7. Indigenous social innovation: what is distinctive? And a research agenda

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In recent years, governments and non-governmental organizations, as well as universities, have come together in seeing "social innovation" as a way to address long-standing and deeply rooted social ills (Ayob et al., 2016). Our focus in this chapter is on the connection between the promise of social innovation and a particular population that is especially acquainted with the kinds of problems that social innovation is supposed to tackle: Indigenous peoples around the world.

Indigenous peoples are not one population, but a numerous and varied set of communities in many different localities. Typically, they face chronic social, cultural, economic and political challenges (Hall and Gandolfo, 2016; World Bank, 2011) as a consequence of colonization processes and racism, though their constellation and intensity vary from place to place. The many dimensions of poverty are evident in the striking differences that typify the contrast between these populations and their surrounding settler societies not only with respect to income, but also health and health care, education and employment, housing, living conditions and opportunities of many kinds. Given this background, it might seem the most obvious form of connection to be explored would be the way in which innovations not yet identified or attempted might be employed to address the difficulties faced by Indigenous peoples. We have a different question, or rather, set of questions. In this chapter, we raise the question of what specifically *Indigenous* social innovation (ISI) might look like, and whether something like that is already taking place. We ask further what we can learn from distinctively Indigenous social innovation that could inform our attack on social problems faced not only by the Indigenous but by other disadvantaged peoples and communities.

We begin with a brief exploration of the concept of social innovation. We proceed then to look at two main literature streams to inform our search for what is distinctive about ISI. These streams suggest three aspects in which we might expect ISI to be grounded: (1) traditional knowledge and practices; (2) distinct cosmology and culture; and (3) struggles for decolonization and Indigenous resurgence. We then consider a specific case of Indigenous innovation that illustrates how those distinctive aspects work in practice and the possibilities that opens for Indigenous communities. We conclude with a research agenda.

WHAT IS SOCIAL INNOVATION?

The concept of "social innovation" has become a heading for policy initiatives and focused scholarly attention only in recent years (Ayob et al., 2016), though the phenomena it refers to have arguably been with us throughout human civilization. As with

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any burgeoning subject area, the concept is subject to a variety of understandings and explications (Andrew and Klein, 2010; Ayob et al., 2016; Government of Canada, 2010; Mulgan et al., 2007; Phills et al., 2008; Westley, 2008). While there is general agreement on many paradigm cases – innovations such as "Fair Trade" products, micro-credit, co-operative housing, emissions trading, community kitchens and Meals on Wheels – and historical examples that are now part of life in many of our countries, such as trade unions, co-operatives, collective insurance, publicly funded health schemes and many more – there is disagreement both as to what makes social innovation, innovation and what makes it social.

Innovation

A considerable variety of things may be the carriers of social innovation**.** Phills et al. observe that "A social innovation can be a product, production process, or technology (much like innovation in general), but it can also be a principle, an idea, a piece of legislation, a social movement, an intervention, or some combination of them" (2008, p. 39). It is tautological to assert that innovation requires novelty, something new in any of the things that are properly called an innovation. It is open to question, however, how that novelty should be understood.

Practitioners and promoters of social innovation often speak of "new ideas" as characteristic of social innovation, but there is wide agreement among scholars that social innovation is frequently, perhaps usually, the adaptation and perhaps recombination of existing ideas. Phills et al. represent this view in stating that "innovations need not necessarily be original." All that is required, they suggest, is that "they must be new to the user, context or application" (2008, p. 37). Often what is new is the *combination* of items (Mulgan et al., 2007, p. 5). As a research brief produced for the Canadian Government puts it, "[social innovation] often involves novel applications (or recombinations) of existing ideas and/or their application to new areas" (Government of Canada, 2010, p. 1; see also Mulgan et al., 2007, p. 5). The concept of bricolage – the inventive combination of elements that are at hand but not generally recognized as resources – has been shown to illuminate the concepts of entrepreneurship (Baker and Nelson, 2005) and social entrepreneurship (Di Domenico et al., 2010). It seems fully applicable to social innovation.

There is a variety of opinion concerning not only the quality of novelty in social innovation, but also the magnitude of its impact. Mulgan (2006) and Westley (2008) represent many scholars who regard social innovation as bringing about a systemic change, addressing the underlying sources of social problems and not just their symptoms. From this point of view, social innovations are disruptive and large scale rather than incremental and context specific. Others, such as Phills et al. (2008), decline to make such a distinction, on the grounds that impact is essentially ranged on a continuum, with any attempt to draw a significant distinction based on subjective judgment.

For the purpose of this chapter, we will adopt a broad view of the character of novelty in social innovation. As mentioned, many different kinds of entities can count as innovative. Innovation with respect to any of them will often, perhaps typically, not be a total novelty but a recombination and/or reapplication of familiar ideas. We accept that the range of impact is a continuum, though we can see why research on social innovation focuses more on innovations that are relatively systemic and wide-ranging in their impact.

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The magnitude of the problems that we face, the forces that sustain them, and the hope that we may address them in some long-term fashion seem to call for responses that go to the roots of the problems.

Social

The social element in social innovation has been interpreted in a variety of ways along two complementary paths: (1) What are the outcomes of the innovation? and (2) What are the innovators aiming at?

Regarding outcomes, Mulgan et al. state simply that social innovations "work in meeting social goals" (2007, p. 8). Phills et al. offer a similarly general suggestion. Social innovations, they say, are those "for which the value created accrues primarily to society as a whole rather than private individuals" (Phills et al., 2008, p. 36). Pol and Ville more cautiously stipulate that a social innovation "has the potential to improve either the quality or the quantity of life" (2009, p. 881).

A more focused idea of the target population emerges when researchers specify the objective of social innovation in terms of problems to be addressed. Westley expresses a commonly held view when she states that her interest is "in those social innovations that address seemingly intractable social problems – homelessness, poverty, and mental health" (2008, p. 2). No doubt it would be a mistake to rule out innovations that produce general improvements in the well-being of a society or some group within it, whether or not there is a clear sense of hardship. But what are recognized as urgent social problems, and those who suffer from them, do come in for special attention when social innovation is discussed.

A more radical approach to the social element in social innovation has been championed especially by Moulaert and Hillier (2009). For them, a fundamental aspect of the outcomes of social innovation is the transformation of social relations. Social innovation, they contend, leads to "a better inclusion of excluded groups and individuals into various spheres of society at various spatial scales" (Moulaert and Hillier, 2009, p. 4). Social innovation, on this view, entails an ethical priority of "social justice" (Moulaert and Hillier, 2009, p. 4).

A second strand in the social aspect literature of social innovation emphasizes that the social outcomes must be more than positive externalities. Mulgan et al., for example, define the term as "innovative activities and services that are motivated by the goal of meeting a social need and that are predominantly developed and diffused through organisations whose primary purposes are social" (2007, p. 8). One could object that motivation is hard to determine and generally mixed (Phills et al., 2008). But Mulgan et al.'s use of the idea of "primary purposes" suggests that what they have in mind is not really motivation, but objectives or intentions. Of course, intentions/objectives/goals are generally mixed as well, and the aim of producing socially desirable outcomes is often somewhere on a continuum between a minor goal and a totally dominant intention (Peredo and McLean, 2006). But the suggestion that socially valuable outcomes must result from an individual or organization's intentions, and not just accidental results of normal business activity, seems sound. We will assume that the goal of social benefit must be significant, but need not be the exclusive, or even primary, intentional aim.

The inclusion by Mulgan et al. of a requirement that social innovations "are predominantly developed and diffused through organisations whose primary purposes

are social" (2007, p. 8) may seem to rule out profit-seeking organizations as potential agents of social innovation. That is surely too strong. In effect, this restriction seems to suggest that prosocial intentions should not only be strong determinants of the innovation, but almost exclusive. The existence of companies that aim to make money but also to benefit society is well recognized (Vogel, 2007). We will assume that if prosocial outcomes are prominent among the goals of an organization, even if they might not be "primary," they might well produce social innovations. It seems important, as well, to recognize that social innovation often occurs where business and government interact with third sector organizations in producing social benefit (Phills et al., 2008; Waddell, 1999). We take Mulgan's restriction to be just a way of underlining the requirement that the benefits of social innovation are deliberately sought, and are not merely positive externalities of regular, profit-seeking business activity. We welcome a special concern for inclusion and social justice as a vital element in social innovation, whether or not that is made part of its definition. In a nutshell, the social aspect of social innovation lies in the fact that some kind of social benefit is the outcome, and it is something intentionally sought out, and not the accidental byproduct of pursuing some other goal.

We have discussed what makes social innovation innovative, and what makes it social. For the purpose of this chapter, we propose the following definition: Social innovation is a novelty in some practice, product, technology or other phenomenon with social impact, where (a) that novelty is not necessarily a new invention but may be a combination/recombination/reapplication of existing factors; (b) it results in significant social benefit, especially amelioration of a significant social problem; and (c) that benefit is the intentional aim and not an accidental byproduct of the innovation. Our proposed definition is not precise and tidy; and that, we suggest, simply reflects the way that social innovation is in the real world. It is a phenomenon of great impact, but there are no sharp boundaries between the kinds of things that we will agree in recognizing as examples, and those we might not. We hold that there is wide enough agreement on paradigm cases, and on the general features that pick them out, to make the discussion of what we can learn from them and how to promote them very worthwhile. Our particular interest is how the concept applies to innovations taking place in the Indigenous world.

INDIGENOUS SOCIAL INNOVATION

Who are the Indigenous?

The United Nations estimates that the worldwide population of Indigenous peoples numbers more than 370 million, distributed over 70 countries worldwide (United Nations Permanent Forum on Indigenous Issues, 2017). Those engaged with Indigenous affairs generally agree in favoring a criterion that recognizes self-identification as a primary marker for Indigeneity, rather than a formal definition. At the same time, they converge on a broad agreement on the characteristics of Indigenous societies. Peredo et al. (2004) identify six features that are generally included in recognizing Indigenous society:

> (1) descent from inhabitants of a land prior to later inhabitants, (2) some form of domination by the later inhabitants, (3) maintenance of distinguishing socio-cultural norms and institutions

> by the indigenous group, (4) an attachment to ancestral lands and resources, (5) often, but not always, subsistence economic arrangements, and (6) an association with distinctive languages. (2004, p. 5)

They note that not all elements are present in all cases, but in most instances of modern indigenous cultures, all six characteristics are present to at least some degree.

Underlying this list of characteristics is a lived history in which those features are blended in shared experience extending over many generations, shaping the identify of Indigenous peoples (Sigurdarson, 2009). To begin with, the descent from early inhabitants of the land is typically and vividly represented in traditions, stories, songs, art forms or other cultural expressions that link the Indigenous with their ancestors and their place. Second, distinct cultural norms and institutions – for example, collective forms of organization and economies based on reciprocity and gifts rather than markets – have also been part of what distinguishes Indigenous history. These have typically been dismissed by colonizers as alien and primitive, rather than rich and complex patterns of interaction embedded in distinct worldviews. Third, a sense of deep attachment to ancestral lands quite alien to European ideas of property or ownership (Bryan, 2000), sometimes embedded in a sense of being parented by it or kinship with it, is a fundamental characteristic of most Indigenous outlooks (Sigurdarson, 2009). Fourth, Indigenous cultures have often maintained themselves in those lands by means of economies that draw on the endowments of the environment in ways that require intimate knowledge of the nature of that environment and are embedded in a sense of stewardship and reciprocity in relation to it. Fifth, different languages embody different ways of constructing and perceiving reality (Athanasopoulos et al., 2015), and distinct languages are an obvious and vital marker of Indigenous identity, capturing and expressing the distinct worldviews, cultural patterns and traditional knowledge that make up Indigenous identity.

These interconnected indicators of indigeneity are all embedded in the remaining and transformational element listed above: domination by colonizing incomers. Traditional bearers of the links with ancestors – stories, songs, dances and so on – were precisely among the things meant to be suppressed by practices of assimilation, for example, Residential Schools in Canada (Miller and Marshall, 2017) and Aboriginal child removal in Australia (Krieken, 2004). Distinguishing socio-cultural norms and institutions were likewise meant to be extinguished by the colonial powers that meant to absorb Indigenous peoples into their "superior" cultures. The attachment to land had to give way to the need of incomers to find habitation, to subordinate the land to agricultural practices based on a different sense of relationship to the land, and along the way to turn land into something that could be exchanged in markets. In the drive to assimilation, languages were deliberately snuffed out as part of what was holding the Indigenous back from progress into "civilization," and the advancing extinction of Indigenous languages continues apace (Sigurdarson, 2009).

Indigenous scholar Taiaiaki asserts that this potent mix of Indigenous character, mingled with the experience of colonization, is the defining characteristic of the Indigenous identity. "It is this oppositional, place-based existence," he says, "along with the consciousness of being in struggle against the dispossessing and demeaning fact of colonization by foreign peoples, that fundamentally distinguishes Indigenous peoples from other peoples of the world" (Alfred, 2005, p. 597).

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It is this shared experience of a rich heritage, marginalized and threatened with extinction, that provides the context in which ISI takes place.

A Working Definition, and What Might We Expect to be Distinctive about Indigenous Social Innovation?

This aspect of the chapter draws on three strands of scholarly literature. First, there is an emergent multidisciplinary body of literature that explicitly recognizes and discusses the concept and the practice of Indigenous innovation: for example, Alexiuk (2013), Drahos (2011), Drahos and Frankel (2012b), Huaman and Sriraman (2015), McCarthy et al. (2014), Tapsell and Woods (2008, 2010) and Volynets (2015). Second, there is a considerably larger literature that considers topics obviously bordering on and bound up with ISI: topics such as Indigenous economies, Indigenous entrepreneurship and Indigenous social enterprise. Prominent examples here are Anderson et al. (2006), Banerjee and Tedmanson (2010), Berkes and Adhikari (2006), Dana (2015), Hindle and Moroz (2010), Kuokkanen (2011), Nikolakis (2010), Peredo and Anderson (2006), Peredo et al. (2004) and Tapsell and Woods (2008). Third, there is a nascent and vital literature that has its own powerful implications for ISI: the literature on what has come to be known as "Indigenous resurgence." Alexiuk (2013), Alfred (2013), Alfred and Corntassel (2005), Corntassel (2012), Simpson (2008) and Turner (2007) illustrate this important voice in framing our study.

By "Indigenous social innovation (ISI)," we mean a novelty informed by ancestral knowledge and practices, in some product, practice, technology or other phenomenon with social and cultural impact, developed and implemented by the Indigenous in accordance with their worldviews. As mentioned earlier, (a) the novelty is not necessarily a new invention but may be a combination/recombination/reapplication of existing factors, including traditional teachings and practices; (b) it results in significant social benefit, especially improving the lives of Indigenous peoples and/or serving to reaffirm their Indigenous ways of life; and (c) its benefit is the intentional aim and not an accidental byproduct of the innovation in harmony with their distinct cosmology and culture. The fact that this form of innovation is developed and implemented by the Indigenous means first, we not considering the development and application of innovations by external governments, corporations or other exogenous agents to Indigenous communities, however valuable or important those externally derived innovations might be. Second, we are not counting the appropriation of items from Indigenous life and culture and their application to problem-solving in settler cultures, though that has been and continues to be a significant form of innovation (and raises important ethical and political questions). The question, for instance, of how Indigenous traditional knowledge should be respected in international regulation of intellectual property is of vital current concern (Drahos, 2011; Drahos and Frankel, 2012b), but is beyond the scope of our inquiry here.

Our focus is on the Indigenous as the agents of social innovations aimed at benefiting primarily, but not necessarily exclusively, their own communities, whether those communities are rural or urban, gathered or disbursed. There are open questions as to how to see innovations in a context where Indigenous peoples are engaging with settler peoples in a joint activity, such as extractive enterprise on land to which the Indigenous have a claim. We say that for these to be regarded as ISIs, there must be a clear recognition that the Indigenous contribution is a major component of the intervention, and that Indigenous

interests are primary in determining the objective of the innovation. Decisions here will need to be on a case-by-case basis. As above, co-option of Indigenous ideas to serve non-Indigenous commercial interests does not count as ISI.

As mentioned above, we raise three large-scale questions concerning ISI: (1) What might we expect to be distinctive about ISI? (2) What examples are there of ISI already taking place? (3) What learnings might be gathered from those examples and applied not only to Indigenous but other societies and communities? These questions compose something like a tri-focal lens that can be used to identify interventions with significant potential for Indigenous and broader betterment, and to amplify their impact. In this chapter, we make only a preliminary attempt at answering the first and second questions, but we argue that the research agenda they entail opens the door to enormous potential.

The emergent fields of Indigenous entrepreneurship and Indigenous social enterprise have been facing questions similar to the one posed here about the distinctiveness of ISI. Culture is a dominant theme in research on Indigenous entrepreneurship and Indigenous social enterprise, and it is recognized as a potent force in defining goals and purposes of Indigenous enterprise. Scholars generally agree in seeing an inclination in Indigenous culture to collective orientation and a spiritual connection with land (Anderson et al., 2006; Berkes and Adhikari, 2006; Peredo and Anderson, 2006).

The Indigenous resurgence research stream has highlighted efforts of Indigenous communities to reactivate and reconnect with Indigenous knowledge and practices as a pathway toward decolonization (Alfred and Corntassel, 2005; Corntassel, 2012). Simpson (2008) refers to efforts to flourish from inside out. Indigenous decolonization movements go beyond inclusion and aim at garnering respect for Indigenous philosophies and knowledge (Alexiuk, 2013).

Consider now question one: where should we look for distinctively ISI? We propose three promising grounds: (1) traditional knowledge and practices; (2) distinct worldviews and resulting cultural norms; and (3) the struggle for recovery from colonization – recovering sovereignty.

Grounded in traditional knowledge and practices

Indigenous societies have typically inhabited their lands for eons, often thousands of years, before being colonized by settler populations. What Turner writes about the Indigenous people of the Pacific Northwest could be said of many, perhaps most Indigenous groups:

> If there is one overriding theme extending over time and space for human survival in this vast region, it is change – and adaptation to change. Being keen and vigilant observers, scientists in the broadest sense of the word, indigenous peoples have not only used the resources around them but maintained and enhanced them in various ways . . . [T]hey have found diverse means, through developing cultural institutions and protocols, to control their impacts on other species and to accommodate the changes that have occurred over millennia. (2008, p. 14)

This ability to survive and adapt is built on a vast store of "traditional Indigenous knowledge (TIK)" (Barnhardt, 2005). This knowledge, and the innovation it has given rise to in adaptation to changing conditions, is intensely place based (Drahos and Frankel, 2012a; Tomlins-Jahnke and Forster, 2015), reflecting the deep attachment to traditional lands and resources that is characteristic of Indigenous peoples.

TIK is frequently represented and transmitted in ways that are unfamiliar to Western

conventions of representing and transmitting knowledge, in forms such as story-telling, songs, dreams, religious ritual, art, dance and other kinds of symbolic representation (Drahos and Frankel, 2012a, p. 21). Traditional knowledge is generally transmitted, usually orally, by one generation to another generation, with elders playing a fundamental role as the keepers of traditional knowledge who not only preserve the knowledge but determine who is fit to convey it. Herman (2018) notes that the tradition in her Indigenous background, of orally transmitted knowledge guarded by a particular "keeper," is often seen as discrediting that knowledge in the eyes of non-Indigenous. It is perhaps these unfamiliar forms of representation, as well as the cultural disdain that settler societies typically display toward Indigenous ways, that has led to widespread disregard for TIK in Western scientific circles (Turner, 2008, p. 4). There has, however, been a growing recognition of insights to be gained from TIK (Heyd, 1995). Scholars increasingly see potential in bringing TIK together with conventional "scientific" thinking (for example, Kawagley and Barnhardt, 1998; Turner, 2008), especially in areas such as ecology, environmental sustainability and natural resource management (Menzies, 2006; Moller et al., 2004; Ng'asike and Swadener, 2015). Chhetri and Chhetri (2015) propose the idea of "alternative imagination" as a way of bringing Indigenous knowledge systems together with non-Indigenous formats to produce fresh and innovative insights into the world around us. As Dudgeon and Berkes (2003) point out, TIK is not static, but evolves as people encounter new circumstances and ways of thinking. TIK thus functions as a central base from which Indigenous social innovations may spring in response to new challenges facing Indigenous communities. As a Maya leader put it, "it is the base from where we reach" (personal communication). TIK should therefore be regarded as a dynamic and relevant resource and not a fixed body of knowledge attached only to a specific time and set of circumstances. The Quechua of South America, for example, use ancient organizational practices to create and maintain community-based enterprises that engage with the evolving global market economy, where their ancient practices of mobilizing labor provide them with unique competitive advantages (Peredo, 2012). Canadian Indigenous leader and former judge, Murray Sinclair, captured this point in his comment to the Indigenous Innovation Summit of 2015: "Innovation isn't always about creating new things. Innovation sometimes means looking back at our old ways and bringing them forward to this new situation" (National Association of Friendship Centres, 2015, p. 4). The rich resources of traditional Indigenous knowledge are clearly a place where one can expect to find grounds for Indigenous social innovation.

Grounded in distinct cosmology and cultural norms: all my relations

TIK is embedded in a cosmology, or worldview. While Indigenous cosmologies differ fundamentally around the world, they typically see the world as a place where "human and non-humans and others-than humans all dance their world into continued existence" (Apffel-Marglin, 2012, p. 18). The large variety and diversity of Indigenous peoples brings with it a multiplicity of cultural patterns. One substantial similarity that recurs in this multiplicity, however, is a conception of the unity of all beings and a profound interdependence ~~and~~ of human, non-human and spiritual beings.

Rist (2000) provides a compelling example in his outline of the way that the Indigenous of the Bolivian Andes construct their agricultural practices, their economic interaction and their models of governance out of a cosmology that locates them and their

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communities in something like a comprehensive kinship relationship with one another, the natural world and the spiritual forces that govern it. This is vividly represented in the words of a campesino: "For us, potatoes are living beings; everyone has its own potato family. If we mistreat them, they get angry and tired and some day they will abandon us" (Rist, 2000, p. 311). Drahos and Frankel relate this sense of connectedness with nature to the place-based quality of Māori knowledge: "Rights over resources, and obligations such as that of being *kaitiaki*, are made concrete by being part of a group that is related to a place and is itself integrated into a network with human and non-human members (for example, the plants, animals, rivers of that place)" (2012a, p. 13). Turner holds that the cosmological view of the Indigenous in the Canadian West is captured in a phrase that is translated "everything is one" (2008, p. 179).

This idea of the unity of all beings is borne out, for example, in the concept of *buen vivir* that has taken hold in Latin America as an alternative to "development" (Lennon, 2015; Peredo, 2019; Walsh, 2010) and an example of the Indigenous resurgence movement. These holistic outlooks emerge in traditions of reciprocity and respect that extend beyond kin and tribal members to other inhabitants of the natural and supernatural world in what anthropologists Kew and Griggs label an "ethic of reciprocity" (1991, p. 27).

This is evident not only in the way that Indigenous peoples interact with their natural environment, but also in their economic (in the broadest sense) arrangements. Strong co-operative traditions within communities and groups are a standard feature of Indigenous societies. Forms of exchange that puzzle the standard analysis of neoclassical economists arise out of a "community orientation" in which community members experience their membership as resembling participation in the life of an organism, where their status and well-being is a function of mutual contributions to and from community (Peredo and Chrisman, 2006, p. 313). This outlook is reflected in a variety of institutions and traditions that function to balance individual/family interests with those of the community in which they have their being (Peredo and Chrisman, 2006). The concept of "inclusiveness" is thus a fundamental feature of the worldviews characteristic of Indigenous societies.

One outcropping of this inclusive view of society is a distinct and congruent conception of wealth. Turner captures the outlook of the Indigenous in the Pacific Northwest in a way that represents the perspective of many Indigenous communities: "Rich are those people who balance the benefits they receive in life with the responsibilities they assume for themselves, their families and communities, and their environment" (2008, p. 24). Thus, markets may be governed more by rules of barter than supply and demand, and they are surrounded by gift economies based on need and social relations rather than profit-seeking (Rist, 2000). Polanyi's view that market societies, which are taken to be a natural outgrowth of human nature, are in fact a recent invention, and market exchange only one mechanism for producing and distributing livelihood (Polanyi, 1944 [2001]), is richly illustrated in such traditions as the potlach system of the Indigenous in the Pacific Northwest (Trosper, 2003). A current example, which illustrates clearly the pattern of innovation built on combining ancient traditions with modern technology, is the network of community freezers operated by Inuit communities in Canada's far north. Recalling a time when hunters would collect food and then store it in permafrost locations open to everyone in the community, communities now use freezers for that purpose, contributing to food security for their members (Aningmiuq and Sarazin, 2018).

Clearly, this complex of distinctive cosmologies in which aspects of reality, natural and

non-natural are seen as intimately connected, and the ways of interacting with other community members as well as the natural environment that flow from these worldviews, must be recognized as fertile ground from which Indigenous social innovation may emerge.

Grounded in a struggle for recovery from colonization, recovered sovereignty
A focus on recovering self-determination, or "sovereignty," constitutes something like a movement in Indigenous communities around the world. The emphasis on self-determination arises in the context of the profound and varied experience of colonization that is now built into the Indigenous sense of identity (Alfred and Corntassel, 2005). One Indigenous researcher felt challenged by her Pueblo communities to see sovereignty as a foundation for cultural recovery and survival (Enos, 2015). The drive for sovereignty is a drive for decolonization. As Indigenous scholar Corntassel puts it, "Being Indigenous today means struggling to reclaim and regenerate one's relational, place-based existence by challenging the ongoing, destructive forces of colonization" (2012, p. 88). This outlook has led some Indigenous scholars to characterize the movement to recovery of self-reliance and sovereignty as "Indigenous resurgence" (Alfred and Corntassel, 2005; Corntassel, 2012; Simpson, 2008; Turner, 2007), emphasizing the recovery of Indigenous worldviews and connections with the land as the basis for a postcolonial identity. The discussion of this drive toward decolonization and recovered sovereignty that frequently occurs in the context of Indigenous innovation clearly marks that drive as a third place to look for Indigenous social innovation.

EXEMPLAR: THE T'SOU-KE FIRST NATION

In the previous section, we proposed three areas of Indigenous life and experience as rich with potential for generating social innovation: (1) traditional Indigenous knowledge; (2) distinct cosmologies and cultural forms; and (3) the struggle for recovered sovereignty. It seems certain that these sources, and perhaps others, have already been employed in important Indigenous social innovations; but there has been little attempt to search out and identify ISI, let alone study its scope and impact. Before proposing a research agenda aimed at stimulating those inquiries, we consider what could be considered a prototypical case: a bundle of connected innovations introduced by a Canadian First Nation with the aim of bettering their community.

> If you have a culture that has been carried on from your elders, your ancestors, you're going to know how things were protected, and saved, or used in a good way, so that it's still there for all generations to come. You have to know your culture and how people managed all these things years ago and use those today. (Linda Bristol, elder, founding member and cultural advisor of T'Sou-ke Arts Group)

T'Sou-ke is a small, Canadian First Nation of approximately 250 members located on the southern tip of Vancouver Island, approximately 30 kilometers (19 miles) southwest of the city of Victoria. Following colonization, the nation was confined to a fraction of its traditional territory and its members fell back on fisheries and the timber industry, for which their location and history gave them some capacity. They have remained active in those industries, though overexploitation by the non-Indigenous has considerably

depleted the resources and activities associated with them, and other forms of maintenance have been limited to competing in a marketplace governed by colonial rules and large commercial enterprises. Like many Canadian First Nations, the community suffered from insecure employment.

The community's response to shrinking traditional resources and employment opportunities was a process and a project that has attracted widespread recognition for innovative projects in community-based renewable energy and food security. The results of that project, which is still being developed, have placed it on a path quite different from where recent history seemed to be leading. Underlying their endeavors has been the revitalization of traditional values, cultural practices and language, and the deliberate integration of these in the foundation of innovative development projects. Chief Gordon Planes locates their originality in a traditional worldview: "What we are doing is something that I believe we all should be doing . . . and we all should take care of Mother Earth before we can assure a healthy community and if we do that Mother Earth will be able to provide for us for our future generations" (Indigenous and Northern Affairs Canada, 2015).

In addition to housing the largest community solar project in British Columbia, the Nation has launched a number of other innovations that are leading the community to zero emissions and self-sufficiency, including food production, aquaculture and a revitalization of arts and culture. All are grounded in, and revitalizing, traditional cosmology and inherited skills. Their work toward sustainability has made them an eco-tourism destination, attracting more than 2,000 visitors a year for solar tours and education workshops (Troian, 2017).

The Community Planning Process: Seven Generations Ahead

The process began with the T'Sou-ke Nation, assisted by a community development facilitator, engaging in a community visioning process, involving citizens of the Nation from elders to children in identifying a comprehensive development vision. Inspired by their ancestral values and practices, including the community visioning of looking ahead seven generations, the Nation anchored their new economy in a traditional view of their culture and spirituality: "We used to live sustainably, and only took what we needed from the land. We need to get back to that" (Tammemagi, 2013). The outcome of that process was a plan that rested on four pillars: energy autonomy, food self-sufficiency, cultural renaissance and economic development.

In the visioning process, each community member was asked, "If you had the power to improve your community, what would you do?" One of the first goals that emerged was to pursue an energy secure future for their nation (Ozog, 2012). T'Sou-ke felt faced with a challenge that called for social innovation – dealing with the environmental effects of hydrocarbon consumption, but also a specifically Indigenous challenge – energy dependency and energy deprivation (Ravotti, 2017; White Hawk, 2016).

In 2009, the T'Sou-ke Nation developed a plan for a Solar Community Program, secured funding for it from a variety of public and private sources, and went on to complete the installation of the largest solar photovoltaic installation in British Columbia. The installation is estimated to have reduced community energy use by 75 percent (Dodge and Kinney, 2013). "Facing climate change and increasing global oil prices, we knew that we wanted to become energy self-sufficient, and to not have to rely on the grid for

power for evermore," says Chief Planes (Ozog, 2012, p. 50). The drive toward energy self-sufficiency arose naturally from a reimmersion in the First Nation's experience of having to live sustainably in their environment. As Chief Planes put it:

> First Nations have lived for thousands of years on this continent without fossil fuels. It is appropriate that First Nations lead the way out of dependency and addiction to fossil fuels and to rely on the power of the elements, the sun, the wind and the sea once again. (T'Sou-ke First Nation, 2017)

Community engagement with the visioning process helped reawaken this awareness, and made the achievement of an energy secure future a top priority (Ozog, 2012). But the desire for energy autonomy was also rooted in a sensed need to recover political and social autonomy. "Power is power," says the community facilitator, "and becoming independent of the outside power grid means recovering some of our independence from the settler society that keeps the First Nations in a dependent relationship" (personal communication).

A Renaissance of Culture, Self-sufficiency and Sustainability

The Solar Community Program has attracted attention from other Indigenous and non-Indigenous communities across Canada and abroad. The initiative included the installation of a comprehensive photovoltaic system with a capacity of 75 kilowatts of energy from approximately 550 solar panels. The energy generated provides electrical needs for the Nation's offices and community hall, which are now net-zero in energy consumption, with any excess sold back to the BC Hydro grid. The program also included installing hot water systems employing roof-mounted thermal panels on many homes on the reserve, and an extensive energy saving program providing direct cost savings to individuals within the community (Newell and King, 2013). The youth-driven T'Sou-ke Smart Energy Group has also provided behavioral training to encourage residents to turn down thermostats and reduce light usage. The ongoing goal is to get all buildings to net-zero energy usage.

Training community members in solar energy technology was an important part of the program. T'Sou-ke partnered with Home Energy Solutions, a solar electric contractor, and First Power, a "cultural interface" between technology companies, renewable experts and First Nations, to deliver training and technological expertise to nine community members, who were the principle installers for the T'Sou-ke project and have since worked in other communities on panel installation. Local artist Mark Gauti designed and etched a solar symbol on to one of the T'Sou-ke panels, adding an emphatic expression of culture to the technology and underlining a sense of community ownership.

Although the energy program, with its impressive installation of solar panels, is the center of attention for government, academics, tourists and other First Nations, it is, as pointed out above, only a part of a program aimed at increased self-sufficiency. The visioning process outcome of priorities for "energy security, food security, cultural renaissance and economic self-sufficiency" (Petrescu, 2014) emerged in a diverse portfolio of community-based enterprises, all grounded in traditional values and supporting the goal of self-sufficiency.

A Community Garden and "Ladybug Garden" grew from the vision for financial and food security for the community. The community garden program produces enough food

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for weekly gatherings, celebratory events and a box program for the elderly in the community. In addition to building resilience and community well-being, the garden program provides employment opportunities for youth and other members of the community. In 2014, the Nation started yet another enterprise and built three 35-by-150 feet greenhouses to grow wasabi, a plant best known as a piquant condiment for sushi. The cultivation and export of this cash crop in particular has become an important economic venture for the Nation, producing 15,000 plants per harvest. The community paid off its start-up costs with their first harvest, which brought in $100,000 in revenue (Troian, 2017).

The Nation has also launched a thriving aquaculture enterprise off their shores. A 82-hectare oyster farm produces 3 million oysters per harvest but with the capacity to grow up to 24 million oysters per harvest, leading to a partnership with the Chinese Canadian Aboriginal Development Enterprise to research the feasibility of farming oysters (Troian, 2017). The Nation plans to expand its operations to include sea cucumbers, another valuable cash crop for export.

Closely linked with these food security initiatives are activities meant to recover and sustain the traditional links with local food and medicines. Youth are taken on walks conducted by elders that reacquaint them with traditional resources and time-honored means of harvesting them respectfully (T'Sou-ke First Nation, 2017). A concern for food security is thus embedded in traditions not only of sustainability but a cosmology that unites people with an environment that is not just material.

In 2009 the community created T'Sou-ke Arts Group (TAG), a collection of carvers, knitters, weavers and artists, with the intention of restoring, reviving and living their culture. Organized as a non-profit organization TAG runs a number of workshops in the local community, and holds an annual arts sale, showcasing and selling Indigenous arts and crafts. In the words of Linda Bristol, founding member and cultural advisor of TAG,

> in order to know who you are and where you're from you need to know your culture. You can't move forward if you don't know what your identity is, and where you come from, and your culture within this community and your family. Art is something that we can be involved in right from being a very young child to for the rest of your life". (Personal interview)

One vital element in the process that underlies all these activities is represented in a document prominently displayed on the main meeting hall on the reserve's central space. It is a copy of the 1850 treaty by which the extensive T'Sou-ke traditional territories, apart from a small sector constituting the present reserves, became "the entire property of the white people for ever" in exchange for forty-eight pounds, six shillings and eight pence (Ministry of Aboriginal Relations and Reconciliation, 2006). Visitors to the reserve cannot help seeing the document, and its significance for the renewal processes underway in the Nation is quite apparent.

A Model that Travels

The T'Sou-ke model of social innovation has had an impact on neighboring non-Indigenous communities as well as communities continents away (Petrescu, 2014). A 2009 economic and technical study of the T'Sou-ke solar project concluded that similar solar installations could be even more beneficial in remote areas not served by conventional electrical grids.

The Indigenous community of Skidegate, located in the Haida Gwaii region of British Columbia, resembled most remote Indigenous communities in its heavy dependence on diesel-fueled generators for energy. Hearing about the T'Sou-ke undertaking aroused interest in the community, and in partnership with T'Sou-ke, they succeeded in securing funding first to study the application of T'Sou-ke's model to Skidegate, and then to produce their own version of it (Ozog, 2012). August of 2017 saw a 385-panel switched on and supplying energy to the community's heritage center. It was far from making the community self-sufficient in energy, but in the view of the community opens the way to such a future.

The Nation regularly acts as a mentor and advisor to communities throughout North America and has engaged with a variety of external associations, public and private partnerships. Their leadership in mitigating climate change has also attracted partnerships in national research projects, such as Indigenous Climate Action (ICA), an Indigenous-led initiative, represented through a coalition of individuals from different organizations, communities and regions whose mission is to fill the gaps between lived experiences of Indigenous peoples and policies and strategies being developed to address climate change.

Challenges Faced By Innovating Indigenous Communities

Indigenous communities share with other small communities a number of recurring challenges, as well as a number of potential difficulties that a history of colonization and marginalization has presented especially to Indigenous peoples.

Small communities, for instance, abound in "social capital," the product of networks in which trust and reciprocity may flourish (Portes, 1998; Putnam, with Leonardi and Nanetti, 1993). But social capital can have its drawbacks. Including people in networks, for example, can mean actively excluding others (Portes, 1998). Cliques develop, with their special interests and a sense of togetherness that excludes others and may be transmitted through kin and connections. Achieving a sense of shared purpose broad enough to sustain novel initiatives in these circumstances requires special efforts, which T'Sou-ke has fortunately been able accomplish.

Indigenous peoples face challenges on top of these. They characteristically inherit in their settler setting a dependent status, thought to require close supervision and regulation, usually embodied in specific legislation and limiting their opportunity for independent initiative. They have frequently had their customary forms of self-governance replaced by imposed forms derived from the patterns of their colonizers, and live with the community tensions created by the coexistence of traditional and imposed governance models (see, for example, Ladner, 2006).

Scarcity of funding even for basic community needs is a serious and chronic problem for many, perhaps most Indigenous communities. Securing resources for special initiatives involving novelty is even more challenging, especially given the collective nature of Indigenous governance and decision-making that is hard for non-Indigenous governments and authorities to recognize. T'Sou-ke has been particularly inventive in identifying and pursuing grant opportunities.

Engaging Indigenous youth is crucial. This is a significant challenge for many Indigenous communities as their youth encounter the relentless spread of surrounding consumer cultures, requiring efforts that connect young people with their communities and traditions in ways that keep them alive and relevant.

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The T'Sou-ke Nation seems to have surmounted these challenges remarkably, but in considering Indigenous social innovation generally, these challenges must be recognized and reckoned with.

Summary on T'Sou-ke

It is easy to discern in T'Sou-ke's initiative the pattern of endogenous support we hypothesize for Indigenous social innovation. It is clearly based in applying traditional knowledge to solving problems encountered by an Indigenous community; it is embedded in a traditional worldview that binds its people with their surroundings in a deep interdependence; and it expresses a desire to recover an autonomy that colonization has deprived them of. T'Sou-ke has attracted considerable attention for its innovation; though arguably, its rootedness in Indigenous foundations of the kind we suggest is under-appreciated.

What is particularly striking about the T'Sou-ke program of innovation is the way it embodies and advances the concept of inclusiveness. In fact, it could be said that the program is inclusive on at least three different levels. To begin with, the family of innovations, from solar panels through community gardens to arts groups, is built on seeing the community as fundamentally included in their natural and social environment in a way that is often lost sight of in modern societies. The holistic sense that so often characterizes Indigenous worldviews is borne out in the way that the innovations, which themselves are seen as interconnected, recall the community to a sense of inclusion with the natural and social forces that sustain them through reciprocal action. Second, the pattern of innovation is intensely inclusive in the way that it arises from a community visioning exercise that intentionally draws all voices in the community into the discussion, and not just those of people in power or with special interests. Inclusive community visioning requires that the goals of innovation, and the means by which they are pursued, have inclusive commitment and serve an inclusive purpose in a way that innovation often fails to achieve. Third, the T'Sou-ke social innovation has the effect of including their community as full, autonomous members of the wider society, respected for their distinctiveness and strengths, rather than second-class dependents meant for assimilation as the forces of colonization constructed them. This inclusive effect is achieved not by initiatives of outsiders wishing to benefit them, but by the community itself.

This multifaceted concept of inclusiveness is something we suggest needs to be brought to the study of social innovation in general. Indeed, our claim is that the T'Sou-ke phenomenon is the tip of an iceberg that embodies profound and inclusive social innovation but has scarcely begun to be recognized let alone explored and analysed. The potential of this iceberg calls for an energetic research program.

INDIGENOUS SOCIAL INNOVATION: A HISTORICAL, MULTILEVEL AND COMMUNITY-ENGAGED RESEARCH AGENDA

There is a large knowledge gap in management studies regarding Indigenous peoples in general and social innovation in particular. The formation of a 'Native Caucus' at the 2013 meetings of the Academy of Management by a group of Indigenous and non-Indigenous

scholars is among a number of developments signaling a growing interest in addressing that gap.

Historical context, multilevel analysis and community-based research methodologies are essential elements in advancing our understanding the process of ISI. Social innovation is always located in a historical, political and social context, as suggested earlier; but this is especially true in ISI. Current social and political circumstances for Indigenous peoples combine with historical forces to form an especially rich mixture that meets and interacts with technological innovation to create a diversity of unique environments for social innovation.

Inclusion, social justice and transformation of social relations are, for several researchers on social innovation, of central importance (Moulaert and Hillier, 2009). In considering ISI, these are absolutely fundamental. These factors generate large-scale questions such as: How do Indigenous communities' efforts toward improving the lives of their communities result in increased inclusion and social justice for their communities? Do these innovations transform their relations with mainstream society, and if so, in what ways and by what means? What internal and external barriers do the initiators of social innovation face in their efforts at transformation with respect to these factors?

Research on ISI innovation calls for an imaginative variety in conceptual basis for analysis. We noted above, for example, the recognition of a collectivist inclination in the social organization and outlook of Indigenous communities, and the way this flows from a tendency to a holistic perspective in worldviews. The collective perspective entails an interplay among individuals, families and communities that has not been easy to recognize and operationalize by researchers, business organizations and policy makers. Research into ISI will have to be inventive in its recognition of these dynamics not generally taken into account in management studies of social innovation.

Research into ISI should consider at least three levels of analysis: macro level, meso level and micro level. Macro-level analysis, for instance, would function at regional and national levels, and could take into account the influence of large-scale historical and socio-political factors, as well as institutional elements such as land tenure policies and property regimes. Land tenure and property regimes have been especially contested issues for Indigenous peoples in many regions and the relation of collectively held traditional knowledge to evolving conventions of intellectual property is a hotly debated topic (Drahos, 2011; Drahos and Frankel, 2012a). Meso-level analysis would focus on particular language groups within regional and national territories, and their distinguishing features that seem relevant to social innovation. Micro-level studies would consider factors that are characteristic of particular sub-groups such as "bands" or particular geographical gatherings within linguistically defined groups, perhaps even considering the role of particular kin or family factors. Box 7.1 illustrates the range of topics and issues that can be considered for building a research agenda at these various levels.

Box 7.1 is meant only to illustrate topics and issues, and there may well be an overlap among the different levels of analysis. Research designs that take into account and establish relations between the different levels – macro, meso and micro – could be particularly productive in understanding ISI processes and in theory building. In this chapter, we have made use of the emergent literature concerning Indigenous economies, Indigenous social entrepreneurship and Indigenous resurgence. The applications of other management theories and findings to ISI could be rewarding in both directions, creating useful research

BOX 7.1 A MULTILEVEL RESEARCH AGENDA

Institutional

- **Property rights**: For example, what land tenure regimes are most consistent with traditional Indigenous cultural practices and likely to facilitate positive ISI? How can Indigenous traditional knowledge and worldviews be respected in national and international regulation of intellectual property?
- **Political environment and forms of sovereignty**: For example, are there forms of settler government (e.g., unity states or federations) and political institutions (e.g., unicameral, bicameral or multicameral legislatures, varieties in court systems and jurisdictions) that are particularly favorable to ISI within its area of influence? What kinds of Indigenous sovereignty understandings (e.g., nation within nation, recovery of original lands, language) are most fruitful for ISI?
- **New relations**: For example, what kinds of policies and reports can facilitate ISI and open new spaces for new intercultural relations between Indigenous peoples and non-Indigenous peoples, fostering inclusion and appropriately transformed social relations? Are there examples of policies that work, or do not work, that need to be recognized and examined?
- **Funding**: What forms of funding would be most useful in supporting ISI initiatives?

Organizational or Indigenous Community

- **Social Innovation and ISI**: What are the main characteristics of ISI, and in what way do these distinguish ISI from non-Indigenous social innovation?
- **Goals and motivation**: What are the triggers/motivations that appear to lead to ISI? What is the role of spiritual practices in ISI? How do Indigenous worldviews shape the vision, goals and implementation of ISI?
- **Maintenance**: What are the cultural mechanisms maintaining ISI? Do the youth and elders play a distinctive role? What Indigenous cultural practices aimed at decolonization have informed ISI?
- **Impact**: What are the outcomes/impact of ISI in the well-being and long-term sustainability of the community? Are there particular forms of impact at various levels of analysis that are distinctive of ISI?
- **Leadership**: Are there characteristic forms of leadership and political arrangements at various levels that influence the creation, implementation and sustainability of ISI?
- **Resources and location**: Do natural resource endowments make a difference in the ISI process? Do the Indigenous in small remote communities tend to engage more in ISI? What are the characteristics of ISI as it occurs in concentrated rural locations as compared with ISI in dispersed urban settings? Are there differences in the motivation and/or goals of ISI between poor and rich country contexts? Are decolonization efforts a significant factor for ISI in poor countries?
- **Decolonization and sustainability**: How can ISI practices based on Indigenous knowledge and cosmology inform large society around decolonization and large sustainability issues?
- **Roles**: What is/can be the role(s) of intermediaries and facilitators (e.g., consultants, NGOs, governments, universities, financial institutions) in facilitating ISI processes?
- **Intercultural relations**: How do government policies, initiatives and reports on Indigenous peoples' circumstances – for example, on reconciliation – change relations, increase understanding of Indigenous worldviews and create space for ISI?
- **Media**: What is the role of the media in fostering ISI? What is the influence of the media in changing social relations between Indigenous and non-Indigenous populations?
- **Participation and motivation**: What motivates individuals to participate in ISI processes? What roles do individuals and families play in ISI? Are there characteristic patterns of transmission of ISI from various levels of organization?

- **Cultural identity**: What is the relation between ISI in arts, healing, cultural identity and economic development? How does ISI in arts contribute to community healing and the Indigenous resurgence process?
- **New technology and youth**: How do youth make use of digital social networks to reinforce Indigenous identity and build new intercultural relationships between Indigenous and non-Indigenous youth?

questions and illuminating ISI, while enhancing and deepening prevailing management theories. Research streams from entrepreneurship, for instance (innovation, community-based entrepreneurship and place-based entrepreneurship), as well as organization theory (motivation, leadership, diversity, identity, culture), strategy (goal settings, impacts), critical management (colonial and postcolonial, alternative organizations) and sustainability (natural environment and business) are all promising resources for exploring ISI, resources that may well be enriched by their new context.

RESEARCHING SOCIAL INNOVATION IN AN INDIGENOUS CONTEXT: SOME CHALLENGES

"Social innovation" is a concept developed in the environment of academic social science, especially management literature, and the application of notions developed in that setting to Indigenous life and circumstances often brings with it distorting assumptions (Peredo and McLean, 2013). There are risks in applying the idea of social innovation to the Indigenous context (Alexiuk, 2013, pp. 63ff). Indigenous peoples themselves often express skepticism about attempts to mingle Indigenous with non-Indigenous thought-forms (for example, Simpson, 2008). Further, it is easy to see how a non-Indigenous observer may have difficulty telling whether an idea or a product or a practice or their application is really something new, or something of long-standing but striking to an outsider. Likewise, some novelty in practice or principle may go unnoticed by a person not immersed in a particular community. The idea of what is to count as a benefit aimed at in innovation is perhaps even more subject to misunderstanding. If, as we suggest below, for instance, some Indigenous innovation is directed toward the recovery of autonomy and sovereignty, even where that may bring some material loss, recognizing this as a genuine benefit may take at least some cultural empathy.

More fundamentally still, some "innovations" occur in a context where Indigenous people engage in collaborative activity with non-Indigenous organizations in extractive or other activities on Indigenous land (Alexiuk, 2013, p. 65). Relationships of power, notions of what constitutes knowledge and what should be considered as cultural appropriation are foremost among the considerations that may load the idea of Indigenous social innovation with cultural, colonizing presuppositions.

One way of addressing the risks of applying a concept from academic social science, recognizing a novelty, and cultural and colonizing assumptions, is to make the research into Indigenous innovation a matter of co-production, involving scholars in respectful dialogue with Indigenous persons and communities. The case study outlined above is developed out of such a process, where inappropriate assumptions may be exposed and

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questioned, and perspectives introduced that may surprise and enlighten researchers. A process of this kind is an essential element in research into Indigenous social innovation.

The concept, and realities, of social innovation are full of promise. Nowhere is that promise more needed that in the world's Indigenous communities. Research that explores the places where distinctively Indigenous social innovation might be found, and helps us understand how to enhance that innovation and amplify its impact not only in Indigenous communities but everywhere, could be transformational.

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