knowledge that actor's have regarding particular rules or resources can impact the way in which social structures are produced or reproduced (Giddens, 1984). Similarly, (re)acknowledging Indigenous Knowledge and Practices as central authorities within Indigenous communities may lead to individual, familial, and community transformations (Alfred, 2005; Alfred & Corntassel, 2005; Corntassel, 2012; Simpson, 2008; Simpson, 2011). For example, Alfred and Corntassel (2005: 611) describe the transformative process of decolonization and the regeneration of Indigenous ways, views, and practices

as requiring "shifts in thinking and action that emanate from recommitments and reorientations at the level of the self that, over time and through proper organization, manifest as broad social and political movements to challenge state agendas and authorities". Here, Alfred and Corntassel (2005) explain the transformation of social systems on multiple scales as being based on the knowledge held at the individual level. In other words, intervening in the knowledge held by individuals can redefine associated social structures and institutions (Giddens, 1984). Similarly, the power of Indigenous Traditional Conferences to reframe and unsettle settler colonial assumptions is central to building partnerships with allied settler individuals and organizations. Therefore, engaging in a pedagogy of discomfort (Boler & Zembylas, 2003) or an unsettling pedagogy (Regan, 2010) may have a direct influence on the way in which colonial social structures and institutions are defined. In conclusion, changing the knowledge base of the actors within a social system allows innovations to take hold and ensures broad impact and appeal (Moore & Westley, 2011a).

In both literatures, Foucault's (1980) work on power is evident in the importance of knowledge and truth as central to exercising power - those who control the flow of knowledge have the power to define desirable system states (Nadasdy, 2007; Smith, 1999). Indigenous scholars explain that the dominant paradigm suppresses difference in knowledge and meaning making and is rooted in a progress-oriented notion of economic and political gain (Battiste, 2000; Smith, 1999). In contrast, social innovation and resurgence acknowledge and value diversity in knowledge as it is central to building resilience (Walker & Salt, 2006), developing social innovations (Westley et al, 2006), furthering Indigenous development projects (Smith, 1999), and honours the relationships between knowledge and wisdom cultivated through teaching-learning experiences (Wilson, 2008).

3.6.4 Positive Messages of Social Change

Social innovations, by definition, address seemingly intractable problems in order to achieve perceived social needs (Biggs et al., 2010; Nicholls & Murdock, 2012; Phills et al., 2008; Westley et al., 2006; Westley & Antadze, 2011; Young Foundation, 2007). Oftentimes, solutions or new ideas are based on paradoxes, or tensions, at the center of historical problems (Mulgan, 2012; Westley et al., 2006). By reframing these paradoxes, social innovators are able envision new futures. An example of such a paradox lies at the heart of the benevolent peacemaker myth (Regan, 2010), enforcing a binary between contemporary settler society and Indigenous Peoples. These types of post-colonial narratives tend to lessen the injustices perpetuated by the contemporary political and economic preoccupation with linear progress and material gain by envisioning the colonial experience with respect to time (colonial/post-colonial) as opposed to power (colonizer/colonized) (McClintock, 1992; Smith, 1999). Envisioning such historically intractable difference as a shared and mutually beneficial future can lay the foundation for innovative solutions.

Critical indigenist research emphasizes the use of problem-based research as opposed to solution-oriented approaches (Wilson, 2008). Under the dominant paradigm, most research projects are designed to compare, contrast, or otherwise evaluate one phenomenon in relation to another. Researching Indigenous communities from a negative starting point, such as vulnerability or oppression, immediately positions the community as in need of help from the settler community and reinforces the myth of the benevolent peacemaker (Regan, 2010). In keeping with the lessons of critical indigenist research and Indigenous resurgence, I believe that when social innovations emerge under the guidance and wisdom of Indigenous Knowledge Guardians, development is more likely to be respectful, strongly rooted in culture, contribute to eco-cultural restoration, and result in mutually beneficial inter-cultural collaborations. Focusing on solutions and change-oriented narratives of innovation by envisioning alternative futures is one way to decolonize research

with Indigenous Peoples and foster the resurgence of Indigenous Knowledge and Practices.

3.6.5 Multi-Scalar Transformations

The importance of multi-scales is important to both the Indigenous resurgence and social innovation literature. From Section 3.3.2, structuration (Giddens, 1984) provides a theoretical foundation for the transformation of social systems on multiple scales. Agents continually act to either produce new rules and resources or reproduce the old ones, depending on the knowledge that they hold and the ways in which that knowledge is manifest in daily activities (Giddens, 1984). Transformative social innovations have broad impact and durability both within and between scales because they fundamentally change the social structures and/or institutions that define the social system (Biggs et al., 2010; Moore & Westley, 2011a; Westley et al., 2006; Westley & Antadze, 2011, Young Foundation, 2007).

To attain broad durability and lasting impact, social innovations must be scaled out (within a certain scale) and scaled up (across scales) (see section 3.3.3.3) (Westley & Antadze, 2011). Similar to Simpson's (2011) framework for transformative self-empowerment and Corntassel's (2012) emphasis on everyday resurgence, the panarchy framework (Gunderson & Holling, 2002) emphasizes smaller scales as sources of creativity. Both literatures link success across scales to initial work with individuals and small groups - success can scale outwards or upwards because of the mutual influence that actors have social structures. In a similar way, both literatures consider confrontation and disruption of the status quo to be necessary for transformation and, similarly, expect significant resistance from higher scales as a result (Alfred & Corntassel, 2005; Biggs et al., 2010; Corntassel, 2012; Gunderson & Holling, 2002; Simpson, 2008; Simpson, 2011; Westley et al., 2006; Westley & Antadze, 2011).

3.7 Potential Risks with Social Innovation in Indigenous Contexts

3.7.1 Power

From a relational perspective based on Indigenous worldviews, power comes from within oneself and is achieved through balanced relationships - power to achieve desired outcomes stems from establishing these relationships in a good way. Stated in another way, power is "the force needed by all to achieve balance and harmony" between all relations – to other people, the land or environment, knowledge, and the spirits (Alfred, 2008: 73). Leanne Simpson (2008) identifies transformative self-empowerment as critical to the resurgence of Indigenous Knowledge and Practices. In this way, power may be conceived as emanating from one's self in relationship to the world as well as embodying the capacity to maintain or transform the present system into a desirable state.

Giddens' (1984) structuration theory differentiates power from resources - he describes power as the capacity to hold and distribute resources. Social innovation uses a similar description of power: "power means both the power to maintain the status quo and the power to change. Power has to do with control of resources - of time, energy, money, talent and social connections" (Westley et al., 2006: 95). Since social systems are constantly undergoing cycles of creative destruction, release, reorganization and renewal, so too are the dynamics of resource authority and power within the system.

Writing from a Navajo perspective, Robert Yazzie (2000) emphasizes that power flows from balanced relationships as opposed to from domination or control over others, though he recognizing the dominating force of ongoing colonial policies over Indigenous Peoples. The dualism between those who have/do not have power furthers a malevolent and static interpretation common throughout the dominant paradigm (VeneKlasen & Miller, 2002). A major risk associated with this dualism is that *real* changes in power and authority will focus on binary notions of having/not having power or controlling/not controlling resources. Indigenous resurgence calls on the powerful few to accept the responsibility of cultivating balanced relationships

and reciprocating efforts to honestly confront difference. In this way, resurgence seeks to re-orient conventional power structures by looking *with* and *within* for strength as opposed to assuming power once control or influence over resources is *won.*

3.7.2 Knowledge Diversity

Engaging marginalized voices and focusing on knowledge diversity both increases social-ecological system resilience and introduces novelty in the back loop of the adaptive cycle, representing a potential sources of innovation (Walker & Salt, 2006; Westley & Antadze, 2011). Diversity within the context of eco-cultural restoration focuses on knowledge through the integration of Indigenous Knowledge and western academic research) to transcend disciplinary boundaries and strengthen understandings of socio-ecological systems (Turner, 2005). As one of her 25 Indigenous Projects, Smith (1999) discusses diversity in the context of *discovering* in which she describes the role of western research as one which can support Indigenous development, actively centering Indigenous Knowledge and Practice and framing western research as a potentially useful tool for Indigenous communities.

Of these various conceptions of diversity, Westley and Antadze's (2011) approach to Indigenous Knowledge and Practice as 'novelty' is most concerning. Referring to the meaningful inclusion of Indigenous Knowledge as the "introduction of novelty" situates Indigenous ways, views, and practices at the margins and privileges those looking to include "novel" Indigenous Knowledge(s) for the purpose of increasing resilience of the status quo. This is not a desirable situation - "it is precisely the relations of capitalist resource extraction and agro-industry that are most responsible for the marginalization of Indigenous Peoples and the dispossession of their lands and resources" (Nadasdy, 2007: 218). Indigenous Peoples, their Knowledge(s), and Practices must not be used (or, more correctly, *mis*-used) under the dominant paradigm to sustain the colonial status quo (Absolon, 2011; Battiste, 2000; Denzin et al., 2008; Nadasdy, 2007; Simpson, 2008; Smith, 1999). Regan

(2010: 42-43) characterizes this as the "token inclusion of Indigenous ceremony" that well-intentioned settlers demonstrate when caught in what she terms the *benevolent peacemaker myth* – learning *about* Indigenous Peoples in order to help *them*. In conclusion, any social innovation that advances Indigenous resurgence must flow directly from Indigenous Knowledge and Practice and not from the dominant paradigm - knowledge diversity must not be framed as the token inclusion of alternative ways of knowing to advance the agenda of the status quo.

3.7.3 Collaboration

A discussion of collaboration in the context of Indigenous Peoples in resource and environmental management inherently ties into a discussion of intentions. For example, significant advances in co-managing natural resources (for example, Pomeroy & Berkes, 1997; Olsson, Folke, & Berkes, 2004; Armitage, 2007) are intended to increase sustainability and equality in the decision-making process for local land users, including Indigenous Peoples. However, these co-management arrangements are developed within the dominant paradigm and linked to the neoliberal market economy. As was discussed in the previous section, including Indigenous Peoples in collaborative processes that result in the continued appropriation and commodification of traditional lands is unlikely to address underlying inequalities in power (Braun, 2002; Nadasdy, 2007; Porter, 2010). Therefore, collaboration is tied to power and knowledge as the authority to define, manage, and own/sell resources is held by the powerful few, generally represented as government or industry. Including Indigenous Knowledge in such governance models commonly involves the "commodification of "Elders," the assumption that their knowledge can be easily mined and incorporated directly into non-Indigenous knowledge systems" (McGregor et al., 2010: 119). Fostering intercultural understanding that demonstrates respectful protocols for supporting Indigenous Knowledge Guardians, explains the importance of honouring Indigenous ways, views, and practices, and assesses the role of the scientific method in relation to

Indigenous pedagogies will improve Indigenous-settler governance models based on meaningful relationships (McGregor et al., 2010).
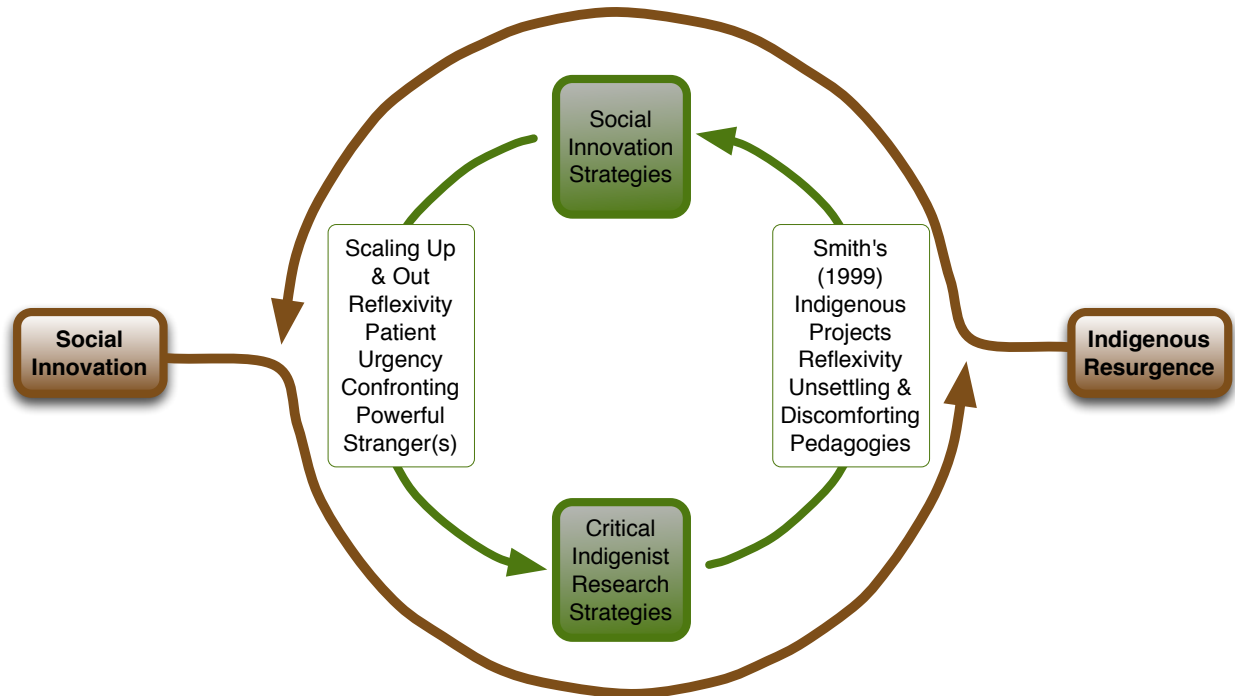
Figure 3: Incorporating Strategies for Indigenous Innovation. Social innovation and critical indigenist research contribute strategies to a model for Indigenous innovation. Westley et al (2006) emphasize reflexivity, patient urgency, and confronting powerful strangers as important strategies for success (see section 3.3). Westley and Antadze (2011) explain how scaling up and out contribute to ensuring broad impact and durability for social innovations (see section 3.3.3.3). Critical indigenist research strategies such as those outlined by Smith (1999), Regan (2010), and Kovach (2010) may all inform Indigenous resurgence initiatives (see sections 3.7, 2.3.4, and 2.4.2, respectively).

3.8 Expanding Upon *Decolonizing Methodologies*: Linking Linda Tuhiwai Smith's Indigenous Projects to Innovation

In her seminal publication, *Decolonizing Methodologies*, Maori scholar Linda Tuhiwai Smith (1999) critically examines the history of research involving Indigenous Peoples and explains her vision for an Indigenous Research Agenda. Smith (1999) explains her Research Agenda through 25 Indigenous Projects (see Table 1) that articulate roles and strategies for engaging in Indigenous and decolonizing research. The 25 Indigenous Projects are not to be interpreted as solely Indigenous initiatives - there are clearly roles for settler allies in supporting this work, for example, in training Indigenous researchers or

providing necessary capacity to ensure progress and success of the projects (Smith, 1999). Similarly, Smith's (1999) Indigenous Projects should not be

Table 1: A Synthesis of Linda Tuhiwai Smith's Indigenous Projects (1999). A summary of the 25 Indigenous Projects outlined in the Indigenous Research Agenda explained by Smith (1999).

Project	Description
Claiming	Centered on the formal claims process and highlights the positive impact that the (re)telling of community history required through this process can have for Indigenous communities
Testimonies	Formal events that includes a role for both speaker and witness; usually associated with speaking the truth about a particularly painful event(s)
Story Telling	Powerful oral histories told through story are a means to communicate cultural values, beliefs, and lessons to the next generation
Celebrating Survival	Celebrations of resistance when people gather to assert Indigenous identifies and embrace "life and diversity and connectedness" (Smith, 1999: 245)
Remembering	A difficult process that can lead to transformative healing as communities remember and respond to the pain induced by colonial pasts and present
Indigenizing	1) For settlers, centering Indigenous cultures and re-evaluating assumptions in settler society, and 2) for Indigenous Peoples, advocating for Indigenous rights, politicizing Indigenous identity, and privileging Indigenous voices
Intervening	An action research project focused on intervening in Indigenous communities (at their request and according to their parameters) to transform colonial institutions
Revitalizing	A project dedicated to the survival of Indigenous languages
Connecting	This project is about connecting in a good way with all of your relations; it can involve (re)connecting families, (re)connecting to Traditional Territories, or connecting young people to promote cultural wellbeing
Reading	(Re)reading history from the perspective of the colonized; acknowledging that history has multiple narratives; deconstructing the colonial narrative is critical
Writing	A strictly Indigenous project, writing produces counternarratives and unique expressions of Indigenous lives and livelihoods
Representing	This projects spans both political representation and representation as expression; barriers to representation are a direct result of colonization
Gendering	(Re)establishing gender roles as outlined by Indigenous values and beliefs to heal the impact colonial conceptions of gender impose(d) upon families
Envisioning	Resisting the colonial present and urging Indigenous Peoples to "dream a new dream and set a new vision" (Smith, 1999: 152) for the future
Reframing	Many social issues facing Indigenous communities persist because problems have not been framed in a way that leads to meaningful

	solutions. Reframing perspectives in academia, government, and industry, can lead to transformative change for communities
Restoring	A holistic project for spiritual, emotional, physical, and mental wellbeing
Returning	Calls upon those in power to return lands appropriated through colonial policy and involves repatriating culturally significant artifacts and ancestral remains
Democratizing	Engages traditional principles of governance in contemporary political dialogue
Networking	Related to connecting, networking involves creating and maintaining relationships between people, often to communicate and share knowledge
Naming	(Re)naming the places and spaces of the world in Indigenous languages, thus restoring meaning and spirit; also applies to naming people
Protecting	This project protects "peoples, communities, languages, customs and beliefs, art and ideas, natural resources and the things indigenous peoples produce" (Smith, 1999: 158); particularly important for Indigenous Knowledge and sacred sites
Creating	Undiminished by colonialism, creativity is a source of innovation, imagination, and adaptability; accessible to everyone creating can lead to solutions for Indigenous communities and lay the foundation for Indigenous-settler relations
Negotiating	Concerned with the long-term self-determination of Indigenous Peoples; involves the negotiation process with settler society and how to proceed in a good way
Discovering	Asks and attempts to answer the questions: How can Indigenous and Western science work together? How can Western science work in the best interests of Indigenous development projects?
Sharing	Similar to connecting and networking, sharing is about communicating knowledge to fuel resistance, particularly as it relates to educating young people; also very important in the research context

strictly understood and carried out in the context of formal social science research methodology. I interpret Smith's (1999) message as addressing broadly defined Indigenous interests. From this understanding, the Indigenous Projects may be expanded to include work in the natural sciences or activities outside of a formal research process (Smith, 1999). Recall that under a critical indigenist approach, research involves a considerable emphasis on practical outcomes for communities. Therefore, Smith's (1999) Indigenous Projects, although partly founded in social science methodology, resonates strongly with movements towards Indigenous self-determination and settler decolonization. As discussed

in the previous section, social innovation shares common ground with several themes in critical indigenist research. However, there is work to be done to develop the language, tools, and spaces within the conceptual framework of social innovation to apply it usefully in Indigenous contexts. I propose using Smith's 25 Indigenous Projects as tools to indigenize the discourse of social innovation and advance an understanding of Indigenous innovations. In understanding the conceptual framework presented in the next section, it is important to remember that at each scale, there are continual panarchical cycles of collapse and renewal simultaneously and continuously occurring. In describing her Indigenous Research Agenda, Smith (1999) names each of the four directions healing, decolonization, transformation, and mobilization (clockwise from north to west, respectively). These processes are meant to provide direction in linking projects that simultaneously occur at multiple scales. Smith (1999) centers her Indigenous Research Agenda around a definition of self-determination that encompasses the pursuit of social justice and is necessarily linked to these four processes of healing, decolonization, transformation, and mobilization. Further, Smith's (1999) definition of self-determination in the context of research is connected to Indigenous resurgence and settler decolonization as each includes a clear emphasis on knowledge and the construction (and re-construction) of meaning within social systems - as resistance, as power, and as a vehicle for change - that further links the inherent transformational agenda to social innovation.

Explaining her intent in listing the Indigenous Projects, Smith (1999) writes, "I hope the message it gives to communities is that they have issues that matter and processes and methodologies which can work for them" (161). Similarly, I hope to build on the Indigenous Projects by linking them to the process of social innovation with the intent to provide a tool for interpreting social innovation in a more useful way for Indigenous communities. Figure 3 describes Smith's (1999) Indigenous Projects as part of a set of strategies that promote the resurgence of Indigenous Knowledge and Practice. In section 3.9, a

conceptual framework for Indigenous innovation positions Smith's (1999) Indigenous Projects as important in fostering social innovations that are initiated, developed, and implemented by Indigenous Peoples. Perhaps most importantly, the conceptual framework discussed in section 3.9 integrates the motivation and intent behind Indigenous innovations and respectfully places the need for change within the context of ongoing settler colonialism and the decolonization project.
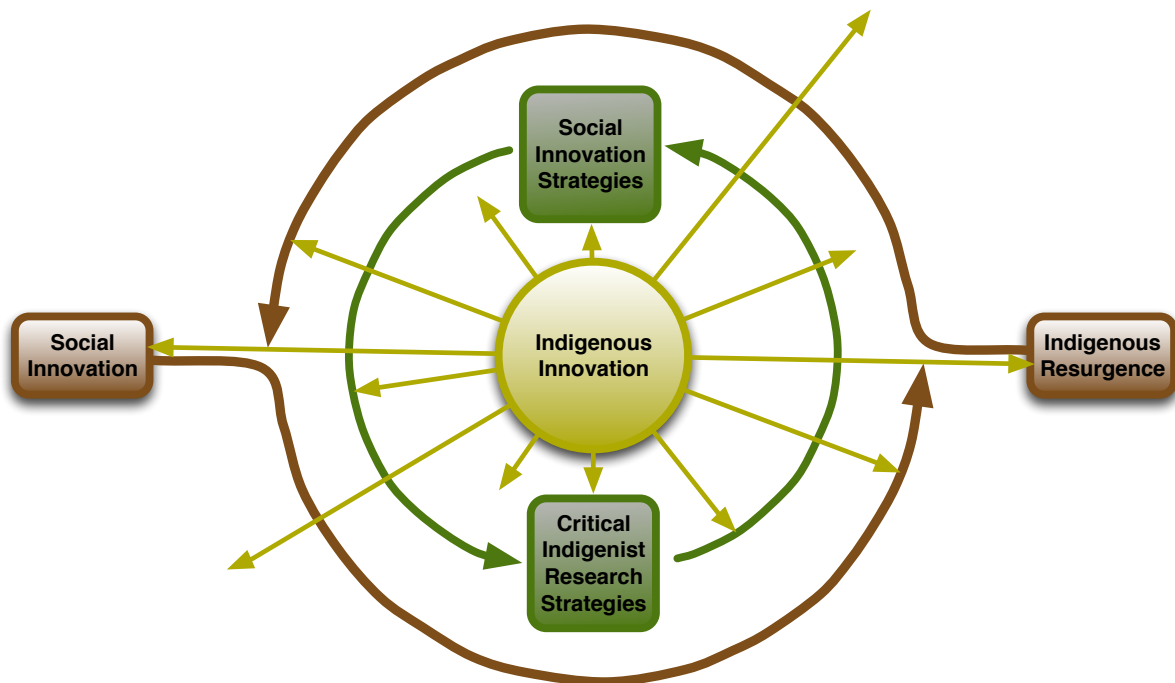
Figure 4: A Conceptual Guide to Indigenous Innovation. This figure is a conceptual representation of how common insights and strategies from social innovation and Indigenous resurgence are brought together to form the foundation of Indigenous innovation. The reciprocal nature of the process is demonstrated as insights emerging from Indigenous innovations broadly contribute to other areas of research and practice. In this way, Indigenous innovation provides strategies and recommendations to scholars and practitioners working across disciplines to foster the resurgence of Indigenous Knowledge and Practice.

3.9 A Multi-Scalar Model for Indigenous Innovation

We don't stand outside the complex system we are trying to change: when it changes, we do; when we change, it does (Westley et al., 2006: 46).

The preceding discussion positions social innovation as an allied framework that shares common ground with Indigenous resurgence and critical indigenist approaches. However, further work can be done to improve the

application of social innovation in Indigenous contexts. To begin this process, I chose to link Smith's (1999) 25 Indigenous Projects, as well as projects suggested by other scholars, to the key themes, roles, and processes of social innovation.

The following conceptual framework uses Westley et al.'s (2006) interpretation of social innovation (see Figure 5). The panarchy cycle is clearly recognizable as three social systems organized in a hierarchy that represents three broadly defined scales – interpersonal (micro-scale), organizational (meso-scale), and system (macro-scale) (Westley & Antadze, 2011). Capable actors are able to intervene any of the three scales, however introducing an innovation is most easily achieved at the conversational level. From this scale, the impact of innovations may gain traction and durability as ideas are strategically embedded and take hold within and between people, organizations, and social systems (Moore & Westley, 2011a; Westley & Antadze, 2011). The following discussion reviews the need for systemic social changes that flows from Indigenous resurgence in Canada and provides an initial synthesis of the projects and roles interacting within and across scales in Indigenous innovations.
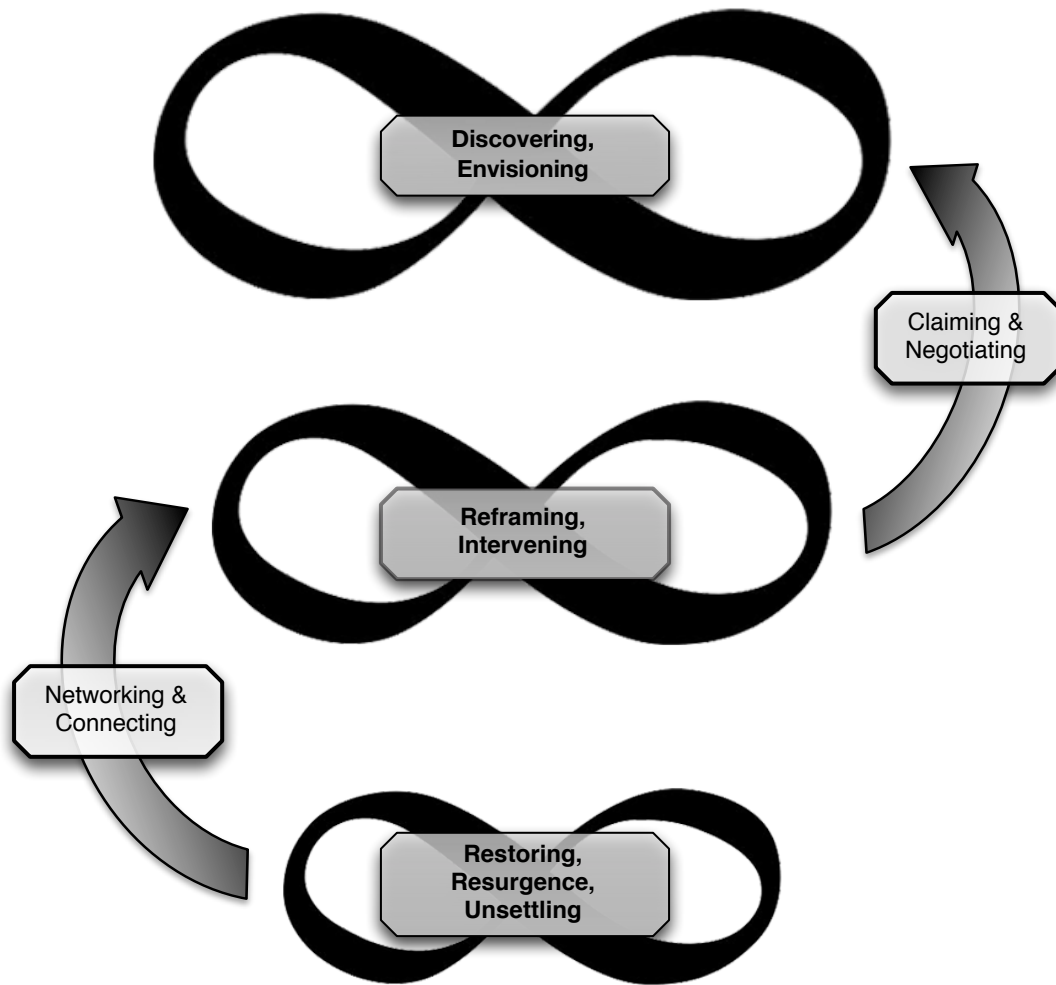
Figure 5: A Multi-Scalar Model for Indigenous Innovation. The model integrates strategies from both social innovation, Indigenous resurgence and critical indigenist research methodologies to describe and inform social innovations initiated, developed, and implemented by Indigenous Peoples.

3.9.1 Interpersonal Scale

3.9.1.1 Changing the Conversation

Conversations and relationships can be transformed at a rapid pace at the interpersonal scale, quickly changing the way individuals perceive and interact with the current social system (Giddens, 1984). In this way, innovative ideas can have broad impact at an interpersonal scale by affecting the way people relate to one another and by establishing and maintaining new relationships. This emphasizes the importance and potential impact of prominent projects at this

scale: *restoring*, *resurgence*, and *unsettling* (Alfred, 2005; Alfred 2008; Corntassel, 2012; Regan, 2010; Simpson, 2008; Smith, 1999). For example, Indigenous resurgence offers an alternative narrative for confronting the colonial present and frames the process for understanding and practicing resurgence as rooted in community and intercultural knowledge exchange (Corntassel, 2012; Simpson, 2008). Similarly, the early stages of social innovation focus on building a strong foundation by identifying social and institutional entrepreneurs, communicating key messages, and scaling out the innovation (Phills et al., 2008; Westley et al., 2006).

3.9.1.2 Prominent Roles and Strategies

> *To realize and build resurgence we not only need visionaries, but our visionaries must also have the skills to excite, inspire and illuminate our peoples to unite, committing to transform that vision into sustain and committed action* (Simpson, 2011: 67).

Indigenous Knowledge Guardians are uniquely capable of *restoring* Indigenous Knowledge and Practice to communities and are thus able to provide direction on how to move towards improved wellbeing for Indigenous Peoples, settler communities, and the environment (Simpson, 2008; Turner 2006). A concurrent *resurgence* is taking place as knowledge transmission and the performance of Indigenous ways, views, and practices is restored to a greater population (Alfred, 2005; Simpson 2008). Settlers carry a responsibility to engage in *unsettling* experiences and continually reflect and respond to the ways in which colonial assumptions creep into daily activities (Regan, 2010). To engage in unsettling pedagogies, settlers must be willing to step out of the rules that govern the current social system and imagine alternative possibilities by confronting the position of neocolonizer, and disrupting the cycle of contemporary colonialism within (Regan, 2010).

In describing their pedagogy of discomfort, Boler and Zembylas (2003) suggest that alternative knowledge systems are powerful sources of creativity and innovation. However, individuals who are unwilling or as yet incapable of

opening themselves to differences may hinder the potential progress enabled by engaging multiple perspectives in the innovation process (Westley et al., 2006). Further, engaging as an ally in Indigenous innovations prematurely or being unprepared for the emotional labour involved in the process of unsettled learning can also increase the chances of failure. This emphasizes the importance of choosing the right settler allies at this scale - those individuals who are prepared to accept the responsibility of engaging all of their relationships and who are ready to follow a path of personal transformation through individual unsettling.

Social entrepreneurs in Indigenous innovations play a very similar role to those engaged in conventional innovation processes. They are tasked with securing resources to turn an innovative idea into a formalized innovation and with bringing like-minded individuals together to form a network of motivated partners (Westley & Antadze, 2011). It is important to consider the prominent projects in mobilizing connections at this scale - Indigenous philosophers must come together to continue to *restore* Indigenous Knowledge and Practice, *resurgence* must build upon this Knowledge and Practice brought to communities, and finally, settler allies must contribute by undertaking their own process of *unsettling*. Less prominent projects at this scale - *testimonies*, *storytelling*, *naming*, *reading*, *writing*, and *creating* - all contribute to the ways in which *restoring*, *resurgence*, and *unsettling* experiences can be fostered and then communicated. Therefore, planning and development at this scale continually contributes to the innovation process and prepares systems at higher scales for transformation.

3.9.1.3 Scaling Out: Translate and Legitimate

The projects at this scale focus on how to communicate the message of Indigenous Knowledge Guardians. In this process, the roles identified by Turner (2006) - Indigenous philosophers (Indigenous Knowledge Guardians), word warriors (or Indigenous scholars) and settler allies witness to teaching-learning experiences with Indigenous philosophers - are useful in describing how the

guidance of Indigenous philosophers may be communicated outward to wider audiences. Under a process of sanctioning, the messages of Indigenous philosophers must be translated into a language that can be understood by various Indigenous communities and also across cultures in such a way that they have impact to those in positions of power (either practically through the translation of traditional languages, or theoretically through the narratives and discourse used to discuss ideas). In this way, communicating the messages at the heart of the Indigenous innovation may be respectfully conveyed to potential funders, supporters, and skeptics in order to galvanize initial support. I recognize that in the context of Indigenous Knowledge and Practice the words *legitimate* and *valid* are inappropriate when used to measure value against the dominant paradigm - this is not my intention. Furthermore, the word *translation* is not meant to imply that the complexity and entirety of the teachings given by Indigenous Knowledge Guardians can be conveyed in this way. Communicating what has been learned through *restoration*, *resurgence*, and *unsettling* to wider audiences helps in the processes of scaling out the innovation (Westley & Antadze, 2011). Dismantling communication barriers and building relationships based on mutual understanding are strategies for preparing the scale above for change (Biggs et al., 2010; Westley et al., 2006; Westley & Antadze, 2011).

3.9.1.4 Scaling Up: Invigorating Change

Between the interpersonal and organizational scales are a series of informal networks and connections between individuals from allied groups. Where social entrepreneurs are critical to scaling-out an innovation by gathering resources, institutional entrepreneurs are essential to Smith's (1999) *networking* and *connecting* projects across scales (Westley & Antadze, 2011). These individuals are skilled in navigating the cycle of renewal in their organization(s) and are able to identify appropriate windows of opportunity for change (Westley & Antadze, 2011). In the context of Indigenous innovations, institutional entrepreneurs may be Indigenous philosophers or word warriors who have extensive experience dealing with government and industry. These

individuals are uniquely qualified to communicate with settler governments and industry representatives while respecting the knowledge and sacred instructions at the heart of the innovation. Scaling up an innovation is not a predictable process, but by fostering transformations at an individual level and communicating the messages of Indigenous Knowledge Guardians across and between scales, the emerging social innovation can begin to change conventional narratives surrounding Indigenous ways, views, and practices.

3.9.2 Organizational Scale

> *If the goal is social transformation, the next step is rarely obvious* (Westley et al., 2006: 209).

3.9.2.1 Building Capacity to Address the Social Need

As a conceptual framework, social innovation uses concepts from resilience to demonstrate how to navigate the uncertainty involved in transformative change (see Section 3.3.1 for an overview of resilience in social-ecological systems) (Westley et al., 2006). Specifically, the panarchy cycle (Gunderson & Holling, 2002) illustrates how changes at smaller scales can penetrate higher scales through the revolt process. In turn, the slow cycles of renewal at higher social scales - represented by social norms, values, beliefs, and, laws - can act to reinforce the status quo and subdue innovation through the remember process (Westley et al., 2006). Recall that the conservation phase of the adaptive cycle is characterized by rigid, highly connected components and generally have low resilience because of the inflexible networks established over time (Holling, 2001; Gunderson & Holling, 2002). The Indigenous Projects prominent at the interpersonal scale, *restoring*, *resurgence* and *unsettling,* help to build the necessary transformative capacity to trigger a collapse of the rigid conservation phase. In navigating this transformation (Biggs et al., 2010), building adaptive capacity within communities is necessary to retain the beneficial components of the original system (for example, procedures for cultivating inter-cultural understanding) and to abandon components that hindered progress towards resurgence (for example, colonial structures of

authority and power). In this way, adaptive capacity draws upon the strengths of the previous iteration of the system in order to build resilience in the next.

The projects at the interpersonal scale also support the development of eco-cultural restoration - activities that ensure the, "viability and sustainability of nature and culture at local, regional, and global levels" (Rapport & Maffi, 2011). In this way, eco-cultural restoration is related to sustainable living, drawing attention to the notion of linked cultural and ecological wellbeing and placing specific emphasis on cultural aspects of sustainability (Turner, 2005). Therefore, maintaining linked cultural and ecological integrity is important in the work of Indigenous Knowledge Guardians.

3.9.2.2 Prominent Roles and Projects

The prominent Indigenous Projects at this scale - *intervening* and *reframing* - confront the colonial values, beliefs, and assumptions present in the previous iteration of the system and provide a basis for change at higher scales. *Intervening* and *reframing* are also concerned with analyzing and changing the perspectives and long-held beliefs about Indigenous Knowledge and Practices in order to foster consideration and respect. At this intermediate scale, the impact of institutional entrepreneurs becomes clearer as *intervening* and *reframing* can result in measurable changes to the way organizations (such as universities or companies) operate. For example, Indigenous Peoples may be insufficiently *represented* in government policy, or perhaps Indigenous Knowledge is not respectfully *protected* by settler society. In this way, Indigenous ways, views, or practices integral to the innovation process may *intervene* in the contemporary colonial context, transforming the status quo at this scale to a decolonized version of the previous structure and function of the organization. The less prominent projects at this scale - *celebrating survival, indigenizing, protecting, representing,* and *sharing* - all emphasize how Indigenous Knowledge and Practice may manifest itself at the organizational scale and contribute to identifying opportunities for further intervention within and across scales.

The role of the institutional entrepreneur at this scale is to identify people in power who are able to stimulate change at higher scales (Moore & Westley, 2011a). The motivation behind this role is founded in the responsibilities held by each person who participates ethically in Indigenous Knowledge learning-teaching scenarios (Simpson, 2011; Wilson, 2008). To demonstrate respect for the relationships developed between Indigenous Knowledge Guardians, the teachings received, the spirits who facilitated the knowledge exchange, and the environment within which the teaching was held, witnesses must acknowledge an ethic of relational accountability (see section 2.1) (Wilson, 2008). Ethical witnessing from a critical indigenist perspective has been discussed with respect to the three R's of indigenist research - respect, responsibility, and reciprocation (Wilson, 2008). In this case, reflecting and reporting what was taken away from teaching-learning experiences or translating-communicating certain pieces to conventional audiences, both within and between scales, may fulfill reciprocation.

3.9.2.3 Patient Urgency: Taking the Time to Get it Right

Each success only increases the pressure to scale up, to find the tipping point where innovation becomes the longed-for tidal wave of change that was, after all, their dream (Westley et al., 2006: 207).

Contrary to the natural inclination to continue with what works, Westley et al. (2006) integrate the idea of patient urgency to argue against the tendency to reuse strategies after experiencing success. Westley et al. (2006) conclude that transformative changes are generally not achieved by repeating the same strategies. Instead, a continual reflexive practice, requiring both reflection and action, is necessary to adapt to uncertain and changing conditions (Westley et al., 2006). This is particularly important during the reorganization phase of the adaptive cycle as overcoming the risk of stagnation is key to transformative change and avoids a return to the previous, undesirable system state (Westley et al., 2006).

However, any activities and programs put forward at this point in the innovation process must be in accordance with the direction and guidance of Indigenous Knowledge Guardians, even though the window for action may seem time sensitive. Monitoring and tracking trends across scales and reflecting on the necessary changes and conditions required for triggering cascading changes are important for understanding the current state of the system (Westley et al., 2006). Furthermore, taking the time to fully understand the direction and guidance of Indigenous Knowledge Guardians ensures that the eventual actions challenges dominant values and beliefs attached to resources and the environment, reaffirms the authority of Indigenous intellectual, social, and cultural traditions (Alfred, 2009), and eases the transition to a re-organized (and perhaps, more decolonized) version of the previous system state. The continual reflexive practice works to further *reframe* the perspectives of allied settler organizations, build strategies for the next steps in the innovation process, and identify windows of opportunity to *intervene* at higher scales.

3.9.2.4 Scaling Up: Dismantling Barriers to Innovation

Significant barriers to innovation are encountered through the authority of dominating paradigms and procedures (Westley et al., 2006). However, just like the informal processes of *networking* and *connecting*, more formal Indigenous Projects such as *negotiating* and *claiming* can help to build bridges between higher scales and dismantle barriers to transformative change. *Negotiating* and *claiming* become particularly important in navigating resistance from the status quo while fostering change at the system scale. Bringing Indigenous interests to the system scale in the Canadian context may take the form of formal negotiations involved in fulfilling the duty to consult, establishing impact and benefit agreements, or reviewing (or developing) federal policy and law. Smith (1999) proposes entering into negotiations through the formal land claims as a way to assert Indigenous rights to ancestral lands. A linked strategy may be to identify influential individuals in positions of power and encourage them to engage in a teaching-learning relationship with

Indigenous Knowledge Guardians. If these individuals were open to learning from an unsettling pedagogy, they may return to their day-to-day roles with an understanding of relational accountability (Wilson, 2008). In this way, teaching individuals in positions of power and *reframing* their understanding of both Indigenous-settler relations and Indigenous ways, views, and practices cultivates a responsibility to communicate this new understanding to broader social network(s). Therefore, *intervening* in both Indigenous and settler communities and working to *reframe* perspectives at an organizational scale contributes to dismantling barriers to innovation and increases the chances of success.

3.9.3 System Scale

3.9.3.1 Disruptive Encounters

> *Mobilization, resistance, and resurgence involves sacrifice, persistence, patience and slow, painful movement* (Simpson, 2011: 67).

Sudden, cascading changes at the system scale require disruptive encounters with the rules, resources, roles, and meanings of the powerful institutions of the dominant social system (Giddens, 1984; Westley & Antadze, 2011; Westley et al., 2006; Westley, 2002). The cycle of creative destruction and renewal at the system scale is generally slow, relative to smaller scales, and therefore acts to constrain ideas and innovations emerging in the scales below (Westley et al., 2006). The prominent Indigenous Projects at this scale, *discovering* and *envisioning,* help to build moments of mutual understanding between institutional entrepreneurs and influential actors capable of navigating confrontation and conflict with the status quo.

Indigenous resurgence and resistance is pursued, in part, to restore balance to the relationships between Indigenous and settler communities (Simpson, 2011). Striving to attain dominance or power over settler society would engage an unproductive win-lose binary in opposition to both the foundation of the resurgence movement and established social innovation strategies (Simpson, 2011; Westley, 2006). This pattern of separating

possibilities is at the foundation of many historical conflicts and problems - reframing such long-standing tensions represents a significant source of innovation (Mulgan, 2012; Westley et al., 2006). Power should be sought through balanced relationships with the status quo as opposed to through dominance in the eventual disruptive encounters Indigenous innovations will face.

The Nishnabeg prophecy known as the Eighth Fire foretells of a time when Indigenous ways, views, and practices will be required to build a common future with settler society - Leanne Simpson links Indigenous resurgence to the Seventh Fire of the Prophecy (Simpson, 2008; Simpson, 2011). However, even with such a powerful message, it remains difficult to stimulate a united response among communities and generate collective action towards resurgence. This is particularly true at a system scale as committed, motivated individuals and organizations are needed to confront the resistance presented by the powerful status quo.

3.9.3.2 Prominent Roles and Projects

Transformations in beliefs and values at the system scale must be made in accordance with Indigenous Knowledge and Practice to avoid perpetuating the status quo. The two Indigenous Projects most prominent at this scale, *discovering* and *envisioning*, are directly linked to strategic change at the policy level, particularly in those policy areas related to land use. In the *discovering* project, the aim is to articulate how Indigenous and settler knowledge systems can work together for mutually beneficial Indigenous development goals (Smith, 1999). *Envisioning* focuses on dreaming, both in terms of planning a future that confronts the colonial present, and the dreaming or visioning that allows for spiritual guidance regarding Indigenous resurgence (Simpson, 2011; Smith, 1999).

Regardless of scale, it is important to reflect upon how the strategies and actions driving the innovation are flowing simultaneously and continuously from lower scales (Westley et al., 2006). In the absence of the guidance of Indigenous Knowledge Holders and their wisdom, the overall course of the

innovation may evolve in a different direction, affecting the process and resulting ideas generated. This is particularly important at higher scales as cascading transformations, by definition, will similarly transform all others below (Westley et al., 2006). In this way, innovations based on Indigenous ways, views, and practices that disrupt the fundamental flow of resources, societal values, beliefs, and norms will guide human-environment relationships towards the good life, explained as *mino bimaadiziwin[2]* by Nishnaabekwe scholar Leanne Simpson (Simpson, 2011).

Indigenous Projects prominent at the system scale are generally defined because they show greater diversity between contexts. For example, Indigenous innovations may seek to improve *democracy* in decision-making and *return* authority to Indigenous Peoples over traditional lands - these are Projects subject to the unique approaches to governance and authority in varying Indigenous nations (Westley et al., 2006). In a similar way, *gendering* and *remembering* have strong individual components and thus show vast differences at smaller scales. However, *gendering* and *remembering* are included at the system scale because the linked processes of *discovering* and *envisioning* are particularly dependent upon the individual healing process - together, *democracy*, *returning*, *gendering*, and *remembering* allow for individuals to be able to look positively into the future and strategically approach transformation from positions of hope and strength.

3.9.3.3 From Innovation to Ordinary: Systemic Transformation

Sustaining a capacity for innovation is different from sustaining a particular innovation or a particular organization (Westley et al., 2006: 213).

Although an isolated event often triggers cascading effects at a system scale, social innovation scholars propose that maintaining capacities (for example, adaptive, eco-cultural, and transformative capacities) is more

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2. A direct translation of this Nishnaabeg phrase is not possible, however Leanne Simpson describes *mino bimaadizin* as "living the good life" or "living life in a way that promotes rebirth, renewal, reciprocity and respect". For further discussion, see Simpson (2011).

important than maintaining specific initiatives (Westley et al., 2006). Several failures, sometimes over many years, are often necessary before systemic transformation occurs (Westley et al., 2006). Therefore sustaining capacity, motivation, and committed action within and between Indigenous and allied settler communities is critical to fulfilling the original intent.

According to the Nishnabeg Eighth Fire Prophecy, the foundation for Indigenous resurgence has been underway for generations (Simpson, 2011). Currently, Indigenous nations and communities are leading resurgence initiatives throughout the colonized world (Alfred, 2005; Simpson, 2008; Simpson, 2011; Smith, 1999; Turner, 2005). *Restoring*, *resurgence*, and *unsettling* experiences lay the foundation for the collective actions moving transformative Indigenous innovations forward. In building towards transformative change across scales, Smith's (1999) four pillars of an Indigenous Research Agenda - healing, decolonization, transformation, and mobilization - are important in maintaining connectivity and a strong foundation. These four pillars are present at each scale in the innovation process and help to guide change built upon strong relationships (Simpson, 2011; Smith, 1999). In this way, innovations that support the resurgence of Indigenous Knowledge and Practice are about fulfilling a linked social and ecological need to find solutions that will build a better future for Indigenous and settler communities.

3.10 Conclusion

> *If [resurgence] is done in a good way, it has the power to transform settler society generative political relationships based on the Indigenous principles of peace, justice, and righteousness as embodied in mino bimaadiziwin* (Simpson, 2011: 66-67).

The preceding development of a conceptual framework for Indigenous innovations provides a preliminary evaluation of the conventional social innovation framework and its application in Indigenous contexts. The literature review (sections 3.1-3.4) focuses on providing context for the Indigenous resurgence movement, particularly as it relates to a critical indigenist research

approach from the perspective of a settler researcher. Through this work I also provide an overview of the key concepts and themes for social innovation and resilience in social-ecological systems. Sections 3.5-3.8 explain how Indigenous resurgence and social innovation may be brought together in a multi-scalar model for Indigenous innovation. This preliminary framework is intended to engage social innovation in a more useful way for Indigenous communities.

In concluding this Chapter, I return to a central question in this research - are conventional approaches to social innovation appropriate and useful in the context of Indigenous innovations in environmental planning and management? Through the above discussion, I lay the necessary foundation to address the three major objectives for this research (from Chapter 1):

- From a critical indigenist perspective, review the social innovation and resilience literatures to identify (if any) common ground with Indigenous resurgence;
- Distinguish Indigenous innovation from conventional social innovations;
- Propose a conceptual framework for describing and informing Indigenous innovations.

Moving forward, the common ground between social innovation and Indigenous resurgence (see section 3.5 & 3.6) is explored in relation to the *Anishanaabe Maamwaye Aki Kiigayewin* case study in Chapter 4. Chapter 4 will also propose a definition for Indigenous innovation. The conceptual framework I outline in section 3.8 is discussed in relation to the Mississaugas of the New Credit case study in Chapter 5.

Chapter Four: Mine Reclamation Informed by the Knowledge and Wisdom of the Ancestors: A Case Study in Indigenous Innovation with Anishanaabe Maamwaye Aki Kiigayewin in Timmins, Ontario

4.1 Introduction

In 2009, a window of opportunity emerged in the northern Ontario mining community of Timmins, Ontario as Canadian mining company Goldcorp began a re-evaluation of corporate social responsibility policies (Yagenova & Garcia, 2009; Zarsky & Stanley, 2011). Traditional Practitioner, Cultural Advisor and local resident Martin Millen, along with the Indigenous Community Relations Manager for Porcupine Gold Mines (the local subsidiary of Goldcorp) Mary Boyden, recognized this opportunity and began their work to bring Indigenous Knowledge Guardians from across Canada together to find direction on how to heal the lands, waterways, and local communities affected by a century of mining and over 400 years of colonization (see McCarthy et al., *forthcoming*). Today, the result of this work is *Anishanaabe Maamwaye Aki Kiigayewin*, an Anishinaabe phrase meaning "all people coming together to heal the Earth", an Indigenous resource governance body operating under the guidance of Indigenous Knowledge Guardians and working with government, industry, and other stakeholders to inform conventional mine reclamation practices. The potential of this innovative solution to historical resource conflict in Timmins prompts the question: are conventional framings of social innovation (Westley et al., 2006) sufficient to describe and provide direction for *Anishanaabe Maamwaye Aki Kiigayewin* considering the emphasis placed on Indigenous Knowledge and Practices? To answer this question, this paper will identify common ground between social innovation and the Indigenous resurgence literature, and then propose Indigenous innovations as a unique type of social innovation. We believe that describing the development of *Anishanaabe Maamwaye Aki Kiigayewin* from a critical indigenist perspective

offers insight into strategies for fostering Indigenous innovations at multiple scales while clarifying potential roles for settler allies.

4.1.1 Locating the Author(s)

Before proceeding, and in keeping with critical indigenist methodology, I will introduce myself and my research story (Absolon, 2011; Denzin et al., 2008; Johnson, 2008; Kovach, 2010; Smith, 1999; Wilson, 2008). I am of mixed Finnish and Ukrainian heritage; both my mother and father grew up near Sudbury, Ontario, where I was born and raised. Through my ongoing research journey, I intend to distance myself from the objective lens I was trained to use in scientific study and instead "include my own perspective and acknowledge that I look at the world through a pair of tinted spectacles" (Johnson 2008: 128). I recognize my responsibility to engage in intercultural knowledge exchanges and have a complimentary research interest in studying indigenist approaches to resource and environmental management. I believe that introducing approaches to relationship building, knowledge integration, and reconciliation outside conventional practice can contribute to improving social justice for Indigenous Peoples living in Canada while simultaneously returning dignity to settler Canadians.

In accordance with the United Nations Declaration of the Rights of Indigenous Peoples (UNGA, 2007) and following Alfred and Corntassel (2005), I use the term *Indigenous Peoples* as opposed to Aboriginal. This is done to respect the Indigenous identities involved in this work and draws attention to the colonial implications of the term Aboriginal, which flows from the Canadian legal terminology used to classify Indigenous Peoples (Alfred & Corntassel, 2005). I do not intend to posit a pan-Indigenous approach - this is, in part, why this paper is founded in case study methodology. Similarly, I use the term *intercultural* as opposed to cross-cultural to emphasize the mutual benefit flowing from these experiences and to avoid invoking comparative evaluations. Finally, I use the term *indigenist* rather than Indigenous in naming the methodological approach used in this

paper. Wilson (2007) explains that, "it is my belief that an indigenist paradigm can be used by anyone who chooses to follow its tenets. It cannot and should not be claimed to belong only to people with 'Aboriginal' heritage" (193-194).

4.1.2 Rationale for Research

Social innovation is "an initiative, product, process or program that profoundly changes the basic routines, resource and authority flows or beliefs of any social system" (SiG@Waterloo, 2013). A social system may be described as an organized group of interrelated resources, beliefs and processes that function together to accomplish a particular function or set of functions (Westley & Antadze, 2011). In complex social systems, social innovation is achieved through the combined effect of agency (the day-to-day activities of actors in the system) and opportunity to disrupt established social institutions (either political, cultural or economic) (Westley & Antadze, 2011). Therefore, social innovation is characterized by a dynamic tension between actors and social structures – through repeated behaviours, actors are responsible for creating the social structures that define the social system while simultaneously, they experience both resistance and opportunity within these structures (Biggs et al., 2010; Giddens, 1984; Moore and Westley, 2011; Westley & Antadze, 2011). Intervening at the micro-scale to change day-to-day conversations initiates the process of social innovation (Moore and Westley, 2011; Westley & Antadze, 2011). However, achieving broad impact and durability across scales involves an intimate knowledge of and significant opportunity to navigate the tension between actors and the social structures (Biggs et al., 2010; Moore and Westley, 2011; Westley & Antadze, 2011; Westley et al., 2006). In navigating the development of social innovations, the processes of *scaling out* and *scaling up* refer to strategies that help gain traction within scales and also reach across scales to build a network of communities that support cascading change (Westley & Antadze, 2011).

The capacity of the social system to continually innovate in the face of adverse conditions is a resilience indicator (Walker & Salt, 2006). From a social-ecological systems perspective, resilience has been defined as the capacity to absorb disturbances and navigate adversity while retaining the fundamental structure and function defining the current system (Resilience Alliance, 2012; Walker & Salt, 2006). From a critical indigenist perspective it is clear that historicizing and contextualizing resilience and social innovations is essential to respectfully describe system states and foster transformative change. In our case, the conventional resource planning and management system is considered highly resilient but in no way desirable for Indigenous Peoples living in Timmins, Ontario, Canada. This leads to the question: how is *Anishanaabe Maamwaye Aki Kiigayewin* overcoming abundant systemic structural barriers to innovation to disrupt knowledge and authority flows in Timmins? Following the case description, we propose Indigenous innovations as a way to both conceptually and practically address colonial assumptions in social innovation theory.

4.2 Background

4.2.1 Confronting Colonial Realities: Indigenous Resurgence

Recent literature in Indigenous studies explains that revolutionary narratives construct binary colonizer/colonized conflicts and instead focuses on the transformative potential of a resurgence in Indigenous Knowledge and Practices (Alfred, 2005; Alfred and Corntassel, 2005; Simpson, 2008; Simpson, 2011). Rooted in the emergence, celebration, and flourishment of Indigeneity, resurgence is a solely Indigenous movement that flows from restoring, practicing, and celebrating Indigenous Knowledge and Practices (Corntassel, 2012; Simpson, 2008; Simpson, 2011). Central to resurgence is the transmission of Indigenous Knowledge between communities and across generations (Alfred, 2005; Alfred & Corntassel, 2005; Corntassel, 2012; Simpson, 2008; Battiste, 2000; Simpson, 2011). This transmission of knowledge contributes to the (re)emergence and maintenance of traditional governance

models based on Indigenous ways, views, and practices, fostering renewed relationships between communities and strengthening the authority of Indigenous cultural and social institutions (Alfred & Corntassel, 2005; Corntassel, 2012; Simpson, 2008). Finally, ecological integrity is also important in Indigenous Knowledge and Practice (Corntassel, 2012; Simpson, 2008; Battiste, 2000; Martin, 2003; Turner, 2005) and while a degree of environmental change is expected, irreparable damage to ecosystem structure and function limits access to and the effectiveness of Indigenous Knowledge and Practice (Simpson, 2008; Battiste, 2000; Turner, 2005).

A parallel project is occurring within settler society as enhanced intercultural understandings are addressing structural inequalities in power, opportunity and equity flowing from colonization. Settler allies accept a series of reciprocal responsibilities when engaging in unsettling, intercultural experiences as new meanings and understandings should be shared to respect emerging teaching-learning relationships (Regan, 2010; Simpson, 2011). A transformative power flows from the positive emotional labour embodied by settlers engaged in discomforting, unsettling experiences that challenge the assumptions of colonial hegemony (Boler & Zembylas, 2003; Regan, 2010). In this way, intercultural spaces help to heal relationships between Indigenous Peoples and settler Canadians by fostering mutual respect and diminishing barriers to communication (Regan, 2010; Turner, 2005).

4.2.2 Linking Human-Environment Perspective in Conventional Resource Management Practices: Social Innovation as an Allied Theory of Change

From a resilience perspective, disruption and change within dynamic systems is inevitable and continuous - systems with resilience have the capacity to absorb disturbance while still retaining the fundamental structure and function that defines a system state (Walker & Salt, 2006; Resilience Alliance, 2012). The conventional resource management approach is critiqued in the resilience literature as it both situates humans outside of the environment system and is in opposition to the disruptive, unpredictable, and dynamic

character of social-ecological systems (Berkes & Folke, 2003; Gunderson & Holling, 2002; Gunderson, Holling, & Light, 1995; Holling, 2001; Walker et al., 2006; Walker & Salt, 2006; Berkes, 2010). The resilience framework has recently been used to describe social innovation in complex social-ecological systems (Biggs et al., 2010; Moore & Westley, 2011; Westley & Antadze, 2011; Westley et al., 2006). Key aspects of social innovation make it a good candidate as an allied theory, useful in Indigenous contexts and recognizable to those in conventional resource management roles. The links between Indigenous resurgence and social innovation are tied to the need to transform the current unsustainable trajectory of development (see for example, Alfred, 2005; Simpson, 2008; Nadasdy, 2007; Westley et al., 2011; Westley, et al., 2006). Nancy Turner directly links resilience thinking and Indigenous ways of knowing in her discussion of the key elements for sustainable living, "given the importance accorded by [I]ndigenous peoples to future generations and to the long-term health of their environment...resilience thinking resonates well with [I]ndigenous views of the world" (Turner, 2005: 234). Both sets of literatures use the narrative of highly resilient yet undesirable system states to describe the need for change. The following areas of intersection represent common ground between Indigenous resurgence and social innovation:

Rooted in Relationships - Indigenous ways of knowing are based on relationships or sets of relationships, holistically addressing the emotional, physical, spiritual and mental self (Kovach, 2010; Martin, 2003; Steinhauer, 2002; Wilson, 2008). Increasing acceptance of a resilient socio-ecological systems approach (Waltner-Toews et al., 2008; Gunderson & Holling, 2002; Holling, 2001; Gunderson et al., 1995; Walker & Salt, 2006) advances holistic perspectives of the human-environment relationship and suggests that viewing humans *with* nature cultivates a deeper understanding of the necessary components for a lasting wellbeing (Turner, 2005).

Inevitable Resistance - Instigating cascading changes to the status quo involves considerable struggle and requires disruptive encounters with power and authority structures (Westley et al., 2006). Disrupting the status quo requires continual reflection to ensure that conventional values and beliefs are challenged in accordance with the original intent of the innovation (Simpson, 2008; Simpson, 2011; Westley et al., 2006). Specifically, Indigenous Peoples may "transcend the controlling power of the many" to confront colonial existence through the wisdom and direction of Indigenous Knowledge Guardians (Alfred & Corntassel, 2005: 613)

Focus on Agency and Knowledge - Intervening in actors' knowledge regarding particular rules or resources can impact the way in which social structures are produced or reproduced (Giddens, 1984). Similarly, (re)acknowledging Indigenous Knowledge and Practices as central authorities within Indigenous communities may lead to individual, familial, and community transformations (Alfred, 2005; Alfred & Corntassel, 2005; Corntassel, 2012; Simpson, 2008; Simpson, 2011). Therefore, reframing the values and beliefs of actors within the institutional context of the social system allows innovations to take hold and ensures broad impact and appeal (Moore & Westley, 2011).

Positive Message of Social Change - By definition, social innovations address seemingly intractable conflicts often characterized by a paradox (Biggs et al., 2010; Young Foundation, 2007; Westley et al., 2006; Westley & Antadze, 2011). Reframing the paradoxes surrounding historical conflicts as shared and mutually beneficial futures can lead to solutions that re-orient the rules and resources of the present social system (Smith, 1999; Westley et al., 2006).

Multi-Scalar Transformations - Social innovations have broad impact and durability both within and between scales (Biggs et al., 2010; Moore & Westley, 2011; Young Foundation, 2007; Westley et al., 2006; Westley & Antadze, 2011). Similar to Simpson's (2011) framework for transformative self-empowerment

and Corntassel's (2012) emphasis on everyday resurgence, the panarchy framework (Gunderson & Holling, 2002) emphasizes smaller scales as sources of novelty. Similarly, resistance from the status quo at higher scales represents inevitable confrontation (Alfred & Corntassel, 2005; Biggs et al., 2010; Corntassel, 2012; Gunderson & Holling, 2002; Simpson, 2008; Simpson, 2011; Westley et al., 2006; Westley & Antadze, 2011).
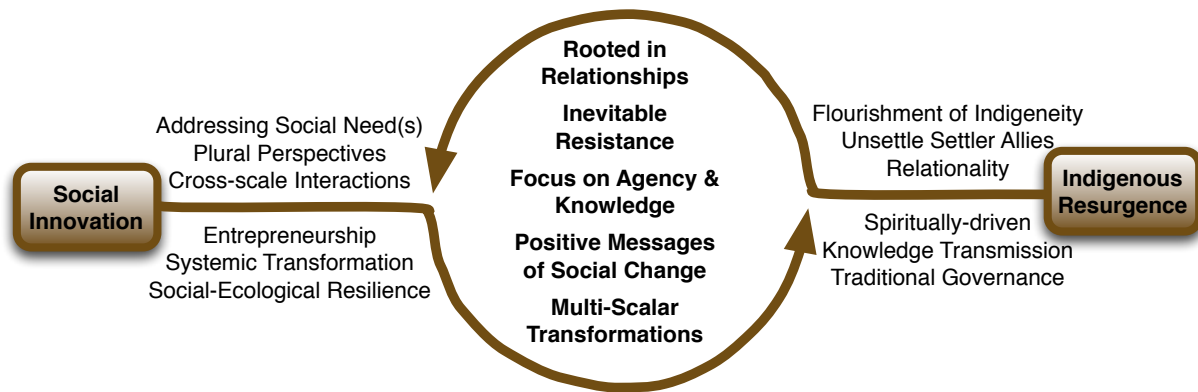
Figure 6: Identifying areas of common ground between social innovation and Indigenous resurgence. Five areas of intersection - rooted in relationships, inevitable resistance, a focus on agency and knowledge, positive messages of social change, and multi-scalar transformations – are identified and explained through section 4.2.2 (see section 3.6 for further details).

Social innovations pursued by Indigenous Peoples for the resurgence of Indigenous Knowledge and Practices fills the need for holistic and culturally appropriate ways of healing the lands, waterways, animal and human communities affected by unsustainable resource and environmental management. The common ground identified between social innovation and Indigenous resurgence may be further demonstrated through Smith's (1999) Indigenous Projects. In this paper, we interpret Smith's (1999) Indigenous Projects as addressing broadly defined Indigenous interests and use them as tools to describe the innovative projects undertaken by *Anishanaabe Maamwaye Aki Kiigayewin*. In addition, we provide an example of Indigenous innovation and explain the role of *Anishanaabe Maamwaye Aki Kiigayewin* in the potential transformation of the resource planning and management system in Timmins, Ontario.

4.3 Methodology & Methods

4.3.1 A Critical Indigenist Approach

Throughout the research process, the university team strives to implement critical indigenist methodologies by linking critical and Indigenous methodologies to decolonize colonial assumptions through action-oriented research (Kovach, 2010; Denzin et al., 2008; Smith, 1999; Wilson, 2008). In collaboration with the Indigenous Knowledge Guardians, Practitioners, and Scholars of *Anishanaabe Maamwaye Aki Kiigayewin*, we continue to learn through our struggle to implement this approach. Intercultural collaborations fostered through critical indigenist research allow for a holistic, iterative, and inclusive research practice that is focused on community assets and action-oriented projects (Johnson, 2008; Kovach, 2010; Martin, 2003; Regan, 2010; Smith, 1999; Steinhauer, 2002; Wilson, 2008). Jones and Jenkins (2008) distinguish between learning *about* Indigenous Peoples to include their interests, and learning *from* Indigenous Peoples to attain a mutual understanding of difference. As an allied settler researcher, Paulette Regan (2005) explains that discomfort and uncertainty are critical to any collaboration with Indigenous Peoples:

> *It seems to me that there is power in this place of 'not knowing' that may hold a key to decolonization for non-indigenous people. As members of settler society, we have to be willing to be uncomfortable, to be disquieted at a deep and disturbing level - and to understand our own history, if we are to transform our colonial relationship with Indigenous peoples* (Regan, 2005: 7).

Following Jones and Jenkins (2008) and Regan (2010), the space between settlers and Indigenous Peoples living in Canada may be understood as a place of mindful difference. Therefore, engaging in an unsettling pedagogy (Regan, 2010) or a pedagogy of discomfort (Boler & Zembylas, 2003) is important for settlers engaging in critical indigenist research. We respect the Indigenous ways, views, and practices of our colleagues by choosing this form of inquiry and accordingly, we are responsible for conducting

ourselves in a good way as we undergo our own healing process as settler Canadians.

4.3.2 Case Study

Case study inquiry examines a contextualized phenomenon and is necessary when there are uncertain boundaries between the events and context of the case (Yin, 2009). Following Yin (2009), a single case study is used here because the approach taken by *Anishanaabe Maamwaye Aki Kiigayewin* is unique with respect to location, design, implementation, and scope, therefore rendering comparison with other approaches inappropriate. Further, the development of *Anishanaabe Maamwaye Aki Kiigayewin* is critical to explaining the points of intersection between Indigenous resurgence and social innovation in this context. Finally, case studies provide for rich descriptions of complex systems, situating the research process and outcomes while limiting generalizations beyond the scope of the findings (Yin, 2009). This is particularly important in the context of a critical indigenist approach as sweeping generalizations of case-specific findings risks perpetuating pan-Indigenous assumptions.

4.3.3 Methods

From January 2012 onwards, I took part in phone calls, face-to-face and video-conference meetings, Traditional Conferences, and informal gatherings with members of *Anishanaabe Maamwaye Aki Kiigayewin*. These ongoing conversations, meetings, and participant observations, inform the qualitative descriptions in this paper. Bryman (2006: 402) describes the task of participant observation for the researcher as immersing him or herself in a "group for an extended period of time, observing behaviour, listening to what is said in conversations both between others and with the researcher, and asking questions". Field notes were taken during each meeting to maintain a record of *Anishanaabe Maamwaye Aki Kiigayewin*'s needs and interests as expressed by Martin Millen and Mary Boyden.

At the request of our Indigenous colleagues, the university team has undertaken an active role in the development of *Anishanaabe Maamwaye Aki Kiigayewin*. For example, we have drafted funding applications, conducted background research, and provided expertise on environmental policy issues. By fulfilling our roles as directed by *Anishanaabe Maamwaye Aki Kiigayewin* the university team ethically engages a practice of reciprocity as described by Wilson (2008). Our position as academics is known at all times to ensure that any private, sacred, or otherwise privileged knowledge is shared at the discretion of the Indigenous Knowledge Guardians, none of which will be shared here.

4.3.4 The Writing Process

The university team listens carefully during conversations and meetings with *Anishanaabe Maamwaye Aki Kiigayewin* to identify research-appropriate questions brought to our attention. The conception and review of manuscripts involves Martin Millen, Mary Boyden, and bicultural Indigenous Scholars of *Anishanaabe Maamwaye Aki Kiigayewin* (trained in Indigenous Knowledge and Practice as well as at post-secondary level in Canadian universities). Resulting manuscripts are considered components of the broader research objective to explore mine restoration and rehabilitation practices that balance Indigenous Knowledge and conventional techniques. The review process ensures that the findings and recommendations of the manuscript are appropriate from the perspective of *Anishanaabe Maamwaye Aki Kiigayewin*. Manuscripts are sanctioned and released only if consensus is reached within *Anishanaabe Maamwaye Aki Kiigayewin* regarding the overall message conveyed in the paper, ensuring that the research process and outcomes are considered valid and ethical according to *Anishanaabe Maamwaye Aki Kiigayewin* Knowledge Guardians who are considered leaders in Indigenous intellectual thought. This manuscript articulates *Anishanaabe Maamwaye Aki Kiigayewin's* approach as an Indigenous innovation through Smith's (1999) Indigenous Projects in a language that will be useful when communicating with funders, government and industry.

4.4 An Emerging Indigenous Innovation: Anishanaabe Maamwaye Aki Kiigayewin and the Mining Sector in Timmins, Ontario

The mining industry in the city of Timmins has been in continuous production for approximately 100 years. This production capacity was made possible through mineral exploration in the early 1900s that resulted in the discovery and development of one of the planet's most productive gold camps (Bateman & Bierlein, 2007). Around the same time, in 1905, Treaty 9 was signed between the Canadian government and the Anishanaabe and Cree nations in Northern Ontario. These near-simultaneous events represent significant transformations in Timmins both for Indigenous Peoples working to uphold the spirit and intent of Treaty 9 and settlers moving into the area as a result of the mining boom. Today, mining and associated support industries continue to drive the local economy - primary industry jobs and the trades represent approximately 20% of the local employment (Statistics Canada, 2007; Statistics Canada, 2012). Porcupine Gold Mines, a subsidiary of Canadian mining company Goldcorp, controls 38,000 hectares of mining claims in the Timmins area and in 2011, net earnings from these holdings reached US$1,881 million (Goldcorp, 2011; Goldcorp, 2013). In 2009, due to growing government and public scrutiny of the Canadian mining sector, Goldcorp committed to building stronger corporate social responsibility (CSR) in Timmins, Ontario (Yagenova & Garcia, 2009; Zarsky & Stanley, 2011). Traditional Practitioner and Cultural Advisor Martin Millen, along with the Indigenous Community Relations Manager for Porcupine Gold Mines, Mary Boyden, recognized this opportunity to advance holistic health and wellbeing in the area by educating the mining sector in Indigenous Knowledge and Practice. The work of the *Anishanaabe Maamwaye Aki Kiigayewin* Knowledge Guardians to restore Indigenous Knowledge and Practice aids in the healing process - mentally, emotionally, physically, and spiritually - of both settlers and Indigenous Peoples living in or near Timmins. Thus far, healing has been primarily associated with the Indigenous colonial experience; however, settler healing can address lingering colonial mentalities and restore balance to the

relationships we have to other people, the land or environment, and our ideas (Regan, 2010; Wilson, 2008). Now, nearly 4 years (at time of publication) since this opportunity arose, *Anishanaabe Maamwaye Aki Kiigayewin* is exploring the logistics of offering services to the mining industry that integrate Indigenous Knowledge and western science to improve the efficacy and overall sustainability of mine reclamation. In this way, *Anishanaabe Maamwaye Aki Kiigayewin* contributes to the resurgence of Indigenous Knowledge and Practice while providing the support necessary for Indigenous Knowledge Guardians to heal - on physical, mental, emotional, and spiritual levels - the Timmins region.

     Anishanaabe Maamwaye Aki Kiigayewin is described by McCarthy et al. (2013, *manuscript in preparation*) as a potential social innovation as it addresses systemic social, economic, ecological and cultural issues flowing from colonial assumptions embedded in conventional mine reclamation in Timmins. In her evaluation of the challenges to attaining sustainability in Northern Ontario towns, Woodrow (2002) identifies several reasons for declining northern communities. Of particular concern to Timmins is the "loss of control over local communities" which Woodrow (2002) connects to the decision-making authority assumed by governments and major industries profiting from local resources. Also of interest is Woodrow's (2002) emphasis on environmental degradation as a barrier to sustainability. There are currently 5700 abandoned mine sties within the province, 1152 of which are within the Sudbury and Porcupine districts (OMNDM, 2013). Therefore, the Timmins mining sector may be characterized as highly resilient - it is an efficient system with long established structures and institutions optimized for the extraction of high price minerals. Considering the current system is highly resilient but neither sustainable in the long-term nor desirable for Indigenous Peoples living in Timmins we ask, how is *Anishanaabe Maamwaye Aki Kiigayewin* overcoming these barriers to disrupt knowledge and authority flows in Timmins?

Figure 7: Map of Timmins, Ontario, Canada.

4.4.1 Finding Common Ground

In her seminal work, *Decolonizing Methodologies*, Maori scholar Linda Tuhiwai Smith (1999) outlines her Indigenous Research Agenda as a decolonizing methodology and argues that knowledge flowing from Indigenous research approaches contribute to social justice, self-determination, and healing for Indigenous Peoples. As part of this work, Smith (1999) outlines 25 projects underway in Indigenous communities that help to articulate Indigenous and decolonizing research (see section 3.8). Considering this explicit focus on the (re)emergence of Indigenous ways of knowing, Smith's (1999) Indigenous Projects may be considered strategies for Indigenous resurgence. We use

Smith's (1999) Indigenous Projects, where appropriate, to organize a description of the development of *Anishanaabe Maamwaye Aki Kiigayewin* in relation the areas of overlap introduced in the previous section. Although *Anishanaabe Maamwaye Aki Kiigayewin* may be engaged in many of Smith's (1999) projects, for the purposes of this paper we focus on the most prominent initiatives contributing to its development. Through this description, we demonstrate how Smith's (1999) Indigenous Projects are useful to indigenize the discourse of social innovation and advance an understanding of Indigenous innovations. Explaining her intent in listing the Indigenous Projects, Smith (1999: 161) writes, "I hope the message it gives to communities is that they have issues that matter and processes and methodologies which can work for them". Similarly, we link Smith's (1999) Indigenous Projects to initiatives undertaken by *Anishanaabe Maamwaye Aki Kiigayewin* with the intent to position social innovation as an allied theory of change and describe strategies for innovation in a more useful way for Indigenous communities.

4.4.1.1 Rooted in Relationships: Restoring, Revitalizing, Unsettling, Gendering
Restoring

Smith's (1999) restoring project is focused on spiritual, emotional, physical, and mental heath and wellbeing. Resilience theory similarly conceptualizes humans *with* nature and focuses on sustainability within linked social and ecological communities (Berkes, 2010; Turner, 2005; Walker & Salt, 2006; Westley et al., 2011). Part of *Anishanaabe Maamwaye Aki Kiigayewin*'s work in the healing process takes place during intercultural knowledge exchanges at Traditional Conferences, specifically in *Whish-ki-yak-it Kinomaagaye-Gaamik* or Teaching Lodge Ceremonies. Traditional Conferences, such the Teaching Lodge, have specific roles in the development of social institutions such as governance, law, education, and health because they enable access to metaphysical experiences – "it is the metaphysical that constructs meaning in the corporeal" (Willie Ermine, 1995: 106). Kathy Absolon (2011: 160) describes her approach to interacting with these sacred events in the academy:

"Our teaching lodges and sacred medicine lodges belong in the community for our people and children and they are protected from the academy. We must be careful what sacred knowledge methods we bring into the academy". Martin Millen (*personal communication*, April 11, 2013) describes the Teaching Lodge ceremony as a governance institution; when it is conducted by *Anishanaabe Maamwaye Aki Kiigayewin* Knowledge Guardians, the wisdom and teachings of the ancestors are shared and direction is given on how to live in a good way, in relation to all of creation. Indigenous Knowledge Guardians are critical to *Whish-ki-yak-it Kinomaagaye-Gaamik* as they are uniquely capable of *restoring* the Indigenous Knowledge and Practices communicated in these gatherings (Simpson, 2008; Smith, 1999; Turner 2005). Dawn Martin-Hill (2008: 10) notes that, "Indigenous people bring with them an ancient knowledge system that demonstrates their distinctive *form* of knowledge as well as its *dynamics* – that is, its capacity to recreate itself and resist Western hegemony". In this way, Traditional Conferences (such as *Whish-ki-yak-it Kinomaagaye-Gaamik*) enable holistic health and wellbeing through Traditional Conferences by restoring Indigenous Knowledge and Practice to communities.

Unsettling

Unsettling is a project unique to settler allies and is described by Regan (2010), as engaging in disruptive, uncomfortable experiences that expose internal colonial values and beliefs (Regan, 2010). At the individual and interpersonal scale, transformations can occur at a rapid pace, changing the way individuals perceive and interact with the current social system (Giddens, 2005; Westley et al., 2006; Westley & Antadze, 2011). A key element of *Anishanaabe Maamwaye Aki Kiigayewin's* approach to is to provide a culturally sensitive, safe and appropriate environment for settler allies in Traditional Conferences (such as Teaching Lodge Ceremonies) where Indigenous Knowledge and Practices are shared. For settler allies, this can lead to unsettling experiences, enhanced intercultural understandings, and most often, a sense of the ignorance settler Canadians have towards Indigenous ways, views, and practices (Regan, 2010;

Jones & Jenkins, 2008). This type of unsettling has forced me to confront my own colonial assumptions and reassess my role while working with *Anishanaabe Maamwaye Aki Kiigayewin*. In a similar way, *Anishanaabe Maamwaye Aki Kiigayewin* invites key allies such as mining executives, managers, and engineers to Traditional Conferences to engage in their own unsettling journey. Successful reclamation projects guided by *Anishanaabe Maamwaye Aki Kiigayewin*'s Knowledge Guardians builds respect for alternative approaches and contributes to validating Indigenous Knowledge from the perspective of the mining industry.

4.4.1.2 Agency and Knowledge: Reading, Writing, Storytelling, Sharing, Protecting, Reframing

Reframing

In the context of social innovation, Biggs et al. (2010) and Westley et al. (2006) describe reframing as understanding a problem in a different way, seeing a different problem altogether, or arriving at new solutions to the problem. Smith (1999) defines reframing in a similar way but prioritizes Indigenous contexts and emphasizes the complexity in problems historically attributed to individual failings (for example, high rates of mental illness and suicide among Indigenous Peoples living in settler states). *Anishanaabe Maamwaye Aki Kiigayewin* seeks to move relationships with Goldcorp and other mining companies forward by building on the intercultural understanding established through Traditional Conferences and encouraging alternative frames of reference for addressing the complex problems associated with mine reclamation. The reframing project is also apparent within *Anishanaabe Maamwaye Aki Kiigayewin.* Long-standing anger and distrust is confronted by forming personal relationships with individuals in the Timmins mining sector. This strategy links to the social innovation literature as fostering empathy for one's nemesis. Westley et al. (2006) describe this strategy for advancing social innovations as accepting those traits or characteristics we have other*ed* from ourselves – note the use of *other* as a verb in this case invokes a clear overlap in

language from post-colonial writings, most notably that of Edward Said (1978). In this way, reframing settler perspectives by communicating alternatives to the status quo can lead to mutually beneficial outcomes and a deeper understanding of difference (Alfred, 2005; Alfred & Corntassel, 2005; Corntassel, 2012; Simpson, 2008; Simpson, 2011).

Sharing

The sharing project confronts and resists colonizing assumptions while sharing Indigenous ways, views, and practices with youth (Smith, 1999). For example, sharing and learning from and between Indigenous Knowledge Holders is critical to developing resilience within communities (Trosper, 2003; Turner, 2005). Engaging younger generations in Indigenous pedagogies and oral traditions ensures cultural preservation, environmental integrity and the added benefits of, "self-esteem, self-confidence and self-reliance" so when youth becomes Elders, they are able to "impart their own vision, energy, knowledge and experience to educating the next generations" through oral traditions (Turner, 2005: 231). Through the sharing project, *Anishanaabe Maamwaye Aki Kiigayewin* fosters leaders, thinkers, and practitioners who have a strong foundation in Indigenous intellectual institutions in preparation for continued cultural resurgence. Communicating what has been learned in Traditional Conferences to wider audiences, including youth, helps to galvanize initial support from potential funders and broaden the appeal of the innovation (Westley & Antadze, 2011). *Anishanaabe Maamwaye Aki Kiigayewin* also engages in the sharing project by being involved in understanding and altering resource and authority flows in the Timmins mining sector. Martin Millen and Mary Boyden describe the emerging results of this interruption to the conventional flow of resources and authority in Timmins as slowly influencing the extent to which financial resources flow from the land (in the form of mineral resources) out of the community (in the form of profits). In this way, the sharing project may engage the mining sector in an unsettling process as

Indigenous approaches to resource governance and authority become more prominent.

Protecting

There is significant concern within *Anishanaabe Maamwaye Aki Kiigayewin* regarding the exploitation and misuse of Indigenous Knowledge and Practices. The integrity of the Indigenous Knowledge Guardians, sacred pedagogy, and resulting Indigenous Knowledge must not be compromised as *Anishanaabe Maamwaye Aki Kiigayewin* develops. There is particular concern with maintaining the overall direction of *Anishanaabe Maamwaye Aki Kiigayewin* while navigating the practical barriers to establishing a social enterprise within the market economy. Leanne Simpson (2001: 139) cautions against *scientizing* Indigenous Knowledge because, "converting it from its Oral form, to one that is both more accessible and acceptable to the dominant society has the impact of separating the knowledge from all of the context (the relationships, the world views, values, ethics, cultures, processes, spirituality) that gives it meaning". Institutional entrepreneurs (Moore & Westley, 2011a; Westley et al., 2006; Westley & Antadze, 2011) involved in Indigenous innovations should be uniquely qualified to communicate and build partnerships with settler governments and industry representatives because of the responsibility involved in protecting the sacred knowledge and instructions. For example, when Martin Millen and Mary Boyden fulfill the role of institutional entrepreneurs, they broker partnerships for *Anishanaabe Maamwaye Aki Kiigayewin* by evaluating prospective partners to gauge if they are open to reframing the current system of resource management and planning in Timmins – they "work strategically to establish the 'right mix' for crossing scales, and do not solely rely on organic, ad-hoc, or voluntary relationships" (Moore & Westley, 2011a: 7). Martin Millen explains the development of *Anishanaabe Maamwaye Aki* Kiigayewin as being spiritually driven - selecting partners and allies involves insight into their motivations and reasons for interest. This process is similar to the question Smith (1999: 10) poses to potential researchers, "is her spirit clear?

Does he have a good heart?". From the perspective of a settler researcher, it has become apparent that certain qualities are beneficial for partners in Indigenous innovation processes. First, individuals should have prior experience working with Indigenous Peoples coupled with a good understanding of the history of colonization in Canada. Second, a willingness to question established beliefs and norms coupled with an open-mind and heart are particularly desirable in intercultural knowledge exchanges. Ethically engaging the protecting project in this way helps Indigenous Knowledge Guardians do their work in the absence of operational details and worries.

4.4.1.3 Disrupting and Confronting: Claiming, Negotiating, Intervening, Naming, Testimonials

Intervening

Disrupting colonial realities often involves confronting capacity barriers hindering Indigenous Peoples in the struggle to intervene in the status quo (AFN, 2011; Wilson 2010; RCAP, 1996). In addition to these challenges and similar to conventional social innovations, Indigenous innovations meet intense resistance both in getting ideas off the ground and in their eventual diffusion (Biggs et al., 2010; Westely et al., 2006). In-line with both the Indigenous resurgence movement and social innovation theory, a central component of *Anishanaabe Maamwaye Aki Kiigayewin's* mandate - to restore balance to Indigenous-settler relationships - seeks balance as opposed to dominance or power over settler society (Simpson, 2008; Simpson, 2011). This approach intervenes in the production of a win-lose binary and invokes the horns of a dilemma - reframing the win-lose binary can represent a source of innovation by envisioning a third, mutually beneficial option (Hampden-Turner, 1990; Westley et al., 2006). In this way, *Anishanaabe Maamwaye Aki Kiigayewin's* intervention in the Timmins mining sector may lead to a novel resource management approach that combines the best of each knowledge system.

Negotiating

The negotiating project is focused on self-determination for Indigenous Peoples and leads to meaningful collaborations with settler society (Smith, 1999). In the context of Indigenous innovations, the negotiating and protecting projects are linked - in both projects institutional entrepreneurs are critical to maintaining the integrity of the innovation at higher scales (Regan, 2010; Smith, 1999; Westley & Antadze, 2011). In the current Canadian context, the negotiating project may manifest through formal processes such as fulfilling the duty to consult or establishing impact and benefit agreements. *Anishanaabe Maamwaye Aki Kiigayewin* does not represent an Indigenous nation; therefore it cannot be directly involved in any formal negotiation process. However, by attending public stakeholder consultation sessions, meeting with local Band Councils, and Tribal Councils, *Anishanaabe Maamwaye Aki Kiigayewin* actively provides input, expertise, and advice to communities. Perhaps more importantly, negotiations with government and industry provide a catalyst for the transmission of Indigenous Knowledge and Practice obtained through the work of *Anishanaabe Maamwaye Aki Kiigayewin* Knowledge Guardians. Negotiations rooted in Indigenous Knowledge and Practice that promote self-determination for Indigenous Peoples are particularly important in navigating resistance from the status quo while fostering change at higher scales.

4.4.1.4 Positive and Change-Oriented: Creating, Celebrating Survival, Returning, Envisioning, Discovering

Discovering

The discovering project articulates how Indigenous and settler knowledge systems can work together for mutually beneficial Indigenous development goals (Smith, 1999). Caution must be used in the context of Indigenous innovations as Indigenous Peoples, their Knowledge(s), and Practices must not be used to sustain the colonial status quo (Absolon, 2011; Battiste, 2000; Denzin et al., 2008; Nadasdy, 2007; Simpson, 2008; Smith, 1999). Turner (2005) identifies epistemological diversity as the integration of Indigenous Knowledge and western academic research to transcend knowledge

boundaries and strengthen intercultural understandings of socio-ecological systems. *Whish-ki-yak-it* [Shake Tent Gatherings] held in November 2010 and August 2011 yielded specific insights related to rehabilitating contaminated mine sites. One such insight directed *Anishanaabe Maamwaye Aki Kiigayewin* to apply dried mushkeg to sites contaminated by mining in the area. Accordingly, in the summer of 2011, local youth applied mushkeg to the Coniaurum site, one of Porcupine Gold Mines properties slated for reclamation in Timmins. By demonstrating tangible results from this initial application of Indigenous Knowledge and Practice, *Anishanaabe Maamwaye Aki Kiigayewin* is providing direction on the evolving and cumulative benefits of how Indigenous and settler leaders, thinkers, and practitioners can work together in a good way towards improving the implementation of mining industry CSR standards.

Envisioning

The envisioning project describes the process of dreaming, both in terms of planning alternative futures and with respect to dreams and visions that provide spiritual guidance (Simpson, 2011; Smith, 1999). The envisioning project is important to both Indigenous innovations and conventional social innovations as it influences overall direction of development. In Indigenous innovations, both the development process and resulting ideas generated would be affected by the absence of Knowledge Holders and their wisdom, raising concerns about the integrity of the innovation. This is particularly important to consider at higher scales as cascading transformations similarly transform all scales below (Gunderson & Holling, 2002; Westley et al., 2006). To ensure connectivity between the dreaming process and project implementation, *Anishanaabe Maamwaye Aki Kiigayewin*'s institutional entrepreneurs maintain contact with the Indigenous Knowledge Guardians and adhere to sanctioning protocols when moving ahead with any new projects. In addition, during Traditional Conferences, dreams and visions (both spiritual and practical) are shared and their meaning with respect to *Anishanaabe Maamwaye Aki*

Kiigayewin's development is discussed. In this way, *Anishanaabe Maamwaye Aki Kiigayewin* maintains spirit and integrity both within and between scales.

4.4.1.5 Multi-Scalar: Networking, Connecting, Remembering, Representing, Democratizing

Connecting

The connecting project involves (re)establishing and maintaining good relations (Smith, 1999). In the developmental stages of an innovation, available resources (including individual and organizations) are connected to bring the founding idea into fruition (Westley et al., 2006). The connecting project is also evident in scaling up an innovation - institutional entrepreneurs navigate the cycle of renewal in their organization(s) and identify appropriate windows of opportunity for change (Westley & Antadze, 2011). Strategic connections accessible to institutional entrepreneurs are leveraged to form partnerships and foster support for the launch of a social innovation (Westley & Antadze, 2011). In the context of *Anishanaabe Maamwaye Aki Kiigayewin,* the connecting project is apparent during Traditional Conferences when Indigenous Knowledge Guardians are connected with each other, across cultures, and with the land. The connecting project can also involve the connections made more apparent through the work of *Anishanaabe Maamwaye Aki Kiigayewin.* For example, Martin Millen explains that *Anishanaabe Maamwaye Aki Kiigayewin* will make the connection between human health and environmental health more clear – "it is here that humanity has something to learn from Indigenous Peoples. It's not just the environment that's changing, it's the people that are changing too" (*personal communication,* January 25, 2012). The connecting project is strategic and future-oriented. Martin Millen and Mary Boyden continue to form connections with allied organizations to fill the growing need for funding, expertise, and administrative capacity as A*nishanaabe Maamwaye Aki Kiigayewin* develops. Connecting in this way supports the work of Indigenous Knowledge Guardians to heal relationships and seize opportunities at multiple scales in the Timmins region.

Representing

The representing project includes both political representation and representation as expression (Smith, 1999). Smith (1999) explains that most barriers to Indigenous representation are a direct result of colonization. In order to gain traction for the emergence of an Indigenous innovation, social innovation indicates that a combined effect of agency (monitoring the system and reflexive practice) and opportunity (either political, cultural or economic) is necessary for successful transformation (Biggs et al., 2010; Westley et al., 2006; Westley & Antadze, 2011). *Anishanaabe Maamwaye Aki Kiigayewin* formed, in part, because of a joint responsibility to represent and give voice to the environment. There is a distinct multi-scalar, systems perspective embedded in how this responsibility is understood. For example, the health and wellbeing of the land has been identified as a common thread between *Anishanaabe Maamwaye Aki Kiigayewin* and Goldcorp. Indigenous Knowledge Guardians have indicated that unintended environmental consequences of mining can result in contaminated country food and waterways as well as render traditional medicines ineffective and even dangerous for consumption. Addressing this issue crosses multiple scales as *Anishanaabe Maamwaye Aki Kiigayewin* is simultaneously building awareness at the individual, organizational, and system scales regarding Indigenous Peoples and the value of Indigenous Knowledge and Practices. In this way, *Anishanaabe Maamwaye Aki Kiigayewin* ensures that progress made in terms of settler-Indigenous relations and improved environmental and social outcomes of mining have maximum impact and durability across scales.

4.4.2 Resolving Differences

Three areas of concern arose while reviewing the social innovation literature for this investigation: how power, knowledge diversity, and collaboration are conceptualized. Due to its theoretical development within the western knowledge systems, social innovation may benefit from insights

provided by Indigenous resurgence and writing on decolonization. The proceeding discussion explains these divergent areas and the associated risks or shortcomings of applying conventional social innovation in Indigenous contexts:

4.4.2.1 Power in Relation or as Domination

From a relational perspective, power comes from within oneself and is achieved through balanced relationships - power to achieve desired outcomes stems from establishing these relationships in a good way (Alfred, 2009; Simpson, 2008; Simpson, 2011; Yazzie, 2000). Embodying the capacity to maintain or transform the present system into a desirable state means strengthening relationships to other people, the land, knowledge, and the spiritual realm (Simpson, 2011). Alternatively, Giddens' (1984) structuration theory differentiates power from resources and describes power as the capacity to hold and distribute resources. Social innovation clearly invokes structuration in describing power: "power means both the power to maintain the status quo and the power to change. Power has to do with control of resources - of time, energy, money, talent and social connections" (Westley et al., 2006: 95). The dualism between those who have/do not have power furthers a malevolent and static interpretation common in western interpretations of power (VeneKlasen & Miller, 2002).

Gidden's (1984) conception of power is useful to characterize the challenge of overcoming current power dynamics in Indigenous-settler relations, however risks the development of social innovations that continue to view power and authority based on binaries. Indigenous innovations, alternatively, necessitate balanced relationships and encourage reciprocal efforts to solving mutual problems. *Anishanaabe Maamwaye Aki Kiigayewin* faces financial barriers as Indigenous Knowledge is not yet widely valued as a legitimate source of knowledge by the mining industry in Timmins. Currently, funding from a partnership with Goldcorp supports logistical expenses, but also limits the autonomy of *Anishanaabe Maamwaye Aki Kiigayewin.* The source of

Anishanaabe Maamwaye Aki Kiigayewin's power is the Indigenous Knowledge Guardians (as opposed to money or authority over resources) because of their ability to access and transfer Indigenous Knowledge through appropriate protocols and pedagogies. A central challenge in developing respect and recognition for *Anishanaabe Maamwaye Aki Kiigayewin* is communicating the inherent value of Indigenous Knowledge and Practice to Goldcorp and other powerful entities maintaining resilience in the current social system. This requires re-orienting conventional power structures and communicating power as flowing *with* and *within* as opposed to dominating *over* once control or influence is *won* (Alfred, 2009; VeneKlasen & Miller, 2002; Yazzie, 2000). Prominent Indigenous Projects (Smith, 1999) that address this dissonance within the social innovation literature include restoring, sharing, reframing, intervening, and representing.

4.4.2.2 Diversity as Intercultural Understanding or Novelty

Resilience theory and social innovation equate knowledge diversity to the introduction of novelty, representing a potential source of radical innovation and increasing social-ecological system resilience (Walker & Salt, 2006; Westley & Antadze, 2011). This language immediately positions western knowledge in the centre and situates all others at the margins. In the context of social innovation in Indigenous contexts, the discourse both privileges western ways of knowing and uses Indigenous Knowledge(s) to increase the resilience of the status quo. This is precisely the "token inclusion of Indigenous ceremony" that Regan (2010: 42-43) cautions against and flows directly from the colonial myth well-intentioned settlers ascribe to when seeking to know more *about* Indigenous Peoples in order to help *them*.

Perceiving Indigenous Knowledge as a source of novelty risks the commodification of Indigenous Knowledge and Practices and hinders intercultural understandings as this Knowledge is sought to build resilience for the status quo (McGregor et al., 2010). Alternatively, Indigenous innovations flow directly from Indigenous Knowledge and Practice to address Indigenous

interests - active protection of Indigenous ways, views, and practices resists the misuse of sacred Knowledge and pedagogies. For example, in their analysis of the 2008 spring flood response in the northern Ontario First Nation community of Fort Albany, McCarthy et al. (2011) speculate that identifying and describing different perspectives on the flood, particularly those of the local community, would result in more productive discourse and effective flood responses. *Anishanaabe Maamwaye Aki Kiigayewin* fosters intercultural understandings by demonstrating respectful protocols for protecting and supporting Indigenous Knowledge Guardians, honouring Indigenous ways, views, and practices, and integrating Indigenous Knowledge and western science to improve the overall sustainability of land use and mining practices. Prominent Indigenous Projects (Regan, 2010; Smith, 1999) that address this dissonance within the social innovation literature include reframing, discovering, restoring, unsettling, and protecting.

4.4.2.3 Collaboration as Mindful Difference or Token Inclusion

Inclusive governance models (for example, Armitage et al., 2009; Armitage et al., 2007; Olsson et al., 2004) represent significant advances in co-managing natural resources. However, these processes are inherently linked to the neoliberal market economy; including Indigenous Peoples in resource governance scenarios that continue to appropriate and commodify traditional lands is unlikely to address underlying inequalities in power (Braun, 2003; Nadasdy, 2007; Porter, 2010). The authority to define, manage, and own/sell resources remains under the control of powerful institutions, generally represented by government or industry: "inclusion means they – the Others - must be brought in to the center by us – the powerful" (Jones with Jenkins, 2008: 478).

Conventional approaches to collaboration risk perpetuating a pattern of token inclusion to meet legislated goals for consultation in which few meaningful efforts are made to establish an intercultural model for collaboration (Jones with Jenkins, 2008; McGregor et al., 2010). Following Jones

with Jenkins (2008) and Regan (2008), the space between settlers and Indigenous Peoples living in Canada is one of mindful difference in which respect and empathy for divergent perspectives is prioritized. *Anishanaabe Maamwaye Aki Kiigayewin* communicates Indigenous Knowledge and Practice by providing input, expertise, and advice to communities, government and industry. Through this work, Martin Millen and Mary Boyden broker partnerships by evaluating potential partners and allies to gauge if they are able to understand and engage meaningfully and productively with *Anishanaabe Maamwaye Aki Kiigayewin*. Prominent Indigenous Projects (Regan, 2010; Smith, 1999) that address this dissonance within the social innovation literature include unsettling, protecting, negotiating, and representing.

4.5 Defining Indigenous Innovations

The *Anishanaabe Maamwaye Aki Kiigayewin* case study illustrates how Indigenous Projects (Smith, 1999) and settler unsettling (Regan, 2010) are engaged to heal the physical, mental, emotional, and spiritual effects of mining in Timmins, Ontario. This case also demonstrates the linkages and dissonance between social innovation theory and the Indigenous resurgence movement. Certain aspects of the discourse and strategies within social innovation as defined by Westley et al. (2006) risk perpetuating conventional approaches to resource and environmental management in Indigenous contexts. Innovation is often characterized as increasing the resilience of the status quo despite concurrent arguments that caution against the unsustainable trajectory of this path (Rockström et al., 2009; Westley et al., 2011). In particular, the dominating conception of power in the resilience and social innovation literature may perpetuate binaries between winners (the privileged few) and losers (the marginalized others) both within Indigenous communities and between Indigenous and settler governments and industries. Characterizing alternative knowledge systems as "new" or "novel" further privileges western academic knowledge while positioning alternative knowledge systems at the margins. In a similar way, inviting marginalized groups into collaborative planning or

governance arrangements privileges western beliefs, values, and norms with respect to these processes. Despite these issues, several themes within social innovation are useful in describing and providing strategies for change-oriented projects in Indigenous communities. This paper focused on interconnectedness in the human-nature relationship, the role of agency and knowledge, the need to disrupt the status quo, and the transformative and multi-scalar characteristics of social innovation in relation to Indigenous resurgence projects.

Identifying the limitations of social innovation in Indigenous contexts indicates a need to develop an understanding of social innovation that takes into account Indigenous ways of knowing. Therefore, we propose Indigenous innovation as a type of social innovation that addresses this need and builds upon the insight gained from the *Anishanaabe Maamwaye Aki Kiigayewin* case:

> *Indigenous innovations are a unique type of social innovation continually informed by the application of Indigenous Knowledge to promote the resurgence of Indigenous Knowledge and Practices, as guided by the wisdom of the ancestors.*

Indigenous innovations address holistic health and wellbeing and often have a strong link to sustainability and social justice agendas. Although pursuing Indigenous interests, they are not purely Indigenous initiatives - there are roles for settler allies within Indigenous innovations. This is a key consideration as maintaining environmental and human health is an opportunity to work on mutually beneficial objectives to create new relationships in place of old conflicts, leading to situations conducive to further innovation. As allied settler researchers, we have a responsibility to critically analyze the discourse emerging from academia to avoid reducing Indigenous self-determination to metaphor or diminishing humanity's task of achieving long-term sustainability. Therefore, we have a responsibility to turn a critical gaze on how theories emerging from western ways of knowing are inclusive/exclusive of alternative knowledge systems. Perhaps more importantly, we have a responsibility to emphasize what we can learn by engaging in a good way with Indigenous colleagues.

We speculate that Indigenous innovation may lay a foundation for further investigation of resilience theory and social innovation from a critical indigenist perspective. Building on this interpretation enables transdisciplinary space for Indigenous methodologies and may build capacity within Indigenous communities to better understand and implement useful social innovation strategies. In a reciprocal way, conventional social innovation processes may incorporate respect for Indigenous Knowledge and Practice while simultaneously recognizing the validity and legitimacy of Indigenous Knowledge systems. These valuable intercultural opportunities may lead to more successful innovations within the resource and environmental management sector as greater trust and understanding flows from mutual respect and balanced relationships. For students and practitioners of resource and environmental management, stronger relationships may result from re-envisioning collaboration with Indigenous Peoples and developing shared meanings to articulate what Indigenous innovation means in varying contexts.

4.6 Conclusions

This paper outlines linkages and differences between the social innovation and Indigenous resurgence literatures. We posit that Indigenous innovations represent a unique type of social innovation that flow directly from Indigenous Knowledge and Practice to address Indigenous interests. The emerging Indigenous innovation *Anishanaabe Maamwaye Aki Kiigayewin* in Timmins, Ontario prompted the development of these ideas as linkages and differences between their approach and the social innovation literature became apparent. Using specific examples of Smith's (1999) Indigenous Projects in the *Anishanaabe Maamwaye Aki Kiigayewin* case study represents progress in describing Indigenous innovation processes. In particular, this research identifies five major areas of agreement with clear examples of how and why they are appropriate in the context of Indigenous innovation. Further areas for exploration into the links between resilience theory, social innovation and Indigenous resurgence beyond the scope of this paper may include self-

organization (Trosper, 2003), social learning (McCarthy et al., 2011; Trosper, 2003), or spiritually-driven action (Alfred & Corntassel, 2005; Simpson, 2008).

This evaluation of social innovation from a critical indigenist perspective both conceptually and practically addresses colonial assumptions in social innovation theory. Further, this research provides insight into strategies for developing Indigenous innovations at multiple scales and clarifying potential roles for settler allies. In keeping with our decolonizing aims, we are communicating these ideas in part to reciprocate the teachings shared with us through the research partnership with *Anishanaabe Maamwaye Aki Kiigayewin.* Accordingly, the results of this research may provide a foundation for further identification and description of Indigenous innovations that promote the resurgence of Indigenous Knowledge and Practice. We recommend that future inquiry investigate how Indigenous groups are navigating transformations at higher scales (for example, through policies, legislation, or treaty processes) as strategies applicable in conventional social innovation processes may be unavailable or inappropriate in an Indigenous context.

Chapter Five: A Critical Indigenist Approach to Social Innovation: Building Municipal-Indigenous Relations in Southern Ontario, Canada

5.1 Introduction

Current literature identifies a need to address ongoing colonialism within the academy by articulating an Indigenous research agenda and (re)claiming space for Indigenous scholars (Alfred & Corntassel, 2005; Bishop, 2010; Kovach, 2010; Battiste et al., 2000; Martin, 2003; Denzin et al., 2008; Regan, 2010; Smith, 1999; Wilson, 2008). Notably, this includes calls for greater emphasis on the inherent value of Indigenous Knowledge in planning and land use management professions (Lane, 2005; O'Flaherty et al., 2008; Porter, 2010; Whitelaw et al., 2009). Accordingly, the university team is currently investigating decolonizing approaches to planning knowledge and practice in Ontario, Canada with former Chief and current Geomatics Environmental Technician for MNCFN, Carolyn King, and Jared Macbeth, Project Review Coordinator for Walpole Island First Nation (WIFN) Heritage Centre. Through this research process, ambiguity in consultation policy has emerged as a major barrier to successful planning. In Canada, the legal duty to consult Indigenous Peoples was first clarified in 2004 (see *Haida Nation v. BC*, 2004; *Mikisew Cree First Nation* v. Canada, 2005; *Taku River Tlingit First Nation v. BC*, 2004). This legal duty lies solely with the Crown and is triggered when the Crown contemplates any action that may infringe upon the rights or title of Indigenous Peoples living in Canada (*Haida Nation v. BC*, 2004). Herein lies a clear problem for municipal and Indigenous planners - municipal planners have restricted capacity to engage in consultation and, due to jurisdictional priorities, provincial and federal agencies are absent from day-to-day consultation duties of Indigenous nations. Meanwhile, Indigenous nations across Canada are currently tasked with triaging copious consultation requests. Therefore, establishing clear, multi-government direction for officials regarding the legal duty to consult is an ongoing area of interest in the case law context of this research. Currently, Carolyn King and Jared Macbeth are engaged

in an innovative strategy to build relationships with neighbouring municipalities to help manage incoming consultation requests. We posit that innovative approaches to implementing the legal duty to consult in practice, such as the relationship-building approach put forth by Carolyn and Jared, may build opportunities for enhanced consultation outcomes.

To further explore this hypothesis, we turn to social innovation as a conceptual framework for describing and informing social change (Biggs et al., 2010; Westley et al., 2006; Westley & Antadze, 2011; Young Foundation, 2007). However, there is a need to understand social innovation from a critical indigenist perspective to increase its efficacy in Indigenous contexts. Therefore, we ask - what would an Indigenous innovation process look like and how can it be used to both describe and inform Indigenous innovations? We define Indigenous innovation as "a unique type of social innovation informed by Indigenous Knowledge to promote the resurgence of Indigenous Knowledge and Practices" (see Chapter 5). Through this paper, we link strategies from social innovation and critical indigenist research methodologies to propose a multi-scalar model for Indigenous innovation. We demonstrate the utility of the model for Indigenous innovation by describing initiatives underway in MCNFN Traditional Territory. We then apply the model to speculate useful strategies to foster change in southern Ontario, Canada particularly as it relates to strengthening municipal-Indigenous relations.

5.1.1 Locating the Author

I was born and raised near Sudbury, Ontario, Canada in the small community of Beaver Lake. I identify as a young, allied Canadian settler researcher of mixed Finnish and Ukrainian heritage. Through my research, I aim to fulfill my responsibilities to engage in knowledge exchanges between Indigenous Peoples and settler groups and have a complimentary research interest in studying indigenist approaches to resource and environmental management. I believe the resurgence of Indigenous Knowledge and Practices is

critical to fostering innovative and adaptive capacities to form a new relationship between Indigenous Peoples and settler Canadians.

5.1.2 Decolonizing and Critical Indigenist Methods

Our work builds upon research emerging from the Decade of Critical Indigenous Inquiry (Denzin et al., 2008) and draws on the work of Indigenous and allied settler scholars in articulating research methodologies that prioritize broadly defined Indigenous interests (Kovach, 2010; Battiste et al., 2000; Martin, 2003; Denzin et al., 2008; Regan, 2010; Smith, 1999; Wilson, 2007; Wilson, 2008). Indigenous scholars are writing about the resurgence of Indigenous Knowledge and Practice as an alternative to revolutionary approaches that confront the colonial present (Alfred, 2005; Alfred, 2009; Alfred & Corntassel, 2005; Corntassel, 2012; Simpson, 2008; Simpson, 2011). Simpson (2011) explains resurgence as moving "from trying to transform the colonial outside into a flourishment of the *Indigenous* inside" (Simpson, 2011: 17). Resurgence focuses on individual and community healing by re(connecting) with the land through Indigenous cultural and social institutions under the guidance of Indigenous Knowledge Guardians (Alfred, 2009; Alfred & Corntassel, 2005; Simpson, 2011). Other themes within the resurgence movement include revitalizing traditional languages (Alfred & Corntassel, 2005; Simpson, 2008), strengthening relationships with the land through traditional diets (Alfred, 2009; Alfred & Corntassel, 2005), and ensuring cultural continuity through the transmission of Indigenous Knowledge, particularly to young people (Alfred, 2009; Simpson, 2008). Several authors have linked Indigenous ways, views, and practices with elements of resilience thinking as the reciprocal relationship between humans and the environment held by Indigenous Peoples resonates with a complex social-ecological systems approach (Berkes, 2009; Davidson-Hunt & Berkes, 2003; O'Flaherty et al., 2008; Trosper, 2003; Turner, 2005). This paper expands upon this work to provide a trans-disciplinary framework for describing and informing Indigenous innovations.

5.1.3 Social Innovation and Resilience in Social-Ecological Systems

Resilience is defined by Walker and Salt (2012: 22) as "the capacity of a system to absorb disturbance and reorganize so as to retain essentially the same function, structure, and feedbacks - to have the same identity". Accordingly, resilience thinking acknowledges disruption and change within complex social-ecological systems as inevitable and continuous (Berkes & Folke, 2003; Folke, 2006; Gunderson & Holling, 2002; Holling, 2001; Gunderson et a., 1995; Walker et al., 2006; Walker et al., 2004; Walker & Salt, 2006; Walker & Salt, 2012). A major insight from this work indicates that resource managers must re-evaluate the standard practice of managing for predictability and stability to incorporate ecosystem uncertainty and change (Berkes & Folke, 2003; Gunderson & Holling, 2002; Holling, 2001; Gunderson et al., 1995; Walker & Salt, 2006; Walker & Salt, 2012).

Recent work examines social innovation with insights from resilience using a complex social-ecological systems perspective (Biggs et al., 2010; Moore & Westley, 2011a; Westley et al., 2006; Westley & Antadze, 2011). Specifically, the capacity to innovate is considered a resilience indicator (Walker & Salt, 2006). In the context of this paper, social innovation is defined as "an initiative, product, process or program that profoundly changes the basic routines, resource and authority flows or beliefs of any social system" (SiG@Waterloo, 2013). The social innovation process involves a dynamic tension between actors and social structures - through daily activities, actors both (re)create the rules and resources characterizing social structures and are simultaneously enabled and constrained by their positions within these structures (Biggs et al., 2010; Giddens, 1984; Moore and Westley, 2011a; Westley & Antadze, 2011). Through these reflexive interactions with social structures, actors may influence current or emerging systems (Biggs et al., 2010; Giddens, 1984; Westley et al., 2006; Westley & Antadze, 2011; Young Foundation, 2007).

From a resilience perspective, complex social-ecological systems continually undergo a dynamic cycle of stability followed by uncertainty,

assuring a constant flux of innovation and change in the system (Gunderson & Holling, 2002; Holling, 2001; Walker et al, 2006). Cross-scalar interactions influencing innovation within a focal system are better understood by placing a system in a hierarchy of scales, referred to as a *panarchy*, (Gunderson & Holling, 2002; Holling, 2001). For example, *revolt* connections describe how novelty and innovation emerge at higher scales during periods of collapse (Gunderson & Holling, 2002; Holling, 2001). In contrast, *remember* connections function as sources of renewal and constrain the transmission of novelty or innovation across scales (Gunderson & Holling, 2002; Holling, 2001). S*caling up* a social innovation can be linked to remember and revolt connections. Actors experience opportunity by intervening in established social structures (similar to revolt processes) but are simultaneously constrained as established social structures stifle change (similar to remember processes). Therefore, social innovations in complex systems are achieved through a combination of agency and opportunity as actors monitor and intervene in social structures (Westley & Antadze, 2011).

In the absence of clear policy direction and encouragement for consultation with Indigenous Peoples in Ontario, Carolyn King and Jared Macbeth seek to establish relationships with neighbouring municipalities to better manage incoming consultation requests. There is strong potential through this case for Indigenous innovation that enhances consultation outcomes outside of the legal duty to consult. Accordingly, this work proposes and demonstrates the utility of a model for Indigenous innovation. We describe initiatives currently underway in MCNFN Traditional Territory and identify useful strategies that may strengthen municipal-Indigenous relations. Further speculation and recommendations are discussed for future research in Indigenous innovation contexts.

5.2 A Conceptual Framework for Indigenous Innovation

The model for Indigenous innovation introduced above is one result of ongoing exploratory case study research (Yin, 2009) with Indigenous groups

across Ontario. The model emerged from a critical indigenist interpretation of social innovation (see Chapter 5 and Figure 8) and incorporates a multi-scalar arrangement of Indigenous and settler projects based on the panarchy framework (see Figure 9) (Gunderson & Holling, 2002). Accordingly, the model integrates insights from Smith's (1999) Indigenous research agenda, Regan's (2010) explanation of pedagogies for settler unsettling, social innovation (Biggs et al., 2010; Westley et al., 2006; Westley & Antadze, 2011; Young Foundation, 2007), resilience (Berkes & Folke, 2003; Gunderson & Holling, 2002; Gunderson et al., 1995; Holling, 2001; Walker et al., 2006; Walker & Salt, 2006; Walker & Salt, 2012), and Indigenous resurgence (Alfred, 2005; Alfred, 2009; Alfred and Corntassel, 2005; Simpson, 2008; Simpson, 2011).

We use Smith's (1999) Indigenous Projects and Regan's (2010) unsettling project to organize activities within the framework (Gunderson & Holling, 2002). See Chapter 3 for a full description of Smith's (1999) Indigenous Projects. Connections between scales, between projects, or the projects themselves may be more or less prominent depending on context. Recognizing that her Indigenous Projects often span across scales, Smith (1999) provides direction for cross-scalar interactions in her Indigenous Research Agenda by naming each of the four directions healing, decolonization, transformation, and mobilization (clockwise from north to west, respectively). In this way, Smith's (1999) Indigenous Projects, coupled with insights from resilience and social innovation, ensure that the model takes broader system dynamics into account while seeking balance between the roles and perspectives that emerge at different scales throughout the innovation process. We intend for this model to provide a starting point for further study of Indigenous innovations.
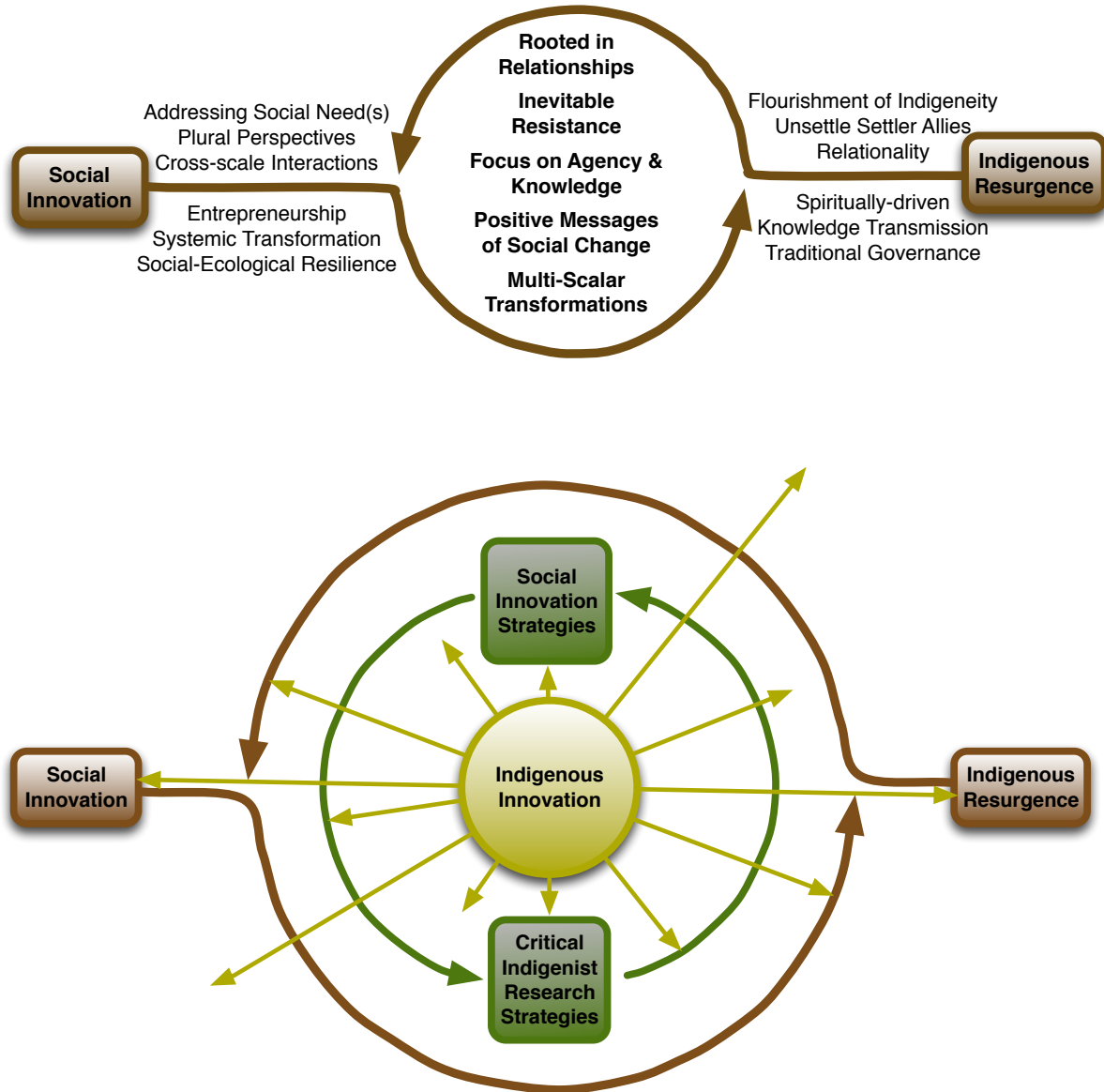
Figure 8: A Conceptual Road Map for Indigenous Innovation. Themes and strategies from social innovation and Indigenous resurgence are brought together to form the foundation of Indigenous innovation. This linking process involves insights from each body of literature reciprocally contributing to research and practice in the other. In this way, Indigenous innovation is an evolving process that may yield recommendations and insights for the study and development of Indigenous innovations.

5.2.1 Interpersonal

The projects at this scale focus on communicating and building traction around the strategic vision for innovation (Westley, 1992) – in Indigenous innovations, this direction often comes from the message of Indigenous Knowledge Guardians. Three projects are prominent at this scale: restoring, resurgence, and unsettling. First, the *restoring* project involves the spiritual, emotional, physical, and mental healing that accompanies the restoration of Indigenous ways, views, and practices suppressed through colonial policy (Smith, 1999). Similarly, *resurgence* focuses on individual transformations toward thriving Indigenous identities (Alfred, 2005; Alfred & Corntassel, 2005; Corntassel, 2012; Simpson, 2008; Simpson, 2011). Indigenous Knowledge Guardians are uniquely capable of restoring Indigenous Knowledge and Practice and are at the heart of the resurgence project because of their knowledge of the ancestor's teachings, cultural protocols (including appropriate pedagogy) and language(s) (Simpson, 2008; Simpson, 2011; Turner 2006; Turner, 2005). The *unsettling* project is associated with the transformative capacity of settlers ethically engaged as witnesses in intercultural spaces (Regan, 2010). The positive emotional labour associated with these experiences can unsettle colonial assumptions as settlers honestly confront neo-colonizer identities and explore difference from vulnerable, other*ed* positions (Regan, 2010).

The transmission of Indigenous Knowledge is central to the resurgence movement – Indigenous Knowledge Guardians have a central role to play in this process (Alfred, 2009; Alfred & Corntassel, 2005; Simpson, 2011). However, this is not meant to diminish the role and contributions of the community as a whole. It is also important to consider individuals who are unwilling or as yet incapable of opening themselves to learning from Indigenous Knowledge or of acknowledging the value of multiple perspectives. These individuals may hinder the innovation process because of their inability to attach themselves to the strategic vision catalyzing the innovation process (Westley, 1992; Westley et al., 2006). Therefore, the right allies may not be the most qualified or connected experts in their field - the right allies are ready to ethically engage in the

emotional labour and accept the responsibilities inherent in Indigenous innovation process. In the early stages of an innovation, communicating what has been learned through *restoration*, *resurgence*, and *unsettling* to wider audiences helps gain traction, build support, and change conventional narratives surrounding Indigenous ways, views, and practices (Westley & Antadze, 2011).

5.2.2 Connecting and Networking

Connecting community networks across scales is known as *scaling up* an innovation (Westley & Antadze, 2011). Between the interpersonal and organizational scales are a series of informal networks and connections between individuals from allied groups - here, institutional entrepreneurs are essential to the *networking* and *connecting* projects. Institutional entrepreneurs work to embed the vision behind the innovation in social institutions to "change the broader context so that the innovation has widespread appeal and impact" (Moore & Westley, 2011a: 6). In the context of Indigenous innovations, institutional entrepreneurs have extensive experience dealing with government and industry and are uniquely qualified because of their ability to understand, respect, and ethically represent Indigenous Knowledge and Practice as they interact with their broader social networks. These individuals are skilled in navigating the cycle of renewal at the organizational scale - often because of their personal connections - and are therefore able to network with key partners that support the ideas behind the innovation at the organizational level (Moore & Westley, 2011a; Westley & Antadze, 2011). Dismantling communication barriers and building relationships based on mutual understanding are strategies for preparing the scale above for change (Biggs et al., 2010; Westley et al., 2006; Westley & Antadze, 2011).

5.2.3 Organizational

The challenge of the organizational scale is to build upon on the momentum spurred by *restoring*, *resurgence*, and *unsettling* while disrupting social norms, values, beliefs, and, laws that reinforce the status quo and subdue

innovation. The *reframing* project is key in addressing the first of these challenges as it explicitly focuses on re-orienting colonial framings of complex problems (Smith, 1999). Opportunities for reframing flow directly from unsettling experiences and intercultural knowledge exchanges at the interpersonal scale (Regan, 2010). At the organizational scale, reframing can lead to innovative approaches to intractable problems, resulting in novel and mutually beneficial alternatives (Biggs et al., 2010; Hampden-Turner, 1990; Westley et al., 2006). The *intervening* project is focused on disrupting historical paradoxes embedded in settler knowledge systems to confront and, potentially, transform colonial institutions (Smith, 1999). This links to the roles of institutional entrepreneurs as they identify key partners in positions of power capable of stimulating change (Moore & Westley, 2011a; Westley et al., 2006; Westley & Antadze, 2011). Intervening may apply to the process of reframing the knowledge key partners have regarding Indigenous Knowledge and Practice. Or more practically, this project may speak to how key partners intervene in their network to facilitate the emergence of new programs or procedures that promote the resurgence of Indigenous Knowledge and Practice (Moore & Westley, 2011a; Westley et al., 2006).

Understanding the current state of the system during the development of a innovation involves monitoring and tracking trends across scales while reflecting on the necessary conditions and opportunities required to trigger cascading change (Westley et al., 2006). Engaging in a reflexive practice is necessary to adapt to uncertain and changing conditions in the organizational landscape (Moore & Westley, 2011a; Westley et al., 2006; Westley & Antadze, 2011). In Indigenous innovations, taking time to fully understand the direction and guidance flowing from Indigenous Knowledge(s) and understanding the meaning of this direction contributes to resurgence by (re)establishing the authority of Indigenous intellectual, cultural, and social institutions (Alfred, 2009). *Intervening* in both Indigenous and settler communities and working to *reframe* perspectives at an organizational scale thus contributes to dismantling barriers to innovation at higher scales.

5.2.4 Claiming and Negotiating

Similar to the informal processes of *networking* and *connecting*, more formal Indigenous Projects such as *claiming* and *negotiating* can help to gain traction for innovations at higher scales (Smith, 1999). In the Canadian context, negotiating and claiming are multi-scalar projects that may involve fulfilling the duty to consult, negotiating impact and benefit agreements, or engaging in the formal land claims process. Through these projects, institutional entrepreneurs may be fulfilling the role of a relationship builder or broker - acting from the relatively informal social network engaged in the innovation process to intervene in formal negotiations and claiming processes to strategically advance the agenda of Indigenous resurgence (Moore & Westley, 2011a). Alternatively, Moore and Westley (2011a) describe knowledge and resource brokers as individuals skilled in communicating specialized knowledge – in Indigenous innovations this involves presenting the message embedded in the innovation in a language that is respectful but still reframes (or unsettles) the decision makers' perspectives. Elaborating on the specialized skill set of an institutional entrepreneur, Moore and Westley (2011a: 7) explain that an individual "acting as a broker is able to identify the windows of opportunity in policy development and must be able to judge the timing of any attempt to cascade an idea up to a broader scale". In this way, entrepreneurs play in important role in the claiming and negotiating projects as they are capable of effectively navigate resistance from the status quo to foster policy change. In this way, *negotiating* and *claiming* are concrete pathways for the transmission of Indigenous Knowledge and Practice to the system scale.

5.2.5 System

Instigating cascading changes at the system scale is about building moments of mutual understanding between institutional entrepreneurs and influential decision-makers. Accordingly, Indigenous Projects at this scale are directly linked to strategic change at the policy level, particularly in those areas related to land use. For example, the *discovering* project focuses on exploring
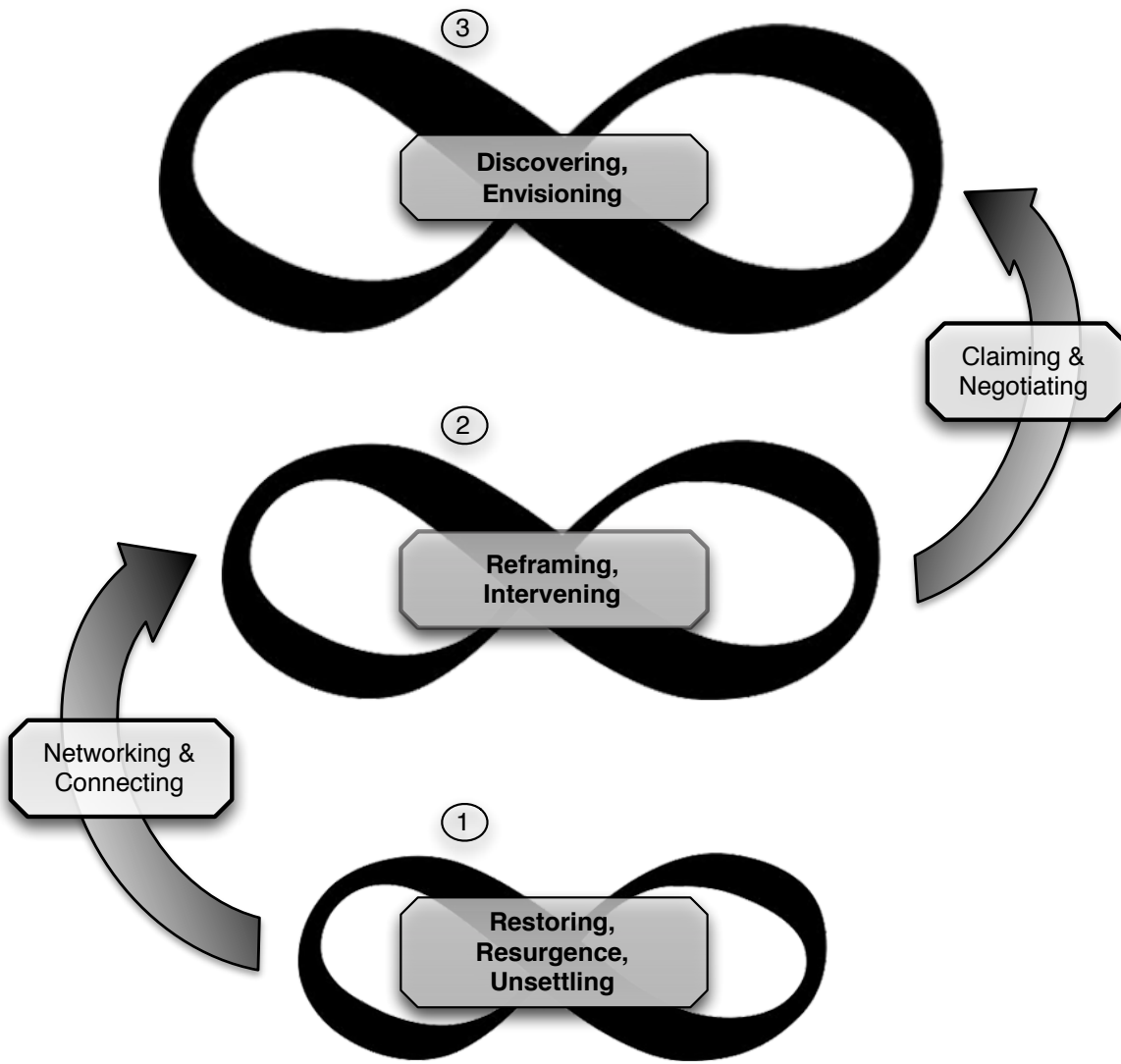
Indigenous and settler knowledge system and how they may work together to achieve development goals that advance wellbeing and opportunity for Indigenous Peoples (Smith, 1999). *Envisioning* focuses on spiritual guidance, dreaming, and visioning that provides the foundation for the ideas that shape alternative futures at the system scale - these are the dreams and visions that ultimately shape the reality the innovation strives to achieve (Simpson, 2011; Smith, 1999). Envisioning is particularly important in terms of the resurgence of Indigenous Knowledge and Practice because "visions or messages from our Ancestors and the Spirit World will be lost if they are not acted upon" (Simpson 2008: 82).

Discovering and envisioning prepare the existing system for transformative change, laying a foundation for reorganization and ensuring the release of the current system promotes decolonizing futures. Westley et al. (2006) explain that preparing for this change is nearly as important as the change itself - those involved in the development of an innovation must focus on "managing the context in which the successful innovation will seem not radical, but as normal as the air we breathe" (Westley et al., 2006: 210). However, transformative change still requires disruptive encounters with the powerful institutions of the dominant social system (Giddens, 1984; Westley & Antadze, 2011; Westley et al., 2006; Westley, 2002). Several failures may be necessary before cascading transformations can occur - it is often only an isolated event occurring at the right time in the right place with the right people that triggers change across scales (Biggs et al., 2010; Westley et al., 2006; Young Foundation, 2007).

The Nishnabeg prophecy known as the Eighth Fire foretells of a time when Indigenous ways, views, and practices will be required to build a common future with settler society - Leanne Simpson links Indigenous resurgence to the Eighth Fire Prophecy (Simpson, 2011; Simpson, 2008). However, even with such a powerful message, it remains difficult to stimulate a united response among communities and generate collective action towards resurgence (Simpson,

2011). Therefore, sustaining commitment, capacity, and action is critical to maintaining motivation and avoiding burnout (Westley et al., 2006). Within the context of relational Indigenous worldviews, in which everything exists in relation to all else (for further explanation of relational worldviews see Battiste, 2000; Kovach, 2010; Smith, 1999; Wilson, 2008), individuals never act in isolation. There is a fuzzy line between the physical and spiritual realm within Indigenous worldviews in which "internal institutions such as spirit messengers, guides, teachers, mentors, tradition, ritual, dreams, and visions are the norm" and provide continual sources of insight and order (Struthers, 2001: 128). In this way, spiritually-driven or spiritually-grounded actions carve a clear role for the spiritual realm in guiding or informing Indigenous resurgence and innovation (Alfred & Corntassel, 2005).

The model for Indigenous innovation described in this paper can be used to describe and inform strategies to further the resurgence of Indigenous ways, views, and practices at multiple scales in resource planning and management contexts. This paper argues that understanding social innovation from a critical indigenist perspective will increase its efficacy in Indigenous contexts and foster the development of innovative approaches to planning and management decisions on Indigenous lands.

3

Discovering, Envisioning

Claiming & Negotiating

2

Reframing, Intervening

Networking & Connecting

1

Restoring, Resurgence, Unsettling

Figure 9: A model for Indigenous innovation. Our model for Indigenous innovation incorporates a multi-scalar arrangement of Indigenous and settler projects based on the panarchy framework (Gunderson & Holling, 2002). 1. At the system scale, *discovering* and *envisioning,* help build capacity to navigate confrontation with the status quo while identifying tipping points and instigating cascading changes. *Remembering, democracy, returning, gendering,* allow transformation to occur from positions of hope and strength. 2. At the organizational scale, *intervening* and *reframing* provide a basis for change at higher scales by confronting ongoing colonial values, beliefs, and assumptions. C*elebrating survival, indigenizing, protecting, representing,* and *sharing* demonstrate how Indigenous Knowledge and Practice may influence programs and practices within organizations. 3. At the interpersonal scale, changes in conversations and relationships quickly change the way individuals perceive and interact with the current social system. *Testimonies, storytelling, naming, reading, writing,* and *creating* all contribute to how *restoring, resurgence,* and *unsettling* can be fostered and then communicated.

5.3 Methodology & Methods

5.3.1 A Critical Indigenist Approach

How can settler researchers ethically engage in research projects with Indigenous Peoples? Through ongoing work with MNCFN and WIFN we have struggled as we strive to implement a critical indigenist approach (Battiste, 2000; Denzin et al., 2008; Kovach, 2010; Martin, 2003; Regan, 2010; Smith, 1999; Wilson, 2007; Wilson, 2008). This approach links critical and Indigenous methodologies in action-oriented research that aims to decolonize conventional approaches to academic inquiry (Denzin et al., 2008; Smith, 1999). This holistic, iterative, and inclusive research practice addresses topics identified by partnered Indigenous communities and seeks solutions to long-term challenges hindering progress towards self-determination, health, and well-being (Kovach, 2010; Denzin et al., 2008; Johnson, 2008; Martin, 2003; Regan, 2010; Smith, 1999; Steinhauer, 2002; Wilson, 2008). The political and moral components of the approach are emphasized by clearly explaining the purpose of proposed project (Denzin et al., 2008; Smith, 1999). Following Jones and Jenkins (2008) and Regan (2010), we have learned to distinguish between learning *about* Indigenous Peoples to include their interests, and learning *from* Indigenous Peoples - we have come to understand Indigenous-settler collaborations as a place of mindful difference.

5.3.2 The Relationship

The university team first met with former Chief and current Geomatics Environmental Technician for MNCFN, Carolyn King, in December 2012 after acquiring research funding to explore a decolonizing approach to the knowledge and practice of planning. Dr. Dan McCarthy facilitated the initial meeting because of his established research relationship with MNCFN. In June 2012, Jared Macbeth, Project Review Coordinator for the WIFN Heritage Centre, joined the research team. Since this time, Carolyn and Jared have identified areas of interest for further research and continue to play a central role in directing research activities. The preliminary stages of our research into a

decolonized planning practice have focused on identifying challenges associated with the day-to-day administration of consultation requests, and have provided insight into Carolyn and Jared's innovative approach to the duty to consult by improving municipal-Indigenous relationships in the context of land use and development planning. The university team is currently developing a research proposal with Carolyn and Jared to ensure research funding continues to explore decolonizing planning strategies that address the interests of MNCFN and WIFN.

5.3.3 Methods

This paper draws upon ongoing case study research (Yin, 2009) with MNCFN and WIFN. Following Yin (2009), a case study approach was taken because the context of MNCFN is critical to understanding the utility of the model for Indigenous innovation and, although generalizable, should not be discussed as separate from the cases at this point. An exploratory approach was taken in order to "develop pertinent hypotheses and propositions for further inquiry" (Yin, 2009: 9). Through this work we aim to lay a foundation for further documentation and description of Indigenous innovations.

The primary means of qualitative data collection for the following case description were participant observations during 7 planning and research meetings at the Old Council House in MNCFN from December 2012 to January 2013. During this time, extensive meeting notes were taken to inform future research directions and to yield insight to the development of our understanding of planning in MNCFN Traditional Territory. Participant observation includes immersive participation in a "group for an extended period of time, observing behaviour, listening to what is said in conversations both between others and with the researcher, and asking questions" (Bryman, 2006: 402). Insights from these meetings, coupled with informal conversations with Carolyn King and Jared Macbeth, helped to further articulate the Indigenous innovation model and use it to inform

strategies for fostering change in municipal-Indigenous relations in southern Ontario.

5.4 Applying the Indigenous Innovation Framework: The Mississaugas of the New Credit First Nation (MNCFN)

The heuristic described above emerged from the need to define Indigenous innovations as a type of social innovation for application in Indigenous contexts (see section 4.5). This work is intended to be a first step in both describing and fostering Indigenous innovations. The utility of our model for Indigenous innovation is explored below through a case study of the MNCFN with a focus on fostering municipal-Indigenous relations in southern Ontario, Canada.

5.4.1 Background

The traditional territory of the Mississaugas of the New Credit First Nation (MNCFN), part of the Anishanaabe Nation, stretches across southern Ontario, Canada and includes much of the Greater Toronto Area (MNCFN, 2011). Until 1695, the Mississaugas lived primarily near the mouth of the Mississaugi River on the northern shore of Lake Huron (PRA, 2008; Sault, 2008). In the late 1600s, one group of Mississaugas followed the Toronto Carrying Place, a well-known route linking Georgian Bay and Lake Ontario, and settled at the mount of the Credit River (PRA, 2008; Sault, 2008). In 1903, this group decided to relocate due to pressure from encroaching settlers in the Toronto area and purchased 6,000 acres of reserve land located southwest of Hamilton, Ontario from the Haudenosaunee Nation - they renamed themselves the Mississaugas of the New Credit (Sault, 2008).

As a relatively small nation with a registered population of 2,176 (903 on reserve) (AANDC, 2013), MNCFN has become overwhelmed by the increase in formal consultation requests. In addition to consultation, the Auditor General has found that reporting requirements are a significant structural barrier to the administration of Band Councils representing Indigenous nations under Canada's *Indian Act* (OAGC, 2011). For example, in 2002, four federal

organizations providing funding for programs and services designed to enhance well-being for Indigenous Peoples required 168 reports from each reserve each year (OAGC, 2011).
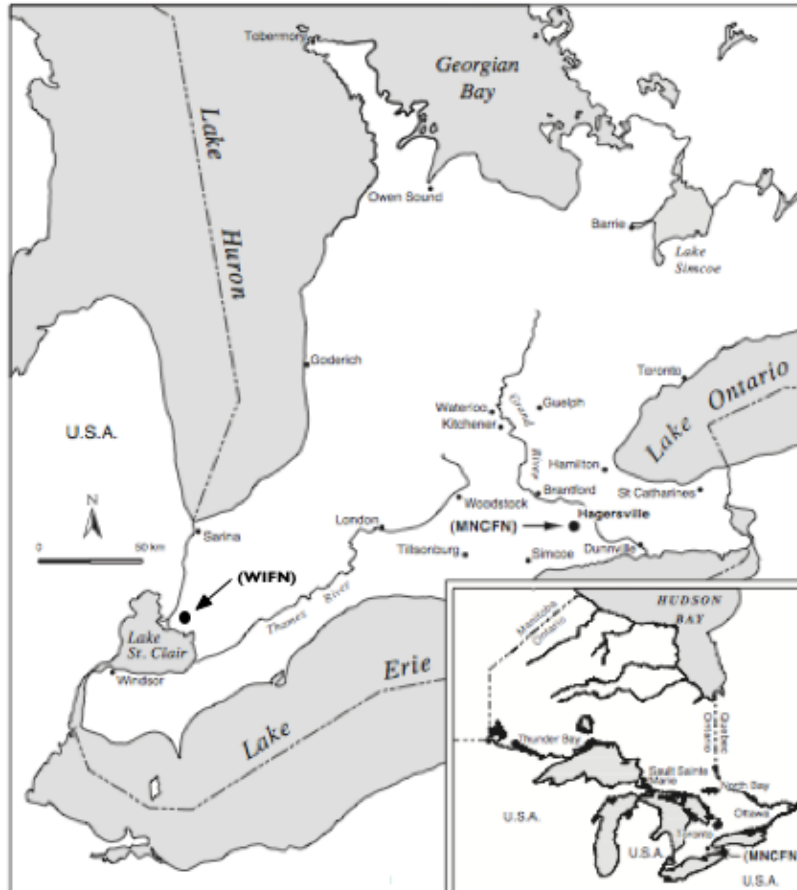
Figure 10: A map indicating the MNCFN Administrative Buildings and the Old Council House (where research meetings took place) as well as the administrative centre of WIFN. WIFN Traditional Territory extends throughout southwestern Ontario. MNCFN Traditional Territory encompasses much of southern Ontario, notably the Greater Toronto Region on the northwest coast of Lake Ontario.

This sets up a clear paradox in the context of Indigenous land rights - establishing rights to land means increased administrative demands and therefore decreased capacity to exercise those rights on the land. Outside of the legal process, practitioners do not always have an opportunity to influence how the duty to consult is defined. However, the obligations outlined by the legal duty are useful because they may bring multiple parties together to begin building respectful relationships through the consultation process. This

relationship-building approach represents an opportunity to foster greater understanding between municipalities and Indigenous Peoples and to foster a desire among practitioners to advance the reconciliation goals in the spirit of the Haida decision (*Haida Nation v. BC*, 2004). Insights from this case study indicate that consultation should facilitate meaningful relationships between municipalities and Indigenous Peoples to increase capacity within both groups and foster mutually beneficial partnerships in regional consultations processes.

5.4.2 The Interpersonal Scale

MNCFN is active throughout southern Ontario *naming* and *writing* about the history of their occupation on the land. One example of *naming* the land is the Moccasin Identifier Project. Carolyn King is spearheading this initiative and explains that it is similar to the popular Yellow Fish Road program that raises awareness of stormwater pollution (Trout Unlimited Canada, 2013). In a similar way, the Moccasin Identifier Project will identify MNCFN lands and significant sites with the purpose of educating settler society on the continued Indigenous presence in southern Ontario. Moccasins that represent different nations in southern Ontario will be painted on the ground to indicate traditional territories and permanent markers will be installed to indicate significant sites (such as burial grounds or sacred lands). Carolyn King describes this act of resurgence in the context of the Moccasin Identifier Project as a message to settler society to "recognize who's land your on, get an education, [and] put our plaques down" (Carolyn King, *personal communication*, December 9, 2011).

These acts of resurgence can lead to a series of unsettling encounters in which settlers find themselves vulnerable in intercultural spaces (Regan, 2010). In the case of MNCFN, this often occurs as settlers are confronted with the suppressed history of Indigenous Peoples in the current metropolis of Toronto. For example, while upgrading infrastructure and re-grading the driving range at the Mississauga Golf and Country Club, workers uncovered artifacts from a village site previously occupied by MNCFN (see Wilkes, 2011). The Mississauga Golf and Country Club did not obtain proper permitting for their excavation,

and workers were unaware of the local history and its significance to the Mississaugas. Carolyn King explains that MNCFN was contacted after the artifacts were uncovered and work on the site stopped after government officials were informed of the lack of a permit for excavation. At the time of writing, the Mississauga Golf & Country Club had engaged MNCFN and were collaboratively establishing an approach to achieve agreement on how to best proceed without conflict. This experience demonstrates the importance of continued education through resurgence and settler unsettling regarding the history and continued presence of Indigenous Peoples in southern Ontario.

5.4.3 The Organizational Scale

An emerging insight from this research indicates ambiguities regarding responsibilities for day-to-day consultation activities. In particular, municipalities lack necessary policy direction and encouragement to pursue positive relationships with nearby Indigenous nations. Jared Macbeth believes that meaningful results may be found by *indigenizing* the narrative and discourse of consultation - municipalities should be engaged in the spirit of long-term relationship-building when carrying out the legal duty in practice. This resonates with Jones and Jenkins (2008) approach to collaboration - as opposed to adopting the Crown's consultation methods, the process should begin from a place of mindful difference and simultaneously force a re-orientation of conventional power structures. The Grand River Notification Agreement represents forward progress in outlining how municipalities and Indigenous Peoples may ethically engage in planning matters outside of the legal duty to consult (INAC, 2005). The primary strength of the agreement lies in the commitment of the undersigned municipalities and Indigenous nations to "notify each other about any contemplated action that might have a significant effect on the physical environment" (INAC, 1998). In this way, agreements developed outside of the legal duty to consult that flow from meaningful partnership on shared landscapes might improve regional development outcomes. This approach is an example of how *indigenizing* the narrative

discourse of consultation may lead to changes in the way it is interpreted in practice.

For MNCFN and WIFN, local-scale issues often take priority over policy issues when triaging consultation requests. For example, MCNFN prioritizes *protecting* sensitive lands and significant sites because they may be at immediate risk of disturbance during development. Carolyn King explains that MNCFN uses parameters such as proximity to the Grand River (the major river in the watershed), whether sites are on high land (often indicative of village sites or hunting grounds), and other indicators that may suggest prior use when determining which projects to invest limited capacity. This is particularly important when identifying potential burial sites and areas where an archeological assessment should take place. Protecting ceremonial sites, traditional medicines, and burial grounds in this way fosters resurgence because it contributes to eco-cultural restoration (see Chapter 3) - a component of resurgence that explicitly recognizes the importance of linked cultural and ecological wellbeing to Indigenous communities (Turner, 2005).

5.4.4 The System Scale

By the mid-1800s, the Credit River Mississaugas had surrendered most of their lands to the British Crown through agreements, including much of what is now known as the Greater Toronto Area (PRA, 2008; Sault, 2008). Following advances in Canadian case law and the recognition of Aboriginal rights (*Constitution Act,* 1982*)*, the MNCFN submitted the Toronto Purchase Specific Claim for approximately ten square miles surrounding Toronto (MNCFN, 2011). The specific claim was filed on the basis that: 1) the original agreement signed between MCNFN and the British Crown failed to provide a reasonable price for surrendered lands, and 2) the honour of the Crown and fiduciary duties were not upheld when negotiating the agreement (MNCFN, 2010). On May 29, 2010, the Toronto Purchase Specific Claim was finally settled, $145 million was awarded to the MNCFN for "the value of the 250,880 acres in 1805 and lost opportunity to the date of the settlement of

this claim" (MNCFN, 2011: 12). Reflecting on MNCFN's activities in this *claiming* project, Carolyn King said, "they're going to know who we are" (*personal communication*, September 28, 2012), emphasizing the importance of *returning* lands to Indigenous Peoples to impact the overall democracy of decision-making processes, particularly as they relate to planning and management.

Ontario's Provincial Policy Statement (PPS) provides policy direction for land use and development in the province (PPS, 2012). Carolyn King and Jared Macbeth saw an opportunity to pursue a top-down approach to intervening in the implementation of the duty to consult through the PPS; they began work on the PPS review process in 2010. Jared explains that high-level policy changes can lessen the burden of consultation on Indigenous nations if these policy changes include protections that address general Indigenous interests (for example, protection for significant sites, landscapes, plants or wildlife) (*personal communication*, May 4, 2013). In this way, including Indigenous interests in policy at this scale can result in less work during the day-to-day business of evaluating projects that trigger the legal duty to consult.

In 2012, Carolyn and Jared brought their work to the research team because the PPS was a useful document from which to evaluate Ontario's approach to Indigenous land interests. During a research meeting held to develop a submission to the 2012 PPS review process, Carolyn and Jared explained that including "three words - *and First Nations*" in planning legislation at the policy level would provide the impetus necessary to initiate conversations about how to meaningfully engage with Indigenous Peoples (*personal communication*, January 27, 2012). Consultation processes built upon clear direction and encouragement for municipal officials can reduce capacity burdens within Indigenous nations and open space to build positive relationships – humanizing development concerns through a conversation among neighbours (Tjornbo et al., 2010). Identifying and intervening in such policy pieces can encourage the opening of a policy window (Kingdon, 1995) - such a window may "generate a spillover interest, establishing a relevant precedent or bundling the adjacent policy with the subject" (Solecki & Michaels,

1994: 588). In this way, *envisioning* alternatives at the policy level helps to articulate strategic visions and recognize opportunities to strategically advance the agenda of Indigenous resurgence when they arise.

5.5 Discussion

5.5.1 Current Barriers and Emerging Solutions

> *"Our future is connected to how we can build a relationship with municipalities"* (Carolyn King, *personal communication*, January 18, 2013).

Resource and environmental management is characterized by a complex and often tense relationship between Indigenous Peoples and the federal and provincial governments (Berkes et al., 2005; Braun, 2002; Menzies, 2006; Nadasdy, 2005; Whitelaw et al., 2009). Our model for Indigenous innovations may yield insight into appropriate strategies for fostering innovation in the way development proceeds within MNCFN and WIFN Traditional Territories. Specifically, the following discussion draws upon Smith's (1999) Indigenous Projects as multi-scalar strategies unique to Indigenous contexts to describe potential next actions for Carolyn King and Jared Macbeth in attempts to foster stronger municipal-Indigenous relations in southern Ontario, Canada.

5.5.2 The Interpersonal Scale: Building Individual Transformative Capacity

Currently, government officials interacting with Indigenous nations are constrained by social norms and rules that frame consultation as a short-term, results-based project. The Indigenous Projects central to the interpersonal scale, *restoring* and *unsettling,* help to build the necessary transformative capacity to trigger a reorganization of the current management system. Carolyn King and Jared Macbeth report that government officials often approach consultation with confusion, anxiety, and sometimes fear. This represents an opportunity to develop an intercultural understanding of Indigenous development concerns and interests within MNCFN and WIFN Traditional Territories. Jared Macbeth explains that if the process of consultation is to change, it should not be difficult, expensive, or make officials uneasy. We speculate that ensuring government officials have a basic understanding of the history of Indigenous

Peoples in Canada and the practical implications of the duty to consult may support the development of trusting personal relationships. O'Flaherty et al. (2008) explain that the interaction between government officials and Pikangikum First Nation Knowledge Guardians that occurred on the land during the land use planning process helped build intercultural respect by focusing on the oral transmission of contextualized Indigenous Knowledge. A similar process may be appropriate in the MNCFN and WIFN contexts, particularly when culturally significant sites are involved. Dismantling communication barriers through contextualized planning discussion with Indigenous Knowledge Guardians and community members will increase respect and understanding for process-based consultation and allow allied partners to emerge at the organizational level (Moore & Westley, 2011a; O'Flaherty et al., 2008; Westley, 2006).

Carolyn King and Jared Macbeth may build upon existing relationships within provincial government ministries, conservation authorities, and municipalities, to facilitate the education of allied individuals. The model for Indigenous innovation indicates that engaging in an *unsettling* pedagogy (Regan, 2010) through a teaching/learning relationship with Indigenous Knowledge Guardians, Traditional Practitioners and community members can aid in fostering understanding for Indigenous ways of knowing. Therefore, these individuals should be supported in their work to engage in the *restoring* and *unsettling* projects. Consultation practitioners should be encouraged to engage in the time-intensive task of unsettling to identify internalized colonial assumptions and understand the need for innovation in consultation (Regan, 2010). Similarly, *sharing* Indigenous Knowledge between communities and across generations fosters the resurgence of Indigenous Knowledge and Practice (Simpson, 2011; Turner, 2005; Alfred, 2009). Intercultural knowledge exchanges may be established in many ways, for example by inviting settler allies to ethically witness testimonies (Regan, 2010), through reciprocal teaching-learning experiences at Traditional Conferences (see Chapter 5), or during shared time on the land (O'Flaherty et al., 2008). By fostering transformations at

the individual scale, the unsettling project helps to retain the beneficial components of the original system (for example, procedures for cultivating intercultural understanding) and abandon components that hindered progress towards *resurgence* (for example, colonial structures of authority and power) in order to build support for innovation in consultation.

Table 1: Recommendations for Advancing an Innovation in Municipal-Indigenous Relations Emerging from the MNCFN Case. These recommendations demonstrate the utility of the model for Indigenous innovation for providing next actions in the innovation process.

Scale	Project	Objective	Strategy
Interpersonal	Unsettling	Educate consultation practitioners on the history and current interests of local Indigenous nations	Engage Indigenous Knowledge Guardians, Traditional Practitioners, and community members in planning discussions (O'Flaherty et al., 2008)
	Restoring	Identify and support Influential settler allies in an unsettling pedagogy	Invite (where appropriate) settler allies into Traditional Conferences (Regan, 2010)
Organizational	Restoring	Support Indigenous Peoples and their work to restore traditional ways, views, and practices	Increase awareness of current initiatives within the community; engage youth and community members in teaching/learning relationships (Simpson, 2011; Turner, 2005; Alfred, 2009)
	Reframing	Reframe the purpose and narrative of consultation with Indigenous Peoples	Articulate desired alternatives; embed alternative messages in allied organizations (Moore & Westley, 2011)
	Connecting	Connect to local organizations with similar aims and objectives	Leverage existing partnerships to support mutual collaboration, learning, and trust (Moore & Westley, 2011ab)
System	Networking	Establish a network of practitioners trained in respectful consultation protocols	
	Negotiating	Engage in disruptive encounters at the policy level	Establish personal relationships to humanize the negotiation process (Tjornbo et al., 2010)
	Envisioning	Privilege the dreams and visions (both practical and metaphysical) of Indigenous Peoples	Identify and articulate guidance for a beneficial alternative to the present (Simpson, 2008; Westley et al., 2006)

5.5.3 The Organizational Scale: Building a Network of Allied Practitioners

The current lack of direction and encouragement for conducting consultations with Indigenous Peoples has resulted in poor implementation (Whitelaw et al., 2009). Identifying and honestly confronting difference between perspectives can lead to more equitable, productive relationships and increase adaptive capacity in consultation processes (McCarthy et al., 2011). The model for Indigenous innovation suggests that the process of unsettling settler allies can lead to reframing perspectives at the organizational scale – in our case, efforts should be made to *reframe* the purpose and narrative around consultation from a one-time bureaucratic obligation to long-term personal relationships between officials. Part of this task at the organizational scale involves monitoring and tracking the cycle of renewal in organizations that have the authority or capacity to instigate change (Westley et al., 2006). For example, Carolyn King and Jared Macbeth frequently attend meetings with municipalities to stay abreast on current issues and key actors within municipal politics. However, in order to reframe the conventional perspectives, there must be reflection on the necessary conditions required to trigger change and patience in waiting for the right time to intervene (Westley et al., 2006). While waiting for a window of opportunity, Moore and Westley (2011a) suggest articulating a desired alternative for consultation and working to embed this narrative in the mission of organizations at similar scales. It is here that capacity issues within MNCFN and WIFN are heightened and opportunities for allied partners become important as entrepreneurs in the development of the innovation process.

Building on established relationships and developing new partnerships provides a supportive foundation to discuss development proposals and engage in joint planning initiatives (Moore & Westley, 2011a,b). For example, Carolyn and Jared may connect to allied organizations to further engage in policy interventions, enhance capacity to protect significant sites, or continue to indigenize the discourse around process based consultation. In the case of MNCFN, the Save the Oak Ridges Moraine (STORM) and the Toronto Regional Conservation Authority (TRCA) may be suitable because of their allied

conservation mandates. In this way, *networking* among existing partners within government and municipalities can create connections and establish broad impact for a new approach to consultation (Westely et al., 2006; Westley & Antadze, 2011). An educated network such as this would build a population of practitioners trained in respectful consultation process in the context of southern Ontario and establish a base of support to enhance capacity to transform the way in which consultations are conducted within MNCFN and WIFN Traditional Territories.

5.5.4 The System Scale: Planning, Policy, and Programs

In moving forward, *negotiations* at the policy scale must work towards setting up disruptive encounters with political and economic institutions (Giddens, 1984; Westley & Antadze, 2011; Westley et al., 2006; Westley, 2002). In the MNCFN case, upcoming opportunities to engage in formal negotiations include the 2015 Greenbelt Plan, Niagara Escarpment Plan, and Oak Ridges Moraine Conservation Plan Reviews (MAH, 2005; NEC, 2013; MAH, 2002). Tjornbo et al. (2010) describe the importance of developing personal relationships to humanize the negotiation process – this strategy is particularly important in overcoming the historic dissension characteristic of Indigenous-government relations. Westley et al. (2006) explain this strategy as cultivating empathy for alternative perspectives – confronting one's nemesis – and argue that it can open space for new relationships that foster innovation and change at between and across scales.

At this point in the innovation process, it may be useful to identify an allied political entrepreneur - a skilled individual capable of elevating the profile of emerging needs in political contexts (Solecki & Michaels, 1994). Identifying and supporting entrepreneurs who have established political relationships to intervene in high-profile review processes represent an opportunity to engage in the *envisioning* and *representing* projects. In this way, individuals with the time, skills, and support needed to be active leaders in regional decision-making processes should be identified. Political entrepreneurs should have established

personal relationships and be encouraged to leverage these connections to gain insight into the emergence of policy windows and other opportunities. Our model for Indigenous innovation suggests that the foundation for actions at this scale should come from the wisdom and guidance of Indigenous Knowledge Guardians – allied entrepreneurs work to ethically represent this guidance through their social interactions in regional politics. In this way, embedding the guidance of Indigenous Knowledge Guardians at the policy scale prepares the system for desired changes as it puts forward viable alternatives to the present organization of the system, leading to future opportunities for change (Kingdon, 1995; Westley et al., 2006).

5.6 Next Steps

Carolyn King and Jared Macbeth are planning a series of workshops with the public and private sectors to further articulate planning and development concerns, foster better relations and trust among planners, government, and Indigenous communities, and promote equitable development of MNCFN and WIFN Territory. The workshops will follow group participatory modeling methods to describe the dynamics of the southern Ontario planning system (Sendzimir et al., 2008). Participants will then problematize the current undesirable system state to elicit hidden assumptions and narratives that may describe barriers currently hindering effective planning. The exercise will lead participants through a process of brainstorming solutions and pathways to transforming the system, ensuring that multiple perspectives are heard and represented within the discussion (Sendzimir et al., 2008). In this way, the planning workshops may foster social learning among the participants, leading to increased understanding across multiple perspectives (Bouwen & Taillieu, 2004, McCarthy et al., 2011). Social learning has been linked to adaptation in the face of dynamic social-ecological systems and is described as a multi-scalar process of "collective action and reflection that occurs among different individuals and groups as they work to improve the management of human and environmental interrelations" (Dybal et al, 2012: 4). We expect links may emerge

between the social learning process and the intervening and reframing projects at the organizational scale of the model for Indigenous innovation. We speculate this process will describe established perspectives towards planning and consultation within MNCFN and WIFN territory and identify key individuals that may form the foundation of a network of allies within government ministries, municipalities, and industry.

5.7 Conclusions

This paper outlines a conceptual framework for a sub-type of social innovation, Indigenous innovations. Our model for Indigenous innovation provides direction for Indigenous innovations at multiple scales by using elements of resilience and social innovation and applying them to Indigenous contexts. By positioning resilience theory and social innovation as allied frameworks, this research attempts to create space within western academic research for the development of a framework for change appropriate for describing the resurgence of Indigenous Knowledge and Practice. The case study demonstrates how the model for Indigenous innovation can be used to describe activities currently underway within Indigenous communities. Applying Smith's (1999) Indigenous Projects to the model privileges initiatives unique to the Indigenous resurgence movement and identifies roles for various actors within contextualized Indigenous innovation processes. To demonstrate the utility of our model, we provide strategies for fostering enhanced municipal-Indigenous relations in the context of Carolyn King and Jared Macbeth's work in consultation for MNCFN and WIFN. Specifically, we recommend engaging Indigenous Knowledge Guardians, Practitioners, and community members to ensure their guidance and direction is communicated ethically and effectively at organizational and system scale. Further, engaging settler allies in unsettling experiences may build capacity within municipal governments for intercultural understanding, build trusting relationships, and ease the process of consultation for both parties.

The case study discussed in this paper is useful for demonstrating the utility of the model for Indigenous innovation at small scales. However, further exploration of Indigenous innovations is needed to discuss transformation and reorganization at the system scale. We speculate that engaging in and describing other projects that contribute to the resurgence of Indigenous Knowledge and Practice will provide a useful set of case studies for Indigenous communities.

Chapter Six: Recommendations & Conclusion

6.1 Reflection

I came into my research journey with an environmental science background and a strong preference for qualitative (in other words, objective) over quantitative methods. As time went on, I became more interested in inter- and trans-disciplinary research and became aware of the need to begin thinking from a linked social and ecological systems perspective. It also became clear that the knowledge and perspectives of Indigenous Peoples living in Canada are critical to understanding persistent problems related to sustainability and ecological integrity. So, I jumped on board with the idea of exploring social innovation from a critical indigenist perspective because it linked these interests. In the absence of formal coursework, I turned to the seminal and recent works on critical indigenist approaches (for example, Absolon, 2011; Battiste, 2000; Denzin et al., 2008; Kovach, 2010; Smith, 1999; Wilson, 2008). I realized that settlers lack a clear role both within a critical indigenist research framework and in writings on transformative change in Indigenous contexts. This leads to an ongoing question – how, as a settler researcher, do I go about my research process in a good way and how can I best answer my research question(s)? This is constantly accompanied by personal self-doubt that imposes a third question - do I need to move away from this subject in order to not cause harm?

The research process has lead me question whether or not graduate students can or should carry out research using a critical indigenist methodology considering the short timeframes for their research. The research process seems, and perhaps rightly is, secondary to the real work of contributing our skills as researchers to drafting policy responses, preparing communication pieces, or preparing reports that support the broad goals of our partners. I've come to feel as though asking for meetings with Indigenous colleagues dedicated solely to my research would be inappropriately audacious, if not arrogant. I find this feeling interesting because I'm striving to embark on a joint research project. Although in many ways I am fulfilling this goal, I feel the demands of academia place an extra burden on researchers to produce materials under such short timeframes that manuscript review and research conversations at times feel rushed and inorganic – not my preferred approach. This challenge is exacerbated by not wanting to strain the research relationship. So, what can a young researcher do? I've been present and engaged in participant observation, strived to embody a critically reflexive practice and build a personal narrative of my experience. I've made myself available whenever possible and have had experiences with Indigenous Knowledge Guardians that influenced my understanding of ideas directly relevant to my research topic and also my life more broadly.

In the conventional academic system, when we enter into graduate school, our task is to become experts in our field. Under a critical indigenist approach, and particularly when learning from an unsettling pedagogy, the purpose is to become a vulnerable non-expert and to accept discomfort and uncertainty as a norm. I struggle even now, writing this piece and thinking about how my identity and perspective is subjective, full of emotion, and far from neutral. My personal transition from positivism has been holistically exhausting. Thus, another question arises: if I'm to become an expert, how do I confidently and honestly write about how much I don't know? Maybe it all just comes back to what I set out to do in the first place – to proceed with the best intentions and to the best of my ability.

Through this research, I have kept my original goal in the foreground of my writing: to create space within western academic research for Indigenous Knowledge and Practice by describing Indigenous innovation as a unique type of social innovation. However, in the background was a parallel and deeply personal journey. Through the personal narratives included throughout the thesis, I have tried to bring in insights from emotional labour involved in my unsettling. Acknowledging that this is an ongoing learning process, I will emphasize again that the results of this thesis are preliminary and a first step in addressing the need for a conceptual tool that describes and provides strategies for Indigenous innovation processes.

However, several insights have emerged that may contribute to the future study of Indigenous innovations. For instance, social innovation shares common ground with the Indigenous resurgence movement and, when considered along with critical indigenist research strategies, can provide direction for Indigenous innovations at multiple scales. Specifically, Indigenous innovations are identified as a unique type of social innovation that privilege projects and roles unique to the Indigenous resurgence movement.

In particular, Chapter 4, "Mine Reclamation Informed by the Knowledge and Wisdom of the Ancestors: A Case Study in Indigenous Innovation with *Anishanaabe Maamwaye Aki Kiigayewin* in Timmins, Ontario", describes the common ground between social innovation and Indigenous resurgence and explains the linkages and differences between the two literatures through a case study of *Anishanaabe Maamwaye Aki Kiigayewin*. Working with *Anishanaabe Maamwaye Aki Kiigayewin*, it became clear that integrating Indigenous Knowledge and Practices into existing social innovation strategies is not sufficient to provide useful tools for Indigenous innovation process. Through this paper, we propose Indigenous innovation as a unique type of social innovation to ensure the necessary conceptual space to develop a historicized, culturally appropriate model that promotes the resurgence of Indigenous Knowledge and Practice. Major findings from Chapter 4 include:

- The common ground between social innovation and Indigenous resurgence is centered on their change-oriented, multi-scalar qualities, the interconnectedness of human-nature relationships, the role of agency and knowledge, the need to disrupt the status quo;
- There are three major areas of disagreement between social innovation and Indigenous resurgence - power, diversity, and collaboration;
- Indigenous innovations may be defined as *a unique type of social innovation informed by Indigenous Knowledge to promote the resurgence of Indigenous Knowledge and Practices.*

Chapter 5, "A Critical Indigenist Approach to Social Innovation: Building Municipal-Indigenous Relations in Southern Ontario, Canada", builds on the insights emerging from the *Anishanaabe Maamwaye Aki Kiigayewin* case to formally bring together strategies from social innovation and critical indigenist research methodologies in a multi-scalar framework for Indigenous innovation. To demonstrate the utility of our Indigenous innovation framework, we describe current initiatives spearheaded by MNCFN to improve municipal-Indigenous relations. Looking forward to a transformation in the implementation of the formal duty to consult, we apply strategies from the model for Indigenous innovation to speculate on future activities that may foster innovation for the MCNFN consultation process. Major findings from Chapter 5 include:

- Resilience, social innovation, Indigenous resurgence, and critical indigenist research strategies may be linked in a conceptual model for Indigenous innovations;
- A conceptual model for Indigenous innovation is useful in describing and providing strategies for advancing innovations in Indigenous contexts.

6.2 Recommendations

The ongoing resurgence projects described in this thesis contribute a foundation to further identify and describe Indigenous innovations. Throughout this thesis are roles for settler allies in Indigenous innovation, a foundation from which to address the lack of direction for these actors in Indigenous

resurgence processes. This is important to consider in the context of environmental planning and management in Canada as the field is historically characterized by antagonistic relationships between Indigenous nations and Canadian federal/provincial government(s) (Braun, 2002; Nadasdy, 2003). I recognize Indigenous Knowledge Guardians as authorities on contextualized Indigenous resurgence initiatives because of their unique ability to transmit the wisdom and teaching of the ancestors, though out of respect I have not shared specific insights here. By positioning Indigenous Knowledge Guardians as knowledge authorities, I emphasize the potential for learning - on mental, emotional, physical, and spiritual levels, outside of the formal academic system - by engaging in a good way with Indigenous colleagues. The following list, coupled with Figure 11, articulate the recommendations emerging from this research:

Recommendations For Theory:

- Continue to identify individual and institutional sources of ongoing colonization and engage in action-oriented research projects that address these areas.

- Continue to foster recognition and respect within academic institutions for Indigenous Knowledge and Practice. Contribute to building a base of environmental planning and management professionals by incorporating intercultural knowledge exchanges, led by Indigenous Knowledge Guardians, into post-secondary curriculums.

Recommendations For Practice:

- Indigenous Knowledge Guardians are uniquely capable of transmitting Indigenous Knowledge and Practice. Support these individuals to ensure their guidance and direction is communicated effectively to advance Indigenous innovations.

- Unsettling experiences can build capacity within settler governments and industry for intercultural understanding, resulting in trusting relationships and easing the process of consultation. Support settler allies and Indigenous

Peoples in resurgence initiatives that foster intercultural exchanges to enable learning from an unsettling pedagogy.

- Several themes of social innovation resonate with Indigenous resurgence. Centers for innovation - such as the Social Innovation Generation Network in Canada – should establish resources and training specific to Indigenous innovation processes. This may include engaging Indigenous Knowledge Guardians or Practitioners with experience in innovation processes to provide relevant and respectful guidance.
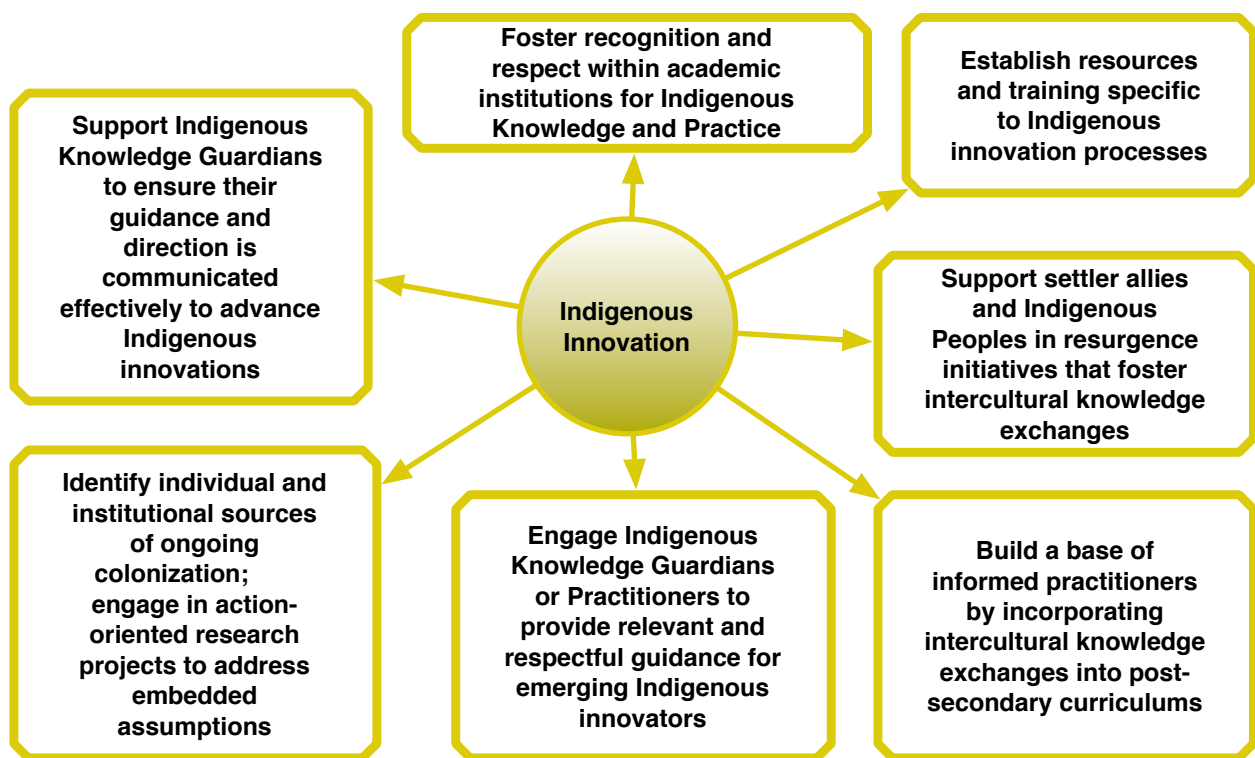

Figure 11: Recommendations and insights emerging from Indigenous Innovation.

6.3 Future Research

Due to time limitations, feedback on the utility of the model for Indigenous innovation from *Anishanaabe Maamwaye Aki Kiigayewin* and MNCFN (beyond initial reactions) was not available. Obtaining ongoing feedback is a major concern for short-term research projects with Indigenous colleagues. To better understand the strengths and weaknesses of the ideas presented in

this thesis from the perspective of Indigenous research partners, this should be a priority for future research.

In addition, I recommend the following areas for future research:

- Further exploratory case study research into Indigenous innovations is needed to test the utility of the model for describing system scale transformation and reorganization.

- Stories of Indigenous innovation should be documented to establish a useful record for Indigenous communities as they engage in the resurgence movement.

- Conflict and struggle is a major theme in both social innovation and Indigenous resurgence. Alternative dispute resolution strategies should be examined in the context of Indigenous innovations as a strategy for navigating resistance from the statue quo.

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Glossary of Terms

This glossary of terms is intended to supplement the material provided in the main body of this thesis. In some instances, particularly resilience and social innovation terminology, I quote definitions to acknowledge their widespread use and acceptance. I provide an explanation or set of characteristics for terms and concepts that are still evolving.

Critical indigenist research – Founded in intercultural research collaborations, this approach is carried out on the common ground of critical and Indigenous methodologies with the purpose of addressing colonial policies and assumptions through iterative, action-oriented projects focused on community assets (Absolon, 2011; Denzin et al., 2008; Johnson, 2008; Kovach, 2010; Martin, 2003; Regan, 2010; Smith, 1999; Steinhauer, 2002; Wilson, 2008).

Cross-scalar interactions – Refers to "influences between the dynamics of systems at one scale and the dynamics of those that are embedded in it or enfold it" (Resilience Alliance, 2013).

Duty to consult – In Canada, the duty to consult flows from the honour of the Crown and is generally recognized as a constitutionally protected right under s. 35 of the Constitution Act, 1982 (*Constitution Act,* 1982; Newman, 2009*)*. Newman (2009) identifies five components of the duty to consult outlined by *Haida Nation v. BC* (2004):

1. The duty to consult is triggered when the Crown contemplates any action that has potential to infringe on asserted rights or title lands;
2. It is the Crown's responsibility to fulfill the duty to consult in good faith *before* rights or title have been proven;
3. The legal strength of the asserted rights or title claims informs both the level of consultation and the degree to which the Crown must take Indigenous interests into account in making its decision;
4. The duty to consult does not grant veto power to Indigenous nations - it is intended to foster a process of balancing interests;
5. If the duty to consult is not fulfilled, remedies may range from court injunctions to compensation for damages. However, in attempting to foster reconciliation, the *Haida* decision encourages a process of understand potential rights and title infringements to eliminate or mitigate negative impacts.

Eco-cultural system – Builds on the social-ecological systems concept to represent the intrinsic link between certain ecological and cultural systems. These systems "not only comprise the social institutions and distinct frameworks of a community, but also the worldviews, identity, values, distinct cultural practices and behaviours that make a community or group culturally distinct" (Pilgrim & Pretty, 2010:11).

Eco-cultural restoration – Describes the coupling of ecological sustainability and cultural resurgence (Turner, 2005). In this thesis, eco-cultural restoration is considered a resurgence project that emphasizes the importance of healthy ecosystems to the work of Indigenous Knowledge Guardians.

Indigenous innovation – A unique type of social innovation informed by Indigenous Knowledge to promote the resurgence of Indigenous Knowledge and Practices.

Indigenous Knowledge Guardians – Highly respected individuals within Indigenous intellectual communities who have extensive knowledge of and access to Indigenous social and cultural institutions, intellectual traditions, traditional languages, and associated protocols and pedagogies (Simpson, 2008).

Indigenous resurgence – Moving "from trying to transform the colonial outside into a flourishment of the *Indigenous* inside" (Simpson, 2011: 17). Resurgence focuses on the (re)emergence of Indigenous Knowledge and Practice through healing by re(connecting) with the land through Indigenous cultural and social institutions under the guidance of Indigenous Knowledge Guardians (Alfred, 2005; Alfred, 2009; Alfred and Corntassel, 2005; Corntassel, 2012; Simpson, 2008; Simpson, 2011).

Institutional entrepreneurs – "Individuals who actively work to change the broader social system – the political, economic, legal or cultural arenas. They are highly skilled at identifying and connecting to opportunities that help a particular social innovation to flourish" (SiG Knowledge Hub, 2013). For this thesis, institutional entrepreneurs also include Indigenous Knowledge Guardians who have extensive experience dealing with government and industry.

Panarchy – "Panarchy is the hierarchical structure in which systems of nature (for example, forests, grasslands, lakes, rivers, and seas), and humans (for example, structures of governance, settlements, and cultures), as well as combined human-nature systems (for example, agencies that control natural resource use)…and social-ecological systems (for instance, co-evolved systems of management)…are interlinked in never-ending adaptive cycles of growth, accumulation, restructuring, and renewal" (Holling, 2001: 392).

Resilience – "The capacity of a system to absorb disturbance and reorganize so as to retain essentially the same function, structure, and feedbacks - to have the same identity" (Walker & Salt, 2012: 22)

Settler – "The colonizer who lurks within" non-Indigenous people (Regan, 2005: 11). This is a complex, shifting identity - people can flux between roles and embody different roles completely. Therefore I follow Regan (2010) in using it to acknowledge the colonial assumptions and policies that

continue to hinder transformation towards mutually beneficial futures, rather than to label particular individuals.

Settler allies – Identifying as a settler ally involves accepting a "responsibility for making change in the world", living in truth as ethical witnesses, and adopting a critical gaze on the ongoing impact of colonial policy (Regan, 2010: 230).

Scaling out (an innovation) – "Involves the replication of an innovation; working to make a good initiative happen in more places in order to increase and spread its impact on managing a problem…scaling out occurs at the same level of a system" (SiG Knowledge Hub, 2013a).

Scaling up (an innovation) – "Refers to increasing an innovation's impact in the broader system in order to address the root causes of the problem…scaling up occurs across one or more levels of a system" (SiG Knowledge Hub, 2013a).

Social-ecological systems – "Complex, integrated systems in which humans are part of nature" (Resilience Alliance, 2013). The use of this term emphasizes the inseparable linkages between humans and the environment.

Social innovation – "Social innovation is an initiative, product, process or program that profoundly changes the basic routines, resource and authority flows or beliefs of any social system. Successful social innovations have durability and broad impact" (SiG Knowledge Hub, 2013b).