

**Imagining Shared Food Futures:
Honouring Canada's obligations towards Anishinaabek foodways**

by

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EXAMINING COMMITTEE MEMBERSHIP

The following served on the Examining Committee for this thesis. The decision of the Examining Committee is by majority vote.

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AUTHOR'S DECLARATION

This thesis consists of material all of which I authored or co-authored: see Statement of Contributions included in the thesis. 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.

STATEMENT OF CONTRIBUTIONS

This dissertation is the product of my scholarship and I am sole author of its contents with two exceptions involving two manuscripts. The first manuscript appears in Chapter 3. I am the principal author and I co-authored with Dr. Jose Luis Vivero Pol, the author of the framework at the centre of the analysis, and Dr. Joseph LeBlanc, the author of a central case study and colleague in scholar-activism.

The second co-authored manuscript appears in Chapter 4 for which I am the principal author. I co-authored with Dr. Sue Chiblow (Garden River First Nation; Traditional Ecological Knowledge Elders) and Caroline Recollet (Whanapatae First Nation; Traditional Ecological Knowledge Elders). I have relied on TEK Elders for analysis in this manuscript, and credit the co-authors with guiding my thinking to ensure knowledge holders are honoured and that ownership remains with the TEK Elders who shared their knowledge in this manuscript.

I take sole responsibility for the contents including any mischaracterizations or missteps that may arise from committing oral knowledge to writing. I acknowledge the limits of my understanding as a settler-descended scholar engaging cross-culturally with Indigenous knowledges in a general way and with *Anishinaabe kindaasowinmin* in particular.

I am accountable for my interpretations and remain open to revising my writing, views, and conclusions where my interpretations fall short of conveying to the reader what has been conveyed to me by colleagues, Anishinaabemowin speakers, and other knowledge keepers whose views I reflect in these studies.

This is a true copy of the dissertation, and I understand that my dissertation may be made electronically available to the public.

ABSTRACT

Sustainability scholars characterize climate breakdown and biodiversity loss as converging crises tied directly to settler colonial ‘resource management’ regimes. Canada *gestures* toward mitigating these crises by ‘including’ Indigenous knowledges in environmental impact assessments and policy. Canada *prioritizes* commodity market profitability over mitigating these crises by excluding Indigenous knowledges in resource management decisions when acting on that knowledge would disrupt industry-favoured practices. One such practice is glyphosate use in forest ‘management.’ Glyphosate is a broad-spectrum agricultural herbicide repurposed to ‘manage’ regrowth after clearcutting forests. Banned by Quebec in 2001, Ontario embraced this practice. In 2013, Anishinaabek Elders along the north shore of the Great Lakes formed the Traditional Ecological Knowledge Elders to campaign for a moratorium on glyphosate use, which is counter to Anishinaabek environmental governance. Proponents claim herbicide use speeds stand regeneration, yet that regeneration converts food-bearing forests to pine plantations. Ontario legislators are not seeing the forest for the trees.

This dissertation contributes to radical food geographies scholarship by characterizing the cumulative impacts of forestry policies on Indigenous foodways. Foodways include economic, material, linguistic, spiritual, intergenerational, scientific, ceremonial, and social dimensions of a culture’s food governance. This study concludes that efforts to imagine shared food futures in Canada’s settler colonial context require reframing ‘renewable’ resource extraction as Indigenous foodways disruption. Applying case study and participatory action research methods, I offer three manuscripts that together characterize the limitations of settler colonial knowledge in imagining shared food futures that meet settler treaty obligations. These three studies conclude that converting Anishinaabek food-bearing forests to pine plantations undermines the conditions required for Canada to meet treaty obligations to protect Anishinaabek foodways.

In the first manuscript, I adapt Vivero Pol’s multi-governance framework to Canada’s settler colonial context to analyze customary and contemporary Indigenous food initiatives through a food commons lens. This study reveals the limitations of settler colonial frameworks for imagining shared food futures. The second manuscript seeks to overcome these limitations by centring an Anishinaabek research paradigm in collaboration with Traditional Ecological Knowledge Elders of the North Shore of Lake Huron. Our case study examining the cumulative impacts of changes to forestry legislation on Anishinaabek foodways centres TEK Elders’ efforts to stop glyphosate use in forestry. Reflecting on Ontario’s Bill 197, we characterize the limitations of settler colonial knowledge systems for understanding the impacts of forest ‘management’ decisions on settler treaty obligations. To better understand the limitations raised in the first two manuscripts, I apply participatory action research methods in the third manuscript to analyze transcripts from the Canadian Society of Ecological Economics’ bi-annual conferences I co-organized between 2019 and 2021. I ask what Indigenous knowledge holders have to say about the repackaging of Indigenous concepts by sustainability researchers within colonial knowledge systems. Despite gestures towards ‘inclusion’ of Indigenous knowledge, settler colonial frameworks depoliticize Indigenous resistance and resurgence, often reinforcing colonial narratives of land cessation and dispossession. Without addressing the underlying settler colonial assumptions and structures, sustainability scholars and settler governments relying on their research risk replicating the violence inherent in food policy frameworks built on settler supremacy. Collectively, these

manuscripts identify actions settler colonial scholars have the responsibility to take up, beginning with transforming settler colonial narratives.

Keywords: Food systems, settler colonialism, Indigenous food ways, participatory action research, ecological economics

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DEDICATION

This five year program was undertaken in service to the ongoing works of Elders Willie Pine (Naganobi), Raymond Owl, Emma Meawasige, Caroline Recollet, Grace Manitowabi, Joe Jones, Art Pethateghooose, Evelyn Roy, Isabelle Meawasige, Skip Jones, Linda Toulouse, Mary Wemigwans, Jo Boisenneau, Junior Brousseau, Urban Majaki, Dolores and Geoff Naponse, helpers Janet Owl, Dr. Sue Chiblow, and Ken Meawasige, and colleagues Dr. Vandana Shiva, Elder Diane Longboat, and all their colleagues, kin, and coconspirators who made their contributions to this study possible.

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List of abbreviations

Abbreviations are included when they are referenced in quotes of transcriptions in order to provide additional information for the reader. Efforts have been made to spell out acronyms and to limit use.

AFN	Assembly of First Nations
CA	Canada
CANSEE	Canadian Society for Ecological Economics
CBC	Canadian Broadcasting Corporation
CFS	Canadian Food Studies
CFSA	<i>Crown Forest Sustainability Act</i>
COO	Chiefs of Ontario
EAA	<i>Environmental Assessment Act</i>
FSC	Food Secure Canada
HC	Health Canada
ICA	Indigenous Climate Action
IKS	Indigenous Knowledge Systems
IPES-Food	Intergovernmental Panel of Experts on Sustainability of Food
MNR	Ministry of Natural Resources
OCAP	Ownership, Consent, Access, Possession
PAR	Participatory Action Research
PFPP	Peoples' Food Policy Project
PMRA	Pesticide Management Regulatory Agency
RCAP	Royal Commission on Aboriginal People
RHTT	Robinson Huron Treaty Territory
RHW	Robinson Huron Waawiindamaagewin
SCC	Supreme Court of Canada
TEK/ TK	Traditional Ecological Knowledge or Traditional Knowledge
TRC	Truth and Reconciliation Commission
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples

“No one colonizes innocently...no one colonizes with impunity either...a civilization which justifies colonization—& therefore force—is already a sick civilization”

-- Jairo I Fúnez-Flores

Chapter 1: Imagining shared food futures

Imagining shared food futures in Canada’s settler colonial context is a daunting task made more challenging in a rapidly warming world whose forest wildlife populations have declined by more than half since 1970 (World Resources Institute, 2024). Climate breakdown and biodiversity loss are converging crises which scholars tie directly to settler colonial ‘resource management’ regimes (Pictou, 2019; Sultana, 2022; Liboiron, 202), and sustainability science within settler colonial knowledge systems is beginning to catch up to Indigenous analyses on settler colonialism’s role in climate breakdown and biodiversity loss (IPCC, 2022, p. 594; Mercer & Simpson, 2023). As a result, policy advocacy to ‘include’ Indigenous knowledges in Canada’s efforts to mitigate climate breakdown and biodiversity loss is on the rise. Indigenous scholars and community leaders have long advocated for settler colonial environmental assessment processes to centre Indigenous knowledges (RCAP, 1996; McGregor et al. 2019). While these calls for ‘inclusion’ of Indigenous knowledges in environmental assessment processes are welcome, Indigenous peoples are increasingly alarmed by Canada’s contemporary ‘resource management’ policies that directly accelerate climate breakdown and biodiversity loss across Indigenous territories (Coulthard & Taiaiake, 2014; Whyte, 2011).

Malli et al. (2023) offered a scoping review on Indigenous Food Systems in Canada and the USA identifying four causes for Indigenous disconnection from traditional food systems: climate change; capitalism; legal change; and socio-cultural change. The study concluded that Indigenous food system revitalization is predicated on authentic Indigenous engagement and support for Indigenous knowledge frameworks (Malli et al., 2023). All four of these themes are present throughout this study. In particular, this dissertation focuses on ways colonial knowledge systems lack parallels for comprehending Indigenous knowledge frameworks, and how this lack of context impedes settler obligations to honour Treaty agreements.

Concern over biodiversity loss in a changing climate is at the centre of the campaign launched by the Traditional Ecological Knowledge Elders (TEK Elders) from Anishinaabek communities along the north shore of the Great Lakes. The Chiefs of Ontario (COO) issued a 2008 call for a moratorium on glyphosate use (COO, 2008). Glyphosate is a broad-spectrum agricultural herbicide used in forestry to ‘manage’ regrowth following clearcuts. Using glyphosate-based herbicides to “tend” forests eliminates the need to do slower, labour-intensive manual brushing to manage regrowth in cut blocks that favours commercial species.

In 2001, public pressure and resistance from the lucrative maple syrup industry led Quebec to ban glyphosate use in forestry. Meanwhile, Ontario continues to increase use. Glyphosate-based herbicides are at the centre of various court cases for their role in human and other biotic systems’ health. In forests, its use converts mixed, biodiverse recovering forests into pine plantations. This “aerial tending” use is opposed by the TEK Elders as an assault on Anishinaabek governance and law that requires Elders to uphold the health of Anishinaabek forests and waters now and into the future. Four Elders and Anishinaabemowin speakers living along the north shore of Lake Huron first came together in 2013 to unite in their resistance to this mismanagement of Anishinaabek forests—Raymond Owl, Emma Meawasige, Willie (Naganobi) Pine, and Grace Maniwabi (Manitowabi, personal correspondence, 2023).



Figure 1.1 pre-Robinson Huron Treaty map of Upper Canada, 1838, according to the British (Source: RHT1850.ca/historyold)

The Traditional Ecological Knowledge Elders live in communities across Anishinaabek lands known since 1850 as The Robinson Huron Treaty Territory. The Anishinaabek Nation is in Treaty with the Crown to share Anishinaabek lands in a mutually beneficial manner. Access to traditional lands to hunt, fish, cultivate, and gather foods and medicines following Anishinaabek foodways was one of the main protections secured by the Anishinaabek signatories to the 1850 Robinson Huron Treaty that even the Ontario and Canadian governments have, to a minimal degree, accepted (Restoule, 2018; Sayers, 2021, McIvor, 2021). Restoule v Canada (2018) includes a citation of one of Robinson’s own letters written shortly after the treaty had been negotiated indicating the Anishinaabek understood they “would have the same privileges as ever of hunting and fishing over the whole territory, because the land “will in all probability never be settled except in a few localities by mining companies,” and that they would receive reserves of reasonable tracts for their own use” (Restoule, 2018, p. 54 par. 227). In contemporary policy, Ontario recognizes rights as described under the Constitution (1982) and the Section 35 interpretation that is common across Canadian jurisprudence. An April 2024 update to the Ontario.ca website page on “Indigenous communities and hunting” states that “Indigenous communities have constitutionally protected rights to hunt in Ontario. The ministry recognizes and respects these rights, which may include hunting for food, social, or ceremonial purposes. These rights are fundamentally different than the privileges given to licensed hunters.” And while this limiting interpretation of “rights” does not reflect Anishinaabek understanding of the Treaty and its impact on Anishinaabek governance, it reflects the minimal acceptance of Ontario’s responsibility to ensure those “rights” are practicable.

This study builds on published research and introduces oral teachings to characterize the impacts of Ontario’s approach to resource management on forest composition (LeBlanc, 2014; McGregor, 2000;

O’Flarhety et al., 2020; Miller, 2015). This study documents ways cumulative impacts have altered the ability of the Anishinaabek Nation to sustainably practice Anishinaabek foodways. The term “foodways” is less common than the terms food systems and food sovereignty more widely found in the literature and discussions informing this study.

Food systems has been popularized over the past two decades in place of the term “food chain” used previously. The World Food Programme defines food systems as “the networks needed to produce and transform food, and ensure it reaches consumers.” While an improvement over the term “food chain” for conceiving the nested relationships across the entirety of a food system, the framing is transactional.

Food sovereignty is a useful concept that arises out of the globalization resistance movements, popularized through Via Campesina’s 1996 declaration in which food sovereignty is described as “the right of people to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agricultural systems” (Via Campesina, 1996). In 2008, the Peoples’ Food Project, through Food Secure Canada, adopted the concept of food sovereignty and its six pillars: provides food for people, builds knowledge and skills; works with nature; values food providers; localizes food systems; and puts control locally. Food Secure Canada added a seventh articulated by the Indigenous Food Circle: food is sacred (Kneen, 2012; Desmarais et al., 2014). Desmarais et al. (2014, p.1153) suggested, “What is most evident in examining the demands of a wide range of actors using food sovereignty language in Canada is a shared aim to reclaim a public voice in shaping the food system and a growing convergence around ideals of social justice, environmental sustainability and diversity.” Food sovereignty operates conceptually within a liberal “rights” based framework.

The concept of foodways is slowly gaining traction. Foodways include various cultural, economic, material, linguistic, spiritual, intergenerational, intellectual, ceremonial, and social dimensions of food governance (Powar, 2008). TEK Elders resonated with the concept of foodways to more accurately represent what is at the centre of their concerns. This term also serves to remove jargon in the cross-cultural research and helps to “unsettle” scholarship and recentre Anishinaabek perspectives. For the Anishinaabek Nation, forests are sites of social, ancestral, and more-than-human relationships that sustain Life. As Elder Joe Jones often says, the forest is his grocery store, and he has an obligation to ensure the diversity of life in the forest for future generations of human and non-human relatives dependent on the forest for Life. Canada’s settler colonial governments treat forests as sites of timber extraction that sustain industry. Canadian legislators fail to see the forest for the trees. This concept is discussed in greater detail in the Chapter 5 case study examining the cumulative impacts of Ontario’s forestry legislation on Anishinaabek foodways.

Elder James Dumont offers this description of what it is to be Anishinaabe:

The Anishinaabe person is inseparable from the land; identity, sense of place and history is intimately related to the land. We originated here. The North American Indigenous person did not migrate from anywhere else, nor originate from any other peoples. The Creator took four parts of Earth and molded the form of the first human person. Since then, all of humankind has been related to the Earth in a very intimate way—the Earth, in fact, is our Mother. The human person is a relative to all other persons of the Earth, and, along with all creatures call the Earth, Mother. (Minnesota Chippewa Tribe, 2017).

Seeing themselves as inseparable from the land, the TEK Elders launched a campaign to halt aerial spraying of glyphosate-based herbicides in forestry, having through direct observation witnessed the impacts of these herbicides on the forests upon which Anishinaabek and all relations rely for foods, medicines, and water. Impacts of its use include a loss of medicines and berries in harvest lands, a change in the moose and deer population, and landscape-wide changes to forest composition. TEK Elders have accepted their responsibility to ensure future generations have access to biodiverse, healthy, forested watersheds. Proponents of aerial spraying claim herbicide use speeds stand regeneration (Dampier et al., 2006; Deighton et al., 2021). Without competition for finite nutrients and water from neighbouring plants seeking to fill the void left by clearcutting, commercial pine species regenerate at a faster pace in the early years. Practitioners suggest this headstart makes for shorter commercial species harvest cycles while converting mixed forests to pine plantations. These regenerated plantations lack the biodiversity at the heart of Anishinaabek foodways (Patterson et al., 2023; Werner et al., 2022).

Ontario's 'resource management' policymakers are not seeing the forest for the trees. Food systems scholars and practitioners within settler colonial institutions may not be considering the role forestry policy plays when thinking about sustaining food systems policy from an Anishinaabek perspective or standpoint. This study contributes to food studies scholars' efforts to expand concepts of Canada's food systems beyond commodity agriculture to include broad territories and waters that have, as Anishinaabek describe, "since time immemorial" sustained the First Nations, Métis, and Inuit exercising their inherent title and rights in traditional lands within the contexts of their own sovereign governances and laws.

Working as a volunteer with TEK Elders as a research assistant, I was asked to do this study to help characterize the cumulative impacts of Ontario's approach to resource management on Anishinaabek foodways.

1.1 Dissertation context

Over the first two decades of the 21st century, Indigenous scholarship centring resurgent, culturally-specific Indigenous research paradigms has invited deeper engagement with Indigenous knowledges to both understand the scope and scale of the climate breakdown and biodiversity loss challenges we face collectively and to offer alternative standpoints for perceiving and responding to these collective challenges (Deranger, 2022; Mahoney & Endfield, 2018). In 2019, Canada responded to these calls as well as to obligations with international agreements from the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) to the Biodiversity Convention with the "Policy Framework for Indigenous Knowledge (IK)" (McGregor et al., 2019). Yet engaging Indigenous knowledges within settler colonial policy frameworks is complicated at the outset by the compartmentalization of policy by ministry.

Forest and food policies are made in isolation of each other, obscuring forest policy impacts to food systems sustainability. For example, in 2024 in Ontario, the Ministry of Northern Development, Mines, Natural Resources and Forestry regulates landscape transitions, leasing large tracts of land for extraction-based projects that forever alter the landscape. Such transitions include wholesale transitions like mining pits or hydro-electric dams to fracking sites. They also include compositional transitions like conversion of food-bearing, biodiverse forests to monocultural, industrial plantations. The Minister of Indigenous Affairs deals with issues of land dispossession. The Minister of Environment, Conservation, and Parks addresses at risk species 'management.' These three ministries do not share underlying priorities and narratives about the purpose of policy, making the consistent uptake of Indigenous

knowledges challenging. And applying Indigenous knowledges to Canada's food policy frameworks specifically raises complications when we consider that policy demands for land and water required to sustain food systems for Canadian citizens may reinforce colonial relationships and further land dispossession (Rotz et al., 2023; Desmarais & Wittman, 2014).

Colonial relationships are further reinforced through Canadian jurisprudence and policy legacies—from the *Indian Act* (1874) to the exclusion of First Nations, Metis, and Inuit from the 1982 “repatriation” of Canada's Constitution from the British Crown to inaction on the Royal Commission on Aboriginal Peoples (1996) to the Marshall decision (1999), elevating settler colonial narratives as the legitimate, transactional, contractual interpretation of treaty relationships (Mills, 2019). Policies from various economic sector-specific ministries may all be working at cross purposes to one another. Ministries function in what mentor Cathleen Kneen described to me as “silos.” When policy interests between siloed ministries inevitably conflict, trade interests generally trump socio-ecological interests. A classic example of policy goals working at cross purposes is the banning of glyphosate for cosmetic use in Ontario, while its commercial use increases in municipal invasive species management programs and as seen in this dissertation, in forestry.

To overcome these policy silos, Canadian scholars have been championing ‘joined-up food policy’ as an integrated approach (McRae, 2011; Levkoe & Sheedy, 2019). Long-standing critiques of Canada's increasingly industrialized food system recognize that decision-making power over ‘resource management’ is still within colonial structures (Latulippe & Klenk, 2020; McGregor, 2013). Within these settler colonial structures, commodity valuation drives the economic system. Enhancing Indigenous food sovereignty requires expanding western or settler-colonial conceptualizations of land, decolonizing spaces in the food movement, and supporting self-determination. Food movement advocacy has focused on ministry-to-ministry “join up” efforts to achieve a sustaining, just food policy for Canada. This study seeks to “join” ministry policies “up” with Canada's treaty obligations to achieve a sustaining, just food policy respectful of Indigenous foodways.

The level of political engagement in Canada on land issues and Indigenous rights within food sustainability scholarship, while increasing in the last few years, remains underdeveloped. A growing body of Indigenous food sovereignty scholarship calls for food movements within Canada to move past ‘inclusion’ to confront settler colonial narratives that uphold land dispossession, a central factor disrupting Indigenous foodways (Campeau & Porter, 2022; Settee & Shukla, 2020; Morrison, 2020; Brant, 2021). In Chapter 2, I expand on the terms ‘Indigenous food sovereignty’ and ‘Indigenous foodways’ as they are used in this dissertation. Indigenous food scholars are unequivocal in their conclusions that unless land dispossession is addressed, Indigenous foodways are threatened (Settee & Shukla, 2020). Land claims processes within Canada's court system prioritize large-scale resource development over sovereign Indigenous nations' rights as recognized by United Nations Declaration on the Rights of Indigenous People (UNDRIP), including rights to their traditional territories (United Nations Declaration on the Rights of Indigenous Peoples, 2020). Indigenous scholars argue that rather than remedy ongoing injustices, modern land claims agreements and treaties re-embed colonialism as the regulating structure for Indigenous-State relations (McIvor, 2021; Venne, 2017). King and Pasternak summarized that “Land theft is currently driven by an unsustainable, undemocratic, and fatal rush toward mass extinction through extraction, development, and capitalist imperatives. It is further enabled by a racist erasure of Indigenous law and jurisdiction” (King & Pasternak, 2019, p. 8).

The following insight on indigenous food sovereignty is from Dawn Morrison whose decades of work on indigenous food sovereignty has been foundational to the scholarship and to how movements in

Canada approach food sovereignty:

“As one of the most basic yet profound ways in which we express Indigeneity, food sovereignty is being more fully realized as a deeply meaningful strategy for remembering our original instructions encoded within our kin-centric relationships to the land, water, people, plants, and animals that provide us with our food. Sharon Jinkerson Brass of the Pacific Association of First Nations Women teaches that “we need to reflect upon our relationships with our Mother (Earth) and understand the way it relates to the health of the land, and practice rituals and ceremonies that help us remember the female teachings of caring and nurturing our relationships. We are out of balance” (personal communication, January 28, 2015). World-renowned self-realization guru Jaggi Vasudev also affirms the intimate relationship that humans share with the earth when he states, “this body is just a piece of earth. You are just a small outcrop of this earth. You have become a small outcrop that dances around. After a while you will become a small mound” (Sadhguru, 2018). Expressions of Indigenous food sovereignty manifest outward from the tiniest scale of Indigenous micro-organisms that give life to the rich soils that nourish our food and bring balance to the microflora in our guts. These extend further to the higher intelligence of the contemplative traditions and rituals that enact our world at the individual, family, community, and tribal scales. Ancient food-related ecosocial and spiritual protocols and ceremonial ways of knowing have stood the test of time and continue to be observed by Indigenous Peoples all around the world (LaDuke, 2013).” (Morrison, 202, p.21).

Indigenous scholarship has begun to influence how Canada’s food movements think about settler-organized organization and academic engagement with Indigenous communities and Indigenous foodways. With *Indian Act* (1874) policies prohibiting Indigenous peoples from attending university lifted in the 1950s, a wave of first- and second-generation Indigenous university scholars have been publishing environmental research. This scholarship applies Indigenous methods and perspectives to examine Canadian resource extraction policies’ impacts on Indigenous peoples, lands, and waters. Advocates for sustaining food systems had attention drawn to unexamined reproduction of colonial narratives at a National Food Security Assembly held in Waterloo, Ontario, in 2005, and the examination continues today (Levkoe & Sheedy, 2017; Rotz 2017). While Indigenous food program leaders had been included in the Assembly, Assembly organizers were made aware by Indigenous participants that Indigenous food “insecurity” continued to be framed in terms of access to industrial foods and charity rather than examining the role land theft and cultural dispossession upon which Canadian agriculture has depended plays in creating Indigenous food insecurity.

Desmarais and Wittman’s (2014) important study marked a shift in settler colonial food systems research. This paper repositions food democracy research in Canada within the context of tensions between Canadian agriculture interests, First Nations’ interests, and food systems sustainability advocates interests—research upon which other settler-colonial scholars have expanded. Previous studies highlighted a gap in the literature connecting Canada’s food systems researchers with the research on Indigenous land dispossession and land degradation (Spraidka et al., 2022; Kepkiewicz, 2020; LeBlanc, 2014; Campeau & Porter, 2023; Malli et al., 2023). This dissertation contributes to that effort, adding to food studies scholarship by taking account of colonialism and its narratives when imagining shared food futures in Canada’s settler colonial context.

1.2 Dissertation approach and design

Approach

This study approaches the topic of imagining shared food futures in the context of settler colonialism. Food democracy theory currently exists as a western science-based analysis and bears deeper

examination in the context of settler colonialism through this case study considering Ontario's Robinson Huron Treaty obligations as understood by Traditional Ecological Knowledge Elders. My research fills a knowledge gap by characterizing impacts of commodity forestry practices on Anishnaabe food sovereignty, supporting governments and regulators in evaluating food systems impacts of clearcutting reliant on aerial herbicide use as a standard practice in forest management. An Indigenist approach addresses the erasure of Anishnaabe research paradigms from the evidence base, and re-orientations conversations about forests in the Robinson Huron Treaty Territory within the values system of the Anishinaabek Nation rather than the values system of the Crown (McGregor, 2018; Wilson, 2007; Patterson et al., 2023).

Design

This dissertation was designed to examine the impacts of commodification on Canada's treaty obligations, focusing on Traditional Ecological Knowledge Elders' efforts to protect Anishinaabek food traditions, lifestyles, and culture in the Robinson Huron Treaty Territory from commodity forestry practices. I employed a five step process: i) a literature review examining the intersection of food democracy, Indigenous environmental governance, and sustainable forest management (comprehensive exams; each chapter); ii) modification of a food democracy tri-governance framework to Canada's settler colonial context (Chapter 3); iii) examination of the relationship between sustainability scholarship and Indigenous knowledge systems (Chapters 4 and 5); iv) exploration of the limitations of settler colonial knowledge systems named throughout the dissertation process, building on results of the case studies (Chapter 5); and v) reflection on limitations of colonial knowledge systems and bring forth requests from Indigenous and rooted scholars, Youth, Elders, knowledge holders, and community leaders on addressing those limitations (Chapters 5 and 6). While this 5 step description is linear for understanding my general process, the process itself was cyclical, iterative, and engaging mind, body, spirit in my reflections with the teachings, data, and philosophies I encountered through this inquiry. Ultimately the questions asked in the second two manuscripts and the question arise from the direct request to investigate these questions from Indigenous colleagues at TEK Elders and Indigenous Climate Action.

The first step of this study involved an integrative literature review examining research at the intersection of food democracy, Indigenous environmental governance, and sustainable forest management. I built on the program of study set out in my comprehensive exams. Through an iterative process spanning a timeline from 2019 to 2023, I read a combination of peer-reviewed journals and grey literature, including governmental and industry reports. Databases used to conduct this review included Google Scholar, Science Direct, and Scopus. I prioritized conferences, webinars, and public lectures where authors whose works I've read delivered talks designed for Indigenous audiences.

Chapter 1 offers an overview of the dissertation, starting with the context for the study and laying out the problem this study seeks to address. The study questions, goals, and design are briefly explained, and a short outline of each chapter is included.

Chapter 2 outlines methods and conceptual foundations. I use case studies and participatory action research methods to analyze limitations of settler colonial frameworks for imagining shared food futures in which treaty obligations are upheld. I give an overview of radical food geographies praxis and situate my work as a settler-descended scholar-activist. Key terms are defined to make this transdisciplinary study more accessible.

The second step, in Chapter 3, involved modifications to Jose Luis Vivero Pol's multi-governance framework for Food Commons in Canada's settler colonial context, informed by insights

generated out of the early literature review between 2019 and 2021. These modifications centre indigenist theorists' rejection of Crown assertion of title. This step resulted in the manuscript in Chapter 3 co-authored with Vivero Pol and Anishinaabe scholar Dr. Joseph LeBlanc. Analyzing Indigenous food initiatives through a food commons lens reveals limitations of settler colonial frameworks.

The third step, in Chapter 4, involved fieldwork with Traditional Ecological Knowledge Elders to characterize cumulative impacts to rights, centering Anishinaabe *kendaasowinmin*. I attended various meetings, gatherings, presentations, conferences, and cultural events as a guest and volunteer with the Traditional Ecological Elders between 2017 and 2024. Upon receiving ethical clearance, transcripts from these gatherings were analysed and applied to the case study in Chapter 4 using an Anishinaabek research paradigm (Chiblow, 2024). The second manuscript in Chapter 4, which is being submitted to *Settler Colonial Studies*, seeks to overcome these limitations by centering an Anishinaabek research paradigm. This study was conducted in collaboration with TEK Elders. We analyse the impacts that changes to forestry legislation in 2020 have on Anishinaabek foodways. We ask what this study reveals about limitations of settler colonial knowledge systems for understanding the impacts of forest 'management' decisions on Anishinaabek governance and law.

The fourth step, in Chapter 5, involved analyzing the relationship between sustainability scholarship and Indigenous knowledge systems through a case study exploring the appropriations of Indigenous knowledge concepts within sustainability research. Using participatory action research methods, I reflect on my experience as an organizer, participant, and presenter at Canadian Society of Ecological Economics (CANSEE) conferences between 2019 and 2023. I ask what Indigenous Knowledge keepers and language speakers have to say about sustainability researchers within colonial knowledge systems repackaging Indigenous concepts. Indigenous scholars expressed frustration with colonial cooptation of Indigenous concepts, resulting in depoliticization of Indigenous resurgence. Without addressing underlying settler colonial assumptions and structures, sustainability scholars and the policymakers relying on their research risk replicating the violence inherent in food policy frameworks built on settler supremacy.

The final step, in Chapter 6, was to reflect on limitations of colonial knowledge systems across the integrative literature review and case studies undertaken, and bring forth requests from Indigenous and rooted scholars, Youth, Elders, knowledge holders, and community leaders on addressing those limitations. Collectively, these manuscripts identify limitations of settler colonial knowledge frameworks when imagining shared food futures. Unexamined colonial narratives obscure 500 years of Indigenous existence, resistance, and resurgence in which contemporary discussions and expressions of Indigenous foodways live. Indigenous scholars have offered their guidance while calling on sustainability scholars to step up to transform settler colonial narratives and end epistemic violence. Chapter 6 summarizes key learnings for letting go of settler colonial narratives that simply do not hold up under scrutiny.

1.3 Dissertation questions

This dissertation is an inquiry about cumulative impacts of settler colonial approaches to resource management on Indigenous foodways. Specifically, I question the impact Ontario's 'resource management' regime has on the Crown's 1850 treaty obligations to protect Anishinaabek foodways (which include food governance, practices, knowledges, traditions, and cultures).

In Chapter 3, I inquire about opportunities for and the limitations of the European concepts of Food Commons and multi-governance frameworks for guiding settler policy in the context of Indigenous sovereignty.

In Chapter 4, I partner with Traditional Ecological Knowledge Elders to characterize the cumulative impacts of Ontario's resource management regime on Anishinaabek foodways as guaranteed in the 1850 Robinson Huron Treaty. I ask what changes that were made in 2020 to Crown forestry policies reveal about the intersection of settler colonial 'resource management' regimes and Anishinaabek governance and laws and how these changes impact Ontario's capacity to meet Treaty obligations as understood by the Anishinaabek Nation.

In Chapter 5, I draw on the results of the previous two manuscripts, which both indicate limitations within settler perspectives as barriers to addressing impacts of settler policies on Anishinaabek foodways, I ask what limitations must be overcome to imagine shared food futures in a settler colonial context. I begin by asking what Indigenous Knowledge keepers and language speakers have to say about researchers within colonial knowledge systems repackaging Indigenous environmental concepts. Next, I ask how these reflections on sustainability studies' appropriations of Indigenous knowledges could transform settler colonial knowledge systems-based theory and practice away from such epistemic violence.

1.4 Dissertation goals

My dissertation goals articulate what my scholarly peers call significant and original contributions to knowledge that PhD candidates are required to make. In keeping with ethics guidelines, this study seeks to avoid replicating extractive research practices. Scholars have ethical obligations to ensure our research with Indigenous communities is both wanted by and in service to those Indigenous communities. To that end, I have outlined significant and original contributions to community in reciprocity with TEK Elders and other Indigenous leaders, knowledge holders, and other community relations. My dissertation goals are:

1: To contribute to radical food geographies scholarship by characterizing cumulative impacts of forestry policies on Indigenous foodways.

2: To make significant and original contributions to the fields of sustainability studies generally and food studies specifically by naming limitations of settler colonial knowledge systems that, unchecked, reproduce extractive, appropriative, transactional approaches to engaging with Indigenous knowledge systems.

3: To make significant and original contributions to community, which include providing briefings on glyphosate use, preparing audio recordings for podcasts, developing outreach materials including a website reflecting glyphosate campaign priorities, and supporting the TEK Elders in administrative and organizing tasks as requested.

The following table outlines the overarching dissertation and is organized by chapter. Each chapter's research questions, research contributions, and methods are summarized. Research contributions reflect the three dissertation research goals:

Table 1. Research questions, contributions, and methods		
OVERARCHING RESEARCH QUESTION:		
What impact does Canada’s commodification of forests in the Robinson Huron Treaty Territory have on treaty obligations to protect Anishinaabek foodways?		
Chapter 3: reframing food as a commons in Canada		
Research questions	Research contributions	Methods
What does analyzing customary and contemporary Indigenous food initiatives through a food commons lens reveal about limitations of applying settler colonial frameworks for imagining shared food futures?	I make an original contribution to knowledge by adapting the tri-governance model found in the food commons literature to the Robinson Huron Treaty context (Research Goal 2); Share results with Indigenous Climate Action and TEK Elders Group (Research Goal 3).	Integrative literature review; Case study
Chapter 4: cumulative impacts of settler colonial policy on Anishinabek foodways		
Specific research question(s)	Research contribution	Methods
What are the cumulative impacts of Ontario’s ‘forest management’ on Anishinaabek foodways in context of the 1850 Robinson Huron Treaty?	Characterize cumulative impacts on Anishinaabek foodways from Anishinaabek Elders’ perspectives (Research Goal 1). Produce a series of podcasts for broadcasting in the community outlining the concerns regarding glyphosate-based herbicide use in the RHT Territory to update the communities’ understandings of the TEK Elders’ Group concerns about the practice and the larger issues associated with clear cutting (Research Goal 3).	Integrative literature review; TEK Elders archive analysis;
How do 2020 changes to Crown forestry policies impact Ontario’s capacity to meet Treaty obligations as understood by the Anishinaabek Nation?	This research offers an original contribution to knowledge by characterizing impacts of the Ontario government’s 2020 changes to the <i>Crown Forests Sustainability Act</i> (1994) for meeting food sovereignty commitments outlined in the Robinson Huron Treaty (Research Goals 1 and 2).	Case Study
Chapter 5: appropriations of Indigenous knowledges in sustainability research		
Specific research question(s)	Research contribution	Methods

<p>What do Indigenous Knowledge keepers and language speakers have to say about researchers within colonial knowledge systems repackaging Indigenous environmental concepts?</p>	<p>Recognizing that sustainability studies scholars increasingly look to Indigenous economies for sustaining frameworks, this study examines appropriations of Indigenous knowledge within colonial knowledge systems (Research Goal 2).</p>	<p>Integrative literature review; TEK Elders archive analysis; Case Study; participatory action research</p>
<p>How can this guidance be reflected in sustainability studies theory and practice?</p>	<p>Produce a background paper for Indigenous Climate Action on Indigenous Economics: Reclaiming the Sacred (un)Conference; Produce a background paper for a podcast on “Anishnaabe Gikendaasowin: reclaiming Elder-led environmental assessment” (Research Goal 3).</p>	<p>Case Study; participatory action research</p>

Chapter 2: Methods and conceptual foundations

After briefly establishing the conceptual foundations supporting my approach, Chapter 2 walks the reader through the methods I have chosen to implement in the study design. Accordingly, the chapter covers conceptual and theoretical foundations; methods of data collection and analysis; research positionality, potential biases, and validity considerations; and study limitations and future directions. First, I wish to give further context for the study itself and my relationship with the Traditional Ecological Knowledge Elders who inspired the project.

Collaboration with Traditional Ecological Knowledge Elders

In 2016, I hosted mentor and colleague Dr. Vandana Shiva in Toronto, ON, for a series of talks. I've been working as a volunteer with the Navdanya Institute at Dr. Shiva's invitation since 2012 when I attended the first ever A to Z of Agroecology Intensive offered at Navdanaya's research farm near Dehradun, Uttarkhand, India, at which I served as an organic sector expert and mentor. Haudenosaunee Elder Diane Kahontakwas Longboat heard of the 2016 talks and reached out to me to invite Dr. Shiva – a long time colleague of Longboat -- to the Chiefs of Ontario office for a meeting between Dr. Shiva and the Traditional Ecological Knowledge Elders (TEK Elders) cofounders Raymond Owl (Sagamok First Nation) and Willie (Naganobi) Pine (Mississauga First Nation), helper Dr. Sue Chiblow (Garden River First Nation), and representatives from the Chiefs of Ontario office. Determined to end glyphosate use in their forests, The TEK Elders sought Dr. Shiva's counsel for building a global campaign to halt the use of glyphosate-based herbicides in Anishinaabek forested watersheds. Dr. Shiva invited me to attend the meeting as her assistant. I was introduced to the group and exchanged contact information. When the meeting wrapped, Dr. Shiva instructed me to make myself available and when the Elders had a specific request or need, to step up to fill that request. She cautioned it was crucial that I do not provide the kind of leadership I have exhibited in my organizing and community-based research work within the Canadian food movement. Rather, she invited me to stay in constant self-reflection and distinguish doing what is asked that is Elders-led, and directing what I believe needs doing, ensuring "actions are led by the TEK Elders". My role, I understood, was to facilitate the TEK Elders' strategies, research needs, network building, and actions.

In 2017, Willie (Naganobi) Pine invited me to help him develop some maps based on announced spray areas to challenge the Ministry's claims on how the herbicide is being used versus how it is being used in practice. This became the first of many visits with Willie at his home above his storied but long shuttered gas bar along Highway 17, along the North Shore of Lake Huron. I was privileged to share work, meals, music, stories, and hospice time with Willie between 2017 and 2022. This working relationship also extended to the TEK Elders as a group, who on Willie's suggestion began including me in their meetings. When I was invited by Rachel Parent of Gen-Earth to offer a keynote address at the 2018 Earth Day celebration at Nathan Phillips Square focused on the work I had been doing on glyphosate in food and forestry, I invited elders Willie and Ray to come and speak in my slot. Following their very powerful call to action, and in light of the discussions the TEK Elders had included me in, I proposed a collaborative research project as a component of our working relationship. It was clear a priority for the TEK Elders was to document their knowledge from an Anishinaabek world view and legal context in an accessible manner and in preparation for potential legal action. My relationship with members of the TEK Elders has blossomed over many years now of collaboration and care. My goal in this research is not to be neutral to the TEK Elders' objectives and goals, or the purpose of their organization. Based on these conversations, I developed a PhD proposal to support the portion of the

work I am engaged with the TEK Elders that is scholarly research. This work is proudly a work of scholar activism. Since 2017, I have raised over \$400,000 to support the TEK Elders' work. Recently I connected the TEK Elders with Safe Food Matters to collaborate on a global campaign regarding glyphosate registration. I have presented at Anishinaabek-led governance meetings alongside the TEK Elders as a topic expert and researcher working with the TEK Elders. This collaboration continues beyond the manuscripts presented in this dissertation, and I remain grateful for the opportunity to facilitate answering questions the TEK Elders have about glyphosate-based forestry “management” and honouring treaties.

Committee member and mentor Dr. Dan McCarthy has cautioned throughout my time as a Masters and then PhD Candidate to speak to ways my scholarship mitigates unexplored and un-named values and biases that we all carry and the deep philosophical differences between worldviews that are almost impossible to navigate. As I have learned through my lifetime of Nation-to-Nation engagement and organizing, it is not for one culture to interpret another. Framing this research to examine limitations of settler colonial narratives is in itself a query in such mitigation. As a settler-descended scholar, my analyses focus on settler institutions. Forgiving myself in advance for most certainly getting it wrong, for failing to mitigate un-named values, and for imposing ill-informed biases I have not yet recognized I am trapped within, aware that I had engaged various tools described in Chapter 2 to the best of my capacity in the moment, and committed to continuing these self-reflections throughout my work.

To mitigate these unavoidable traps, I have offered myself the boon of time in this process. A full six years immersed in these questions, revisiting the conversations each and every time as if new, listening for my reactions and distinguishing them from responses, and deepening my relationships with the TEK Elders members, helpers and colleagues to question my conclusions and listen for correction and alternate framings. I had my settler suppositions called in on several occasions, lovingly, with humour, and occasionally with the level of exasperation my cringy perspective warranted. As Chapter 4 manuscript co-author and TEK Elder spokesperson Caroline Recollet told me to write down, reading something isn't knowing something – with time and repetition, when we have sat with and had reflected back to us, witnessed how that information impacts people in real life —we come to know a thing in our being and when we know, we know. Giving this dissertation process an extra year gave space for this kind of knowing to take place. I've engaged in ceremony on my own, with TEK Elders and supporters, and within the context of Robinson Huron Waawiindamaagewin treaty events to support my process, however I am disinclined to write extensively about those experiences beyond acknowledging the effect on maintaining focus and centering TEK Elders' priorities and perspectives throughout this process.

2.1 Conceptual and theoretical foundations

An examination of three bodies of literature—food democracy, sustainable forest management, and Indigenous environmental governance—informed my views and perspectives about question formation for this PhD research program. I centre Indigenous scholarship and epistemologies focusing on the Indigenous resurgence literature in each of the themed areas. My analysis, coding, data synthesis, and orienting theories of change derive from political ecology and eco-feminist thought (Escobar, 1999; Clapp, 2017; Shiva, 2010) and radical food geography praxis (Hemmelman et al., 2020; Singer 2014). My approach to this dissertation is transdisciplinary.

2.1.1 Transdisciplinary framework: epistemological pluralism

As a Geography and Environment Management PhD Candidate, my work as a geographer is transdisciplinary in nature providing a foundation upon which various disciplines within the academy

(Geography, Socioecological Systems/ Systems Complexity, Political Ecology, and Ecological Economics) inform the analyses. In addition to reaching across disciplinary lines, this research project embraces epistemological pluralism. Epistemological pluralism offers a transparent and intentional negotiation of the researcher's values, in contrast with traditional approaches to research in which assumptions about collaborators' values go unexplored and un-named (Miller et al. 2008). As such, this framework complements my research goals by including multiple ways of knowing within the research design. The result is distinct and varied insights informing the research, offering a richer expression of complexity that may shift in composition depending on the range of epistemologies considered as contributing to knowledge production (Miller et al., 2008; Kay et al., 1999; Kay 2008). Using Khagham et al.'s (2010) taxonomy, the theory type I will be working with is understanding, the research strategy is comparative, and the philosophy of knowledge I am employing is interpretivist, as seen in Khagham's Matrix in Figure 2.1, below.

		Theory type	Research strategy	Philosophy of knowledge		
				Positivist	Interpretivist	Constructivist
Explanatory ↑ ↓ Understanding	Predictive ↑ ↓	Experimental				
		Statistical				
		Comparative				
		Ethnographic				
		Triangulation				

Figure 1 Matrix of generalized relationships between theories, philosophies and research strategies. While there is no necessary correspondence between any particular elements, increasing affinities between philosophies and research strategies are indicated by progressively darker shading. The theory types are overlaid on top of the strategies based on their affiliations. Thus, a positivist is likely to value predictive theory and use an experimental research strategy; an interpretivist is likely to value understanding theory and use an ethnographic strategy; and a constructivist is likely to favour explanatory theory and use a comparative research strategy. Scholars may be able to use this matrix to describe their own conceptual approaches to research, and facilitate collaboration with others by denoting differences and similarities with other scholars.

Figure 2.1: Khagham's Matrix of generalized relationships between theories, philosophies, and research strategies. Source: Figure 2 in Khagham et al. (2010)

This approach distinguishes the values-structures and worldviews embedded in settler colonial knowledge systems and how those structures and views impact how we think about sustainability. Decolonizing research methods means questioning the need to compare to comprehend (LeBlanc, 2014).

As such, my commitment to decolonize my methods results in a conflict of methods. I seek to centre Anishinaabek understandings within this epistemological pluralism to:

- a. fully articulate the tensions arising from commodifying forests for timber values for the Anishinaabek Nation whose very existence is forest-dependent
- b. develop a framework that can engender collaboration in a Nation-to-Nation context, without dislocating Anishinaabek epistemology

Crucial to the success of this effort is the recognition of the limits of my understanding and ability to fully engage Anishinaabemowin and understand the concepts in the manner they are spoken by Anishinaabek raised in their own languages and place-contexts. This work required a lot of trust, and a lot of transparency.

2.1.2 Radical food geographies praxis

Radical geographies as practiced in North America find roots in the mid-twentieth-century civil rights struggles and response to bold U.S. imperialism in Vietnam. Scholars began applying Marxist critiques to geography, a field these scholars felt was complicit in imperial power. The first decades of radical geography scholarship in the North American context remained deeply Eurocentric and patriarchal. The cornerstone journal for these explorations, *Antipode*, began publishing in 1969. The journal's aim, as published online, is "to challenge dominant and orthodox views of the world through debate, scholarship and politically committed research, creating new spaces and envisioning new futures" (Antipode, 1969; 2024). In practice, Hammelman et al. suggested early radical geographers needed "greater recognition of, and accountability to, the discipline's 'colonial baggage' and the need to be attentive to Indigenous perspectives using approaches that meaningfully promote reconciliation and resurgence" (Hammelman et al., 2020, p. 212).

During the same era, food systems scholars from a range of disciplines outside geography pursued similar analyses under a political economy and then later a political ecology framework (Altieri, 1999; Frison, 2016; Shiva, 2010; Lappe, 1968; Clapp, 2016). Hammerman et al. (2020) offered a succinct overview of the development of both radical geographies and food systems scholarship, and where the two intersect as praxis. They also identified similar research modalities within other disciplines, including political economy and political ecology scholarship. My research benefits from both Reynolds et al. (2020) and Hammelman et al. (2020)'s articulation of a 'radical food geography praxis,' a framework that has long guided my own approach to scholarship-activism before having this language for it. Recall that 'praxis' is the process by which theory is embodied, applied, or realized in practice.

Hammelman et al. (2020) proposed a "radical food geography praxis rooted in the intersections of active resistance to structures that reproduce power inequity and oppression in food systems in specific places and across spaces and an ongoing process of critical and theoretical reflection about these structures and geographies" (Hammelman et al., 2020, p. 211). The proposed praxis consists of three interconnected elements. The first is theoretical engagements with structures of oppression and power in and out of academia. This first element forms the foundation of the integrative literature review. The second element involves action through collaboration amongst civil society, academia, and social movements. This study is a collaboration between myself as a researcher and the Traditional Ecological Knowledge Elders. The TEK Elders are a grassroots social movement within the Anishinaabek Nation located along the north shore of Lake Huron, which defines the third element Hammelman et al. proposed: analyses through a broadly defined geographic lens. A radical food geography praxis engages the interconnected, the relational, the cultural realities of our diverse and overlapping geographies through

theory and practice. The praxis—or coming together of theory and practice—that Hammelman et al. articulated acknowledges the distinct lineages of food systems and radical geographies research and their separate development arcs.

2.1.3 Reflexivity and “decolonizing methodology”

Reflexive practice requires the practitioner to distinguish the subject of inquiry— which is the self— in an authentic way (Absolon, 2011; LeBlanc, 2014). Reflexivity in sociology arose from post-positivist debates that sought to address the new shared awareness there is no “neutral” from which to gaze upon research. For Knafo (2016), reflexivity as introduced by Bordieu was more akin to stating an ethical commitment to self-awareness than developing a concrete reflexive methodology. Knafo challenged Bordieu, the sociologist who is credited with conceiving of reflexivity as a practice in International Relations, suggesting our biases are rooted in the connection between the object of our attention and our attention itself (Knafo, 2016). The effort to overcome social conditioning and identify bias is directly connected to conceptualization of the nature of knowledge, as an effort to come to terms with the difficulty that we must grasp the historical and social location of knowledge (Knafo, 2016, p. 14).

Moving away from Bordieu and the European scholars seeking to codify this inquiry and “overcome” bias, Kovach (2021) defined reflexivity as “the researcher’s own self-reflection in the meaning-making process” (Kovach, 2021, p. 32). Applying “abductive reasoning” within this process “allows for an inclusive, holistic consideration of knowledge” (Kovach, 2021, p. 35). Kovach also highlighted the role abductive reasoning plays in reflexive research methods: “Abduction bridges observation, instinct, and experience. Because of its experiential basis, it allows for a holistic way of knowing” (Kovach, 2021, p. 34).

Because Anishnaabe knowledge systems do not separate ethics and cosmology from “science,” such knowledge in western science-based paradigms may be received with skepticism or mischaracterized as lacking robustness (Borrows, 2019; Smith, 2012). Western science-based or colonial knowledge-based research often excludes natural laws informing right relationship with all Creation conversations from the evidence base. There is an unspoken primacy of human needs or agendas within western science-based paradigms such that my experience studying industrial food systems suggests considerations of non-human life are often an add-on feature to western or colonial academic research when considered at all. A growing body of multi-species scholarship within sustainability studies has begun to shift this anthropocentrism, including rights of nature proposals (Leonard et al., 2023; Barkin, 2022; UN, 2020).

While developing this study I have internalized the warnings of various Indigenous scholars to avoid romanticizing pan-Indigeneity or representing epistemologies or theories as pan-Indigenous. Such romanticization and simplifications undermine Indigenous resurgence, avoid difficult topics and contestations within Aboriginal communities, and reproduces uni-dimensional readings of Indigenous narrative traditions as uniquely authentic, integral, or wholesome (Tallbear 2021; Coulthard 2014). Such simplifying or tokenizing perspectives re-produce the colonial relationships a radical food geographies praxis seeks to disrupt (Hammelman et al., 2020). I acknowledge my reflexive journey towards a decolonial praxis is life-long.

Decolonizing research methodology requires recognizing research from ‘Western’ scientific tradition that seeks to quantify has hurt Indigenous communities and such approaches are suspect within Indigenous scholarship. Commitments to decolonizing research require scholars to develop methods that honour knowledge holders as peers rather than as subjects in the research in

question (LeBlanc, 2014; Chiblow, 2023; Craft, 2013). Smith's seminal book, *Decolonizing Methodologies*, provides a theoretical basis to guide development of an Indigenous research agenda. Smith's process involves four pillars— healing, decolonization, transformation, and mobilization — providing a foundation as well as the connectivity needed to engage relational processes. (Smith, 2012)

The call within Indigenous scholarship to decolonize methodology is shaping my approach to epistemological validity. Western or settler colonial methods of contrast and compare when applied to Indigenous knowledge (IK) reproduces colonial relationships (LeBlanc, 2014). While Bourdieu's sociological framework of reflexivity can serve a role in decolonizing research, reflexive practice itself can be a trap (Tuck & Yang, 2012; Knafo, 2016). One such trap is extracting Indigenous Knowledge Systems from their political contexts, thereby denying Indigenous land dispossession and genocide upon which Canada legitimates itself (Tuck & Yang, 2012; Whyte, 2021; McGregor, 2021). Without doing the corresponding work to engage Indigenous epistemological paradigms and theories as inherently legitimate without need of validation, colonial farming may obscure biases and reproduce the colonialist paradigms which privilege me relative to Indigenous scholars whose works I quote (Pictou, 2019; Knafo, 2016; McGregor, 2010). Further, development of relationships with Indigenous scholars and amplifying their work directly was central to my methods.

There are some glaring omissions of colleagues' works that could strengthen the analyses in my dissertation including Vanessa Machado de Oliveira's seminal 2021 work, "Hospicing Modernity" and various newer publications by Dalhousie's Brian Noble. A dissertation is as much an exercise in drawing boundaries as it is an exercise in exploration. I made a decision early in the process to limit my inquiry to environment and sustainability scholars, focusing in Anishinaabek voices. Machado de Oliveira's work will inform my future efforts within this research space as I move beyond these self-imposed boundaries.

2.2 Methods

This study builds on the interdisciplinary scholarship of many others who have come before with an inquiry of limitations of colonial knowledge systems. The critical analysis of colonial knowledge system itself is not novel. Unraveling narratives that stretch over decades and centuries is a time-consuming and paradigm-shifting task, made easier by a growing scholarship across many disciplines committed to the critical study of settler colonialism. When engaging in research within human geography and related sociologies, qualitative research is a dominant method for knowledge generation. A recent meta-analysis of 200 papers showed the dominant approaches being ethnographies, interviews, and discourse analyses (Hitchings & Latham, 2020). Despite this convention, the research itself presents an endless stream of innovation and newness in how scholars do qualitative research:

The picture that tends to follow this approach is one of a discipline in rude methodological health as the reader is treated to a display of promising innovations ... those who we take to be privileged insiders are the focus of a great deal of human geography interviewing. In many such cases, interview material is used to round out, extend, or add nuance to what has been gleaned from other sources. (Hitchings & Latham, 2020)

The research that results from my learning journey must centre the communities that are sharing their knowledge with me. The research goals for my work were determined through relationship-building and direction from the TEK Elders. This dissertation challenges the epistemological singularity that

informs Canada's extractivist approach to land management, which compromises the health and well-being of the Anishinaabek. Extractivism discourse arises from anti-globalization movements including Via Campesina and mining resistance movements in Latin America in the 1990s that linked contemporary resource 'management' to European colonialism. Geographer Sākihitowin Awāsis suggested that "with an expansive spatiotemporal understanding, extraction can be conceptualized across a wide range of practices to make connections between the operations of capitalism and the land. In this sense, extraction encompasses any process through which value is generated for capitalist systems"" (Awāsis, 2021, p. 9). Simply put, extractivism is "a model of development based on resource extraction" the effects of which include "environmental degradation, dispossession of Indigenous peoples, and the concentration of wealth" (Awasis, 2021, p. 9).

My approach employs mixed methods, described below, and different conceptual lenses, described above. Analyses relying on mixed methods approaches optimize the strengths of multiple modes of inquiry (Khagram et al., 2010). To triangulate data and build a more robust synthesis, a variety of conceptual lenses are also essential (Carter et al., 2014). In qualitative research praxis, data gathering is commonly iterative and carried out throughout the research process (Creswell, 2014; Corbin & Strauss, 1998). Given the interdisciplinary nature of the research, I am aware that terms I am using throughout this dissertation have nuanced meanings depending on one's disciplinary practice and epistemological assumptions. As such, I have provided a list of common terminology as an appendix to provide an easy reference for how I am using terms that may have nuanced meanings in various disciplines.

2.2.1 Integrative literature review

Integrative literature reviews are useful for bridging related areas of inquiry (Pinard et al., 2016). Torraco distinguished integrative literature reviews as a research method using published scholarship to create new knowledge. Integrative literature reviews, while rigorous and structured, have many applications that are as varied as the audiences, with varied purposes, taking many forms (Torraco, 2016, p. 404). New knowledge can be generated when bringing different but connected bodies of literature into conversation through an integrative literature review. Dr. Kira Cooper offered the following case for using an integrative literature review:

Integrative literature reviews tend to be broader in scope than systematic reviews and are characterized by their openness to include qualitative, quantitative, mixed methods, clinical, and non-clinical studies (Cottrell & Duggleby, 2016; Elsbach & van Knippenberg, 2020; Gough et al., 2012; Reynders et al., 2022; Whittemore & Knafl, 2005). Integrative reviews can also be seen as stand-alone research because they result in the development of new frameworks or theories that characterize the area of study under review (Callahan, 2010) Furthermore, as Elsbach and van Knippenberg (2020) note, integrative reviews are evidence driven yet also generate value for adding novel insights while being more nuanced than many popular meta-analysis models. (Cooper, 2023, p.10).

During the first literature scan, I drew permeable boundaries across three bodies of knowledge to contain the focus of the inquiry. I centred Indigenist scholarship and epistemologies (Wilson, 2008; Gehl, 2017) in my examination of food democracy, sustainable forest management, and Indigenous environmental governance literature. In keeping with the elements of a radical food geographies praxis (Hammelman et al., 2020), I further contained my inquiry both geo-spatially and relationally by prioritizing Anishinaabek scholarship connected geographically to the so-called Robinson Huron Treaty

territory. This literature review informed my views on question formation for this PhD research program. The literature review provided guidance on research methods to engage the research questions.

Critique of conventional interview approaches to research within Indigenous spaces and places is not novel. Since 2010, First Nations Information Governance Centre stewards a process called OCAP – ownership, control, access, possession—on behalf of all First Nations. OCAP is one of several frameworks to address settler inattention to the ethical dimensions of cross-cultural research. Power imbalances are present when scholars from settler colonial institutions enter communities that are experiencing intergenerational effects of ongoing colonialism. The benefit of going into community and interviewing knowledge holders tends to lean toward the scholar, not the community members (McGregor, 2018; Chiblow, 2021; Craft, 2013). Added to this situation is the lack of both cultural and linguistic grounding necessary to effectively synthesize the knowledge being shared. An integrative literature review designed with input from the Traditional Ecological Knowledge Elders allowed me to access knowledge through published works of Anishinaabek scholars, and directly from knowledge keepers through recorded lectures, presentations, and events.

2.2.2 Indigenist research methods

One method for disrupting this reproduction of colonial power is centering Indigenist theory in my research. Indigenist research operates within Indigenous knowledge systems and epistemologies, from a standpoint of cultural resistance, continuity, survivance, reclamation, and resurgence (Gehl, 2017; Wilson, 2007). Indigenist research draws attention to the fact researchers within colonial knowledge systems are at a disadvantage when seeking to engage with Indigenous knowledge systems or knowledge generated within Indigenous knowledge systems, due in part to a lack of cultural, linguistic, cosmological, and experiential learning contexts (Borrows, 2019; Mills, 2019; Rotz, 2017; Reo et al., 2017).

Indigenist theory reflects a philosophical orientation in which achieving the rights of Indigenous Peoples draws upon the tradition and intellect of Indigenous Peoples to critique philosophical, social, political, and economic hegemony (Simpson, 2004, p. 367). Indigenist scholarship brings into peer review distinct and varied modes of Indigenous methodology in tandem with both increasing recognition of the role Indigenous Knowledge Systems (IKS) play in conservation and environmental governance regimes, and the resurgence of Indigenous legal traditions (Borrows, 2019; Whyte, 2011; von der Porten et al., 2015). As such, Indigenist research paradigms have a goal of Indigenous resurgence—not simply characterizing this effort but functionally contributing to this resurgence. It is a justice-oriented research paradigm. Indigenist theorists claim that a political resurgence beyond language reclamation is needed, demanding re-association with land (Corntassel, 2008; Manuel & Derrickson, 2015; Diabo, 2018). Resurgence involves more than reclaiming lost cultural practices and languages, requiring recognition of not only the right and title to the lands of their ancestors, but of the relationships with the land and with All Creation as a multigenerational experience in which the non-human world operates as active partners in governance systems with humans (Jewell, 2018; McGregor, 2016).

The importance of situating this work in an Indigenist paradigm is that such a lens produces a vastly different interpretation of the same literature as say a person situated in a Monarchist analysis, or a neoliberal economics paradigm. In the readings I have engaged, the term “Indigenist” is not synonymous with “Indigenous,” where in the former is centred specifically in what Smith (2012) would characterize as decolonizing theoretical frameworks. Indigenist theory “draws upon the intellect of Indigenous Peoples to advance critiques to the present social, political, economic, and philosophical status quo” (Simpson, 2004,

p. 382). Indigenist theory is liberatory and centres Indigenous excellence. This term—Indigenist—is an English term more popular outside of Canadian scholarship that risks sweeping all Indigenous thought into a pan-Indigenous melting pot. My intention is to denote a theoretical standpoint that centres Indigenous ways of knowing as whole, intact, and in no need of validation using western science.

Working with Anishinaabek Elders, this study centres Anishnaabe research paradigms (Chiblow, 2021; 2023) or Anishinaabe *kendaasowin* (Absolon, 2011) in keeping with the third element of a radical food geographies praxis. Most significantly, I centre the Anishinaabe Research Paradigm (Chiblow, 2023) to avoid erasure through “pan-Indigeneity” and reflect the specific geographic and ethnographic region involved in my PhD program (Smith, 2012; Hammelman et al., 2020). This focus continues my own personal work in developing an Indigenist analysis over the past number of years within an Anishnaabe research paradigm (Chiblow, 2023). Researchers argue Indigenist methodologies do not require validation through western methodologies (Smith, 2012; Whyte, 2021) and that denial of the relational ethics of intergenerational obligations to others and responsibility at the centre of the Indigenist paradigm is itself an act of colonization (Borrows, 2019; Chiblow, 2020).

Framing my analyses specifically from within an Anishinaabek research paradigm when pursuing a PhD in a western scientific tradition as a white woman has been undertaken with great care and self-reflection. In a similar manner, feminists do not need to be female bodied to offer an analysis from within a feminist paradigm. Researchers need not be of European heritage or be white-passing to embrace a western science-based paradigm, and not all Indigenous researchers are operating by fact of heritage in an Indigenist paradigm (Wilson, 2007; Mills, 2019).

Subsequent to Wilson, Indigenist scholars have taken a greater sense of ownership of what constitutes Indigenous knowledge, departing somewhat from Wilson’s early characterization of Indigenist paradigms (Absolon, 2011). Indigenous scholars articulate frameworks created by, for and with Indigenous peoples centred in the design and delivery of Indigenous-led research. Such scholarly praxis stems from the priorities of the specific Nation, within the specific languages, and connected to specific land and waters. Wilson’s early thoughts on these research paradigms risks the kind of pan-indigeneity that de-politicizes and de-centred Indigenous resistance to colonialism. Contributions informed by an Indigenist analysis would not be “Indigenous knowledge” creation without further context and community engagement with that knowledge. My own analysis aligns with these later thinkers whose work generating front line resistance alongside launching tedious and costly court actions has proven effective in halting or at least slowing extractivism across Canada and the USA over the past forty years. Ultimately this Anishinaabek Research Paradigm overcomes to some extent the “pan-indigenization” of Nation-based resistance movements. Specifying an Anishinaabek Research Paradigm re-politicizes Anishinaabek efforts to reject *Indian Act* impositions and reclaim Anishinaabek governance.

Dr. Sue Chiblow described an Indigenous Research Paradigm (IRP) as one that that furthers relationship building to relationship-maintenance. Chiblow’s development of a specifically Anishinaabek Research Paradigm (ARP) ensures she follows Anishinaabek protocols to stand with the knowledge relationships: “Maintaining the relationships ensures I am part of the research existing in what I am trying to understand by studying across. Research is about relationships with ourselves, others, the lands, spirit, and ideas” (Chiblow, 2023). Reflexivity, described earlier in this chapter, is a core part of an ethical research practice that holistically engages the heart, the spirit, the mind, and the body (Chiblow, 2023; Freeman & Van Katwyk, 2019; Absolon, 2011; Kovach, 2021).

Anishnaabe research is narrative, experiential, and personal, shared as an oral tradition and coded in stories, teachings, beliefs, values, song and other formats and practices (McGregor, 2008; Bell, 2013;

Berkes & Davidson-Hunt 2006). Without Anishnaabe language skills and lacking the cultural contexts for what is being shared, I owe a duty to faithfully reproduce the analyses of the Elders with whom I work and the analyses of the Indigenous scholars shared in the colonizer's language with humility and accuracy.

2.2.3 Case study

In addition to an integrative literature review as a research method, I apply case studies to this inquiry. Chapter 3 offers three case studies of Anishinaabek food initiatives to assess parallels with a proposed model for food commons governance. The central case study (Chapter 4), done in partnership with the Traditional Ecological Knowledge (TEK) Elders, examines how recent changes to forestry legislation affect Anishinaabek food sovereignty guarantees, and what those outcomes reveal about the incommensurability and intersections of settler colonial knowledge systems and Anishnaabe *kendaasowin* informing Canadian policy. A final case study in (Chapter 5) examines what Indigenous Knowledge keepers and language speakers have to say about researchers within colonial knowledge systems repackaging Indigenous environmental concepts.

There has been some scholarly debate about whether a case study is a research design (Wilson, 2007; Stake, 2005) or a research method (Creswell, 2014; Yin, 2003). Titles in journals between 2000 and 2020 focusing on food related research show that case studies reflected the choice to conduct some form of qualitative or mixed methods research focusing on a specific instance, event, sub-group, or region. In practice, “a case study is first and foremost a research design, and it makes sense that a variety of methods could be used to collect the evidence, depending upon which angle one is taking in approaching the research question.” (Wilson, 2007, p. 402). Few articles in Scopus, Google Scholar, and ProQuest for “case study methods” spoke of a case study method. I am adopting the delineation that Wilson (2007), a librarian working with qualitative research literature reviews, adopted from Cavaye (1996), an information systems researcher, of research “design” and research “method”:

Research strategy [or research design] is defined as ‘a way of going about one’s research, embodying a particular style and employing different methods.’ Research method is defined as ‘a way to systemise [sic] observation, describing ways of collecting evidence and indicating the type of tools and techniques to be used during data collection’ (Cavaye, 1996, p. 227 as cited in Wilson, 2007, p. 402).

Based in this delineation, I humbly offer that my approach to case study was both as research design and as research method. What makes the case study also a method is systematizing data collection (Cooper, 2023; Wilson, 2007), with a clear beginning, middle and end to the case studies carried out. My approach, referring again to Fig. 2.1, Khagram et al.’s (2010) taxonomy, applies an interpretivist perspective using case studies as an inductive approach and qualitative method. In Chapters 4 and 5, I apply a process for sense-making shared with me by Dr. Sue Chiblow (2021; 2023) and shared with her by Elder Jim Dumont: *bizindaage* (I listen to someone); *ozhibii’igi* (I write things down); *naanaagadawendam* (I consider, notice, think, reflect, realize); *Nisidotaagwad* (it is understood) (Chiblow, 2021). This non-linear process was introduced to the study by co-author Dr. Sue Chiblow; and this was a process present organically in the practice of the TEK Elders in their campaign work in which I participated.

Generally, case study methods in this study centre Anishinaabek standpoints as the orienting “gaze” of the analysis. Standpoint theory in ‘Western’ scholarship is “a feminist epistemology that makes explicit the value of the relational perspective and collective vantage point of the other (e.g., marginalized and/or oppressed groups) (Harding, 1987; Hartsock, 1987; Hill Collins, 1997, 2000)” (Pemberton, 2012,

p. 157). Moreton-Robinson summarized the relationship between feminist standpoint theory and Indigenous standpoint theory as follows: “Indigenous and feminist scholars share an understanding that their respective production of knowledge is a site of constant struggle against normative dominant patriarchal conceptual frameworks” (Moreton-Robinson, 2013, p. 331). Anishinaabek scholars echo this distinction in their research of a distinctly Indigenous women’s standpoint theory that is particular to culture and place (Simpson, 2004; Chiblow, 2021). Moreton-Robinson highlighted that many Indigenous scholars approach standpoint “as a way of knowing and being located in the actualities of living (that) can be discerned through the deployment of their respective embodied Indigenous knowledges and practice (Smith 1999)” which Indigenous scholars “use as a methodological tool to be operationalised by the ‘subject/knower of inquiry’ within research (Smith, 1999) “ (Moreton-Robinson, 2013, p. 332). Such standpoint theories remain in constant struggle to reject sociology scholarship’s colonizing practices while articulating culturally relevant, liberatory frameworks (Moreton-Robinson, 2013, p. 332; Colburn et al., 2013; Coulthard, 2014).

Frazer and Yunkaporta reminded us that “Indigenous logic demands that items are not examined in isolation from lived contexts and realities,” and as such, studies like this dissertation must also “involve careful critique of colonial institutions, economies, assumptions and ways of knowing, with particular focus on the interface of these things with our cultures as they are lived, and languages as they are spoken today” (Frazer and Yunkaporta, 2019, p. 93). As a design and a method, the case study is action-oriented, centres context, application, and reflects on a specific temporal location, offering epistemological advantages over other research methodologies (Cooper, 2023; Creswell, 2014; Wilson, 2007; Yin, 2003), particularly for critiques of colonial ways of knowing (Mills, 2019; Corbiere, 2021).

2.2.4 Participatory action research

The final method for data gathering and analysis I am applying is Participatory Action Research or PAR, where the method is developing an ethical engagement framework and data sovereignty praxis. Food sovereigntists and anti-globalization activists have innovated PAR praxis over the past forty years within the western science-based research paradigm (Levkoe, 2014; Golden et al., 2016; Srigley & Varley, 2018). Based on my analysis of the research methods in the literature on Indigenous environmental governance and on food democracy, applying a participatory action research framework creates an ethical space for the relationality required of Indigenist research while simultaneously meeting the requirements of the academy.

To employ an Indigenist paradigm in research, one must place oneself in a relational context, one in which one is neither separated from oneself or from one’s work (Wilson, 2007; McGregor, 2018), which is central to participatory action research. Chevalier and Buckles (2013) specifically addressed PAR as a qualitative method, naming tensions PAR creates. For researchers looking to engage in PAR, a tension exists in reconciling reductionism and complexity, cross-cultural limitations, and in navigating the constraints of classic scientific approaches of theory and technique:

PAR practice has had to tread softly on the path of scientific technique (*technê*) and theory (*epistêmê*)... PAR practitioners typically stay clear of theories that are so lofty the ground disappears from sight or methods so complicated the results remain opaque to all but specialist eyes. On the other hand, engaged researchers have been careful not to overstate their humanist struggle against ‘scientific management’ to the point of renouncing the ideals of science. (Chevalier & Buckles, 2013)

Moreton-Robertson (2013) reminded scholars engaging the literature on Indigenous research methods that “most Indigenous researchers advocate that research undertaken within our communities must benefit them, be undertaken for and with our communities, prioritises their needs and interests, is empowering and self-determining (Rigney, 1997a; Smith, 1999). This is an assertion of our sovereign right to determine our research agendas informed by our politics and our commitment to social justice for our people” (Moreton-Robertson, 2013, p. 336).

As such, my study includes significant and original contributions to community. My community contribution involves volunteering with TEK Elders. I was invited to support their glyphosate campaign by TEK Elders founders Wille Pine (Naganobi) and Raymond Owl in 2017. Since then, my role is supporting TEK Elders with research, administration, and grant writing. TEK Elders led the inquiry in Chapter 4, and they contributed to the reflections and research questions and directions in Chapter 5. Chapter 6 reflects briefly on TEK Elders’ ongoing research priorities and future opportunities, which will continue to be led by TEK Elders and with which I will continue to engage as a volunteer beyond this dissertation’s timeline.

When considering relationships between myself as the researcher and the people I engage as research partners and as subject matter experts from a political ecology lens, I am aware power remains embedded within my positionality as “university researcher,” and in the academy and the degree-granting institution. A self-aware researcher acknowledges the challenges in relinquishing this colonial authority, and as such geographers seeking to employ PAR in research projects are tasked with proving demand from Indigenous communities for choosing to work with one or more approaches to PAR: “Indigenous peoples are more interested in ‘claiming the rights of self-definition, the right to tell their own histories, recover their own traditional knowledge and culturally grounded pedagogies, epistemologies and ontologies’” (Stewart-Harawira, 2013, p. 41, in Coombes et al., 2014, p. 847) than in engaging with settler-descended researchers on a personal journey.

To address these pitfalls and shortcomings of trends in human geography, I kept a research diary and used cue cards to follow any emergent narratives and themes in the data. There is a cliché in activist circles that researchers only get the answers to the questions they ask. Too often in the literature, according to Hitchings and Latham (2020), the interviewer—who is also a participant in the interview experience—fails to present their involvement in the interview event to the reader. As addressed on the First Nations Information Governance Centre website, such interviewers may not be aware of or accounting for how their presence as an outside “authority” influences their interactions with the group with whom they are engaged (<https://fnigc.ca/ocap-training/>). Being aware of and speaking to my engagement as a listener and observer in spaces that I have been invited into but within which I am always a guest, and avoiding centering myself and my experience in the analyses is a tricky business. I seek to activate this awareness of the concerns geographers have raised about praxis within Indigenous communities by non-Indigenous researchers. Coombes et al. recommended applying two criteria for assessing the appropriateness of participatory action research in an Indigenous context for non-Indigenous geographers: 1) judge collaborative research on its impact on a host community’s capacity to engage research independently rather than on immediate outputs; and 2) configure research collaborations beyond the 50:50 insider-outsider influence and embrace Indigenous leadership of cross cultural teams of researchers for larger projects (Coombes et al., 2014, p. 848).

With these concerns arising from reading the literature in mind, Participatory Action Research remains a suitable method of inquiry given my direct relationships with leadership in the communities involved in the case studies. I have been asked directly to contribute products or outputs for the Robinson

Huron Treaty Territory communities by TEK Elders and their helper, Dr. Sue Bell Chiblow (Garden River First Nation). When I approached Dr. Chiblow in August of 2020 regarding the research requests the Elders had made between 2017 and 2020, we reviewed specific deliverables the TEK Elders and by extension, the communities within the Robinson Huron Treaty Territory.

METHODS

CASE STUDIES Wilson, 2007; Creswell, 2014

Chapter 3: TEK Elders + Aaroland Blueberry Cooperative + Nutrition North

Chapter 4: TEK Elders

Chapter 5: Canadian Society for Ecological Economics

PARTICIPATORY ACTION RESEARCH Chevelier & Buckles, 2013; Moreton-Robinson, 2013, Hitchings & Latham, 2020

Chapter 4: Co-authored with TEK Elders > Invited as an ally and collaborator to document cumulative impacts

Chapter 5: Canadian Society for Ecological Economics > Conference planning committee 2019 > Called to action during the 2019 conference by Ariel Tchekwie Deranger > actively apply early study results as guidance in planning for 2021 to consider central question of the study > CANSEE liaison with Indigenous Climate Action




Fig 2.2 Summary of methods by chapter

2.3 Research positionality

Applying my own theoretical framework to reflect on my positionality, my bias, my theoretical frameworks from within which my own “sense-making” processes operate, I recognize the privileged position I have experienced within colonial governance structures. As a white woman and mother of two adults living in occupied lands within the Haldimand Tract, I recognize the doors that were opened to me and more importantly doors that were not closed to me. I recognize my paternal family’s Treaty 4 and later Treaty 6 settler Canadian struggles, while difficult for my immediate ancestors, positioned me as a Canadian born after the baby boom to benefit from Canada’s settler colonial project. Their contributions to the settling of Indigenous lands directly contributed to my obtaining a public education, cleaner water, fresh foods, and the foundations of liberal democratic collectivism present in a pre-neoliberal era that gave us Ontario Place, the Science Centre, Public Hospitals and family medicine, roads and cheap fuel to explore them, and some amount of security previous generations had not enjoyed. These generational benefits were birthed from prior settler colonial politics pushing for a better life for “Canadians.” They were birthed of devastation and occupation of Indigenous peoples to create the settler colonial project called Canada. I recognize these generational privileges paved the way for my post-secondary education.

I recognize the privilege of being able to speak my positionality freely, while others face constraints that I have not had to confront in my life. It is easy to be blind to my own culturally specific experiences and epistemological assumptions. As a scholar educated in. Settler colonial context, my effort to critically examine settler colonial knowledge systems is inextricably linked to and informed by my feminist standpoint within colonial knowledge systems. To mitigate these dangers, I must remain aware of the trap of universalizing my own experience within settler colonialism. Dr. Kira Cooper summarized the shortcomings of this positionality quite succinctly in her 2023 dissertation, in which she acknowledges as a settler-descended scholar trained within settler colonial institutions, “there are likely many unspoken frameworks and shared forms of “common sense” suffused throughout my research.

These understandings are often interpreted as natural and universal despite having originated in specific cultural experiences. While I have made a conscious effort to engage in contemplative practices to deepen my capacities for self-reflexivity, it is likely that a non-white or non-elite investigator might offer additional critiques to the research that I have overlooked. (Cooper, 2023, p. 19).

Feedback I received when sharing the abstract for my original research proposal with Anishinaabek colleagues included being told the language I was using and the terminology of the Western knowledge system was problematic, placing Anishinaabek in the past tense. I have endeavoured to ensure the language I use uplifts Anishinaabek futures and speaks to the continuance of the Anishinaabek Nation. Terminology can operate as in-group shorthand, and it can be used to obscure meaning. Aaron Mills quoted Cecil King, who in his influential text, *Balancing Two Worlds*, wrote on using terminology derived from colonial knowledge systems, or what King called the Western Intellectual Tradition:

As soon as we take on and use the terminology of the Western Intellectual Tradition, we are caught having to translate our beliefs, and ways of seeing into others' ways of seeing. I wanted to make readers re-conceptualize their knowledge of the past and see it through our eyes. By making readers learn our words, they come to see our perspective. (Mills, 2019, p. 13, quoting Cecil King)

When focusing my narrative solely on cataloguing what has been lost, I tell only a partial story, and not the most relevant or interesting part. I risk missing the story of resurgence, of resistance, of reclamation. And so, I have been reflecting on my writing and my positionality in this spirit. The inherent contradictions of my efforts to characterize limitations of colonial knowledge systems and to speak of the impacts and costs of colonial knowledge systems while operating from within colonial knowledge systems are not lost on me. I choose to frame my study on the unbroken resistance to occupation, focusing on what has been taken, not on what has been lost, and centering standpoints that offer settler society more sophisticated and complete understandings of relationships and obligations.

I choose to highlight the continuity of innovative, sophisticated Indigenous knowledge systems. Within the Canada settler colonial state and due to the critique of the circular logic upon which Canada asserts Crown title, I recognize it would be impossible to engage in an interdisciplinary discussion on the matters addressed in this study without some discussion of Indigenous–Canada relations, which engages some difficult historical trauma that continues to impact Indigenous peoples. I aim to engage in this history from a place of respect and care for those communities, families, kin, who have experienced and continue to experience state violence and genocidal policies. This study done in partnership with the Traditional Ecological Knowledge Elders Group, which positions the Anishinaabek as a culture with land, language, and their own governance systems. The Anishinaabek on all sides of the Great Lakes are engaged in active, ongoing survivance as part of a 500 years of resistance project to maintain their homelands despite the ongoing occupation. The Anishinaabek Nation is a resurgent culture whose leadership I benefit from as a treaty person, a scholar, and a human being.

I engaged in this study as a mature SSHRC Doctoral Fellow and scholar-activist at the intersection of food, water, climate, and governance informing my approach to the present work. In addition to the current theoretical frameworks of indigenist research and radical food geographies praxis, which are described in this chapter, my work is influenced by Anarchist praxis which further informs my analysis of power, capital, gender, and socio-ecological systems. I have engaged a number of critical theories academically and as an activist: Marxisms (Gramsci and the Black Panther Party, followed by Horowitz and the Toronto School with whom I studied in my undergraduate years at York University from 1988 to 1991), feminisms (from second wave through the ecofeminism of Shiva and Merchant

through the critical socialist analysis and intersectionality on the Red Nation podcast), and critical food studies (from the political ecology work of Altieri, Holt-Gominez, and Clapp, to the Indigenous food sovereignty praxis of Via Campesina and the Indigenous Food Network).

Early published anarchist theorists including Emma Goldman, Bakunin, and Kropotkin influenced my early development as an undergraduate. Anarchism removes the focus on the nation state and places its concerns on cross-culturality, mutual aid, and reforming gender relations and relations with the other-than-human. Today, theorists like Springer argue that “the promise of anarchist geographies rests precisely in their ability to think integrally and therein refuse to assign priority to any one of the multiple dominating apparatuses, as all are irreducible to one another” (Springer, 2012, p. 1614). Following this research program, my attention will turn to non-state actors and landowners as potential partners in honouring First Nations, Metis, and Inuit as hosts and recognizing our responsibilities as uninvited guests born into agreements our leaders have failed to educate us about and have failed to honour. Abra Brynne’s PhD work in this area of non-state solutions to address and dismantle settler colonialism is of interest.

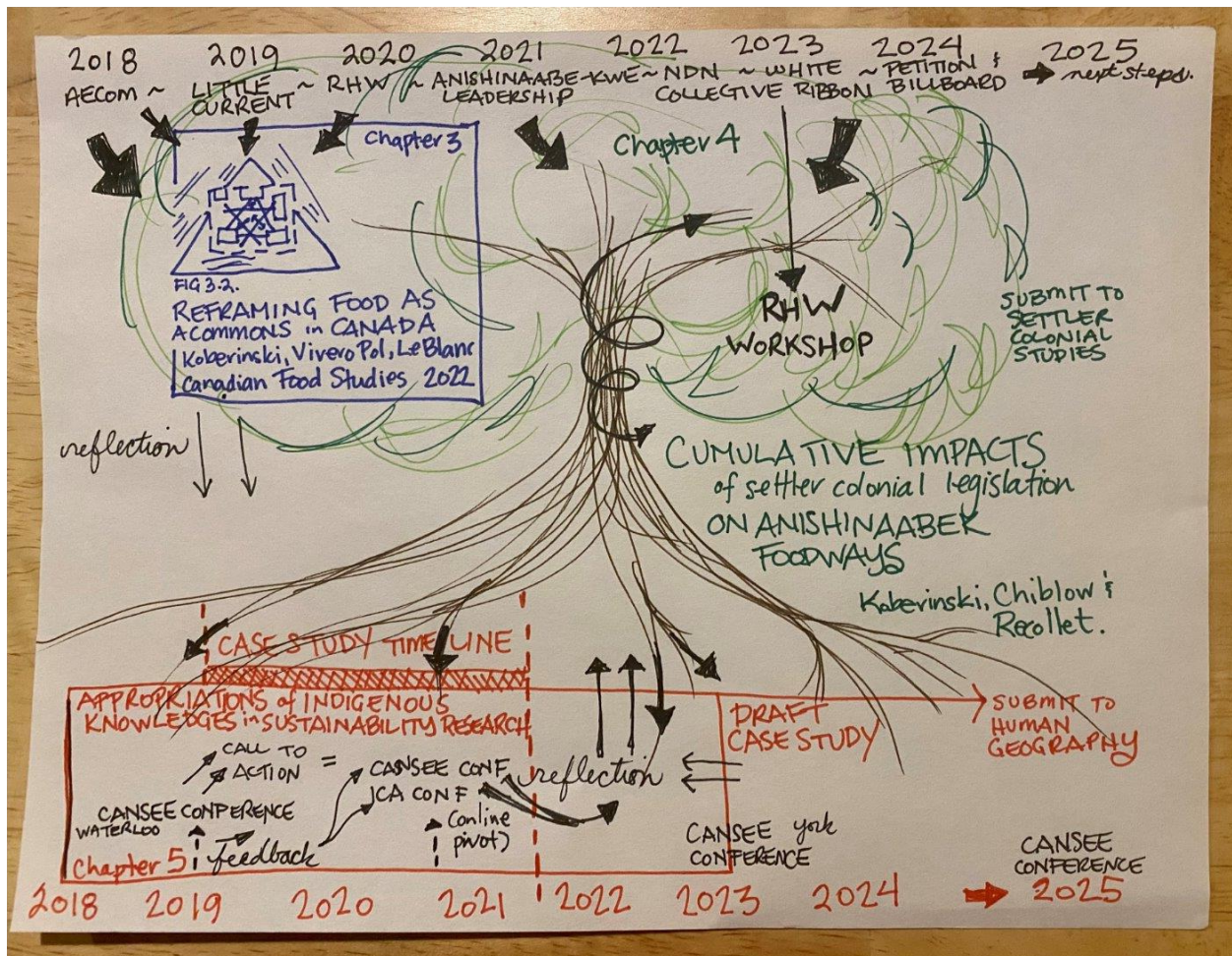


Figure 2.3 Timeline of study and linkages between the three manuscripts. Source: Author’s rendering (Koberinski, 2025).

2.4 Limitations

Conversations, experiences, ceremonies, and insights shared with me during the study period inform my understanding both as a person seeking to uplift my colleagues and as a researcher seeking to honour knowledge shared with me. As a person of settler descent not raised in the culture and communities of the TEK Elders members with whom I have collaborated on this study, I have kept quotes from the TEK Elders spokespeople at the time the quoted text was recorded, and from Elders that have explicitly requested their words be both included and attributed. These perspectives were reviewed with the TEK Elders prior to these works going to publication to ensure my efforts to avoid mischaracterization were adequate. In keeping with the example of WLU scholar Audra Mitchell (2022), I have focused my analysis on studies from Anishinaabek researchers in the published literature and or delivered at public or recorded and publicly available seminars, events, teachings, gatherings, or interviews. I lack the cultural, linguistic, and experiential contexts to try to interpret another culture. My role is to reflect what I have learned. Analyses and syntheses in this study are reserved for my reflections on colonial knowledge systems. My lack of ability to speak Anishinaabemowin is a major limitation to the depth and breadth of this study. One culture cannot interpret another. I hope I have been true to and respectful of the knowledge that Elders and others have shared with me over these years working together. I have sought to minimize the opportunity for cross-cultural mischaracterization by reviewing the core concepts with my Anishinaabek colleagues throughout this process and prior to print.

There were works that I either didn't get to or failed to figure as prominently in the written work as some readers may have liked. I made efforts to cite the appropriate literature, or at least sufficiently cite the literature, fully aware that other works, conversations, presentations, and workshops over the seven years of this project also informed my thinking. As with much of what we do as scholars, someone else has made a similar insight or observation, sometimes dis-similar. Had I more space and time was not a factor in curbing my inquiry, I would have extensively referenced the excellent works of Tabitha Robin Martens, Aimee Craft, and Karine Duhamel among others. I would have also referenced and engaged the work of Vanessa Machado De Oliveira's 2021 handbook, "Hospicing Modernity".

While I am hopeful this work shows the rigour with which this study was undertaken, I echo Dr. Aaron Mills self-assessment of his own dissertation when he wrote "I don't think the approach I've taken is easily reconcilable to dominant methodological or disciplinary conventions in academia" (Mills, 2019, p. 9). This study would not readily be an exercise in replicability as western intellectual traditions or colonial knowledge systems have generally prioritized. While not readily replicable, this research fills a knowledge gap that informs 'impacts to rights' assessments of settler colonial forest management policies and practices on Anishinaabek foodways. This study concerns the Anishinaabek and their lands surrounding the northern Great Lakes Region, with particular attention to the so-called Robinson-Huron Treaty Territories. Anishinaabek law is rooted in the land (Borrows, 2016). Anishinaabe law—*Chi Inaakonigewin*—is law "that can be observed in the environment and helps build good relations among humans and with the natural world" (Awāsis, 2021; Borrows, 2016). My research explores the tensions between commodification and commons approaches to forest management in the Robinson Huron Treaty Territory (RHTT), focusing particularly on the ways food traditions, economies, and cultures are existentially threatened by commodification of trees and the resulting plantation management imposed on the RHTT.

I have been asked over years by Indigenous colleagues and the TEK Elders as part of our collaborative process to keep the language I use simple. I have learned through this journey the many ways that academia upholds dominant power structures by obfuscating or blurring or clouding meaning

with what Elder Willie Pine calls \$10 words. I deeply honour and respect the Elders who have shared so much of themselves, their knowledge, and their hope with me about what we can do together, writing this work. I humbly acknowledge that my role in drafting this dissertation and these chapters is to bring forward TEK Elders' concerns and their data in a faithful manner to offer some analysis on the ways the Crown and its agents the Canadian and Ontario governments have failed in their obligations to Anishinaabek foodways. This mixed methods approach facilitates connecting land dispossession and imposition of the *Indian Act* on Indigenous food sovereignty, bridging research that is siloed in colonial knowledge systems-based research. I have included a discussion on the *Indian Act* in Chapter 5 rather than in an earlier chapter. Including this discussion in the Chapter 5 manuscript written for the journal *Human Geography* provided necessary context that while perhaps helpful earlier in the Dissertation, was not necessary for the arguments made in earlier chapters.

Chapter 3: Reframing food as a commons in Canada— Learning from customary and contemporary Indigenous food initiatives that reflect a normative shift

In this first manuscript published in Canadian Food Studies (2022), I adapt Vivero Pol's multi-governance framework to Canada's settler colonial context. Analyzing customary and contemporary Indigenous food initiatives through a food commons lens reveals limitations of applying settler colonial frameworks for imagining shared food futures. The following manuscript builds on a theory of food democracy.

Chapter 2 summarized the conceptual foundations of this interdisciplinary study, and reviewed the methods used to pursue the research questions. First, I offered an overview of the conceptual foundations including a brief discussion of epistemological pluralism (Khagram et al., 2010), radical food geographies praxis (Hammelman et al., 2020), and reflexivity (Absolon, 2011; Kovach, 2021; LeBlanc, 2014). Next, I outline the methods used in Chapters 3, 4, and 5, and make the case for these choices relative to the research questions in which this paper engages. I outline the integrative literature review as method, Indigenist research methods, case study as design and method, and participatory action research. I highlight the benefits and drawbacks of these methods, and outline ways these methods have been applied for the study at hand. Finally, I concluded this chapter with a discussion of my research positionality and a brief discussion of the study limitations.

Over the next three chapters, I challenge conventional narratives about Canada–Indigenous relations in an effort to address food systems sustainability. I begin with a proposal in Chapter 3, “reconciling food futures: multi governance in a settler colonial context,” from within food democracy research. I ask about the applicability of a multi-governance framework to engender a normative shift away from valuing food strictly as a commodity and towards valuing food as a commons in Canada’s settler colonial context.

Food democracy conceptually isn’t the shallow representative democracy of the past 150 years in Canada, but a deep, localized, participatory democracy as envisioned by ecofeminists like Ariel Salleh (2016) and Vandana Shiva (2010). In fact, Shiva draws attention to the artificial conflict between “economic growth” and “environmental sustainability” that dominates commodity-based economies. Ecofeminists argue wealth generated by destroying the carrying capacity of the planet is in fact impoverishment: “we are living in a global economy of genocide, and it is rooted in these decisions because of the destruction of democracy” (Shiva, 2010). The adapted tri-centric governance model proposed for food commons in this chapter may offer a useful heuristic through which those educated in what Rachel Ann Snow calls ‘the colonized mind’ within settler colonial education systems to think more expansively. Following the reproduction of the *Canadian Food Studies* (2022) manuscript, a discussion of this manuscript in the context of the dissertation’s objectives follows.



Review Article

Reframing food as a commons in Canada: Learning from customary and contemporary Indigenous food initiatives that reflect a normative shift

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Overview

This paper interrogates the role of the dominant narrative of “food-as-commodity” in framing food systems policy in Canada. Human values shape policies, usually privileging those policies that are aligned with dominant values and neglecting others that confront dominant values. In that sense, valuing food as a commodity privileges specific market-based policy goals, regulations, and public subsidies that aim to enlarge market coverage. This prioritizes both corporate profit over societies’ common good and private enclosures of commons resources over universal access to food for all. Conversely, the normative shift this paper proposes—valuing and governing food as a commons—could enable socio-ecologically based policy goals and regulations, and redirect public subsidies to support customary and contemporary practices that produce and distribute food differently. Such a normative shift, scholars have argued, is a prerequisite for developing legal frameworks that lead to

more and better 1) self-production; 2) stewardship of natural commons; and 3) civic participation in the governance of a resource that is essential for everybody’s survival. Valuing food as a commons can provide a complementary narrative to alternative civic claims such as food sovereignty, agro-ecology, or food justice.

In this paper, we begin by outlining the theoretical basis for our investigation into the role of food valuation in the critical food guidance shaping public policy. Next, we provide an overview of the concept of food as commons through the multidimensional food values framework and offer a tri-centric governance model to frame the analysis. Following a brief policy context for Indigenous food initiatives in Canada, we then provide three case studies involving Anishinaabek food systems to explore valuation of food beyond commodity in customary and contemporary food systems. Finally, we discuss how valuing food as a commons offers critical food guidance for addressing multiple socio-ecological issues connected with food systems policy in the Canadian settler colonial context.

Keywords: Food commons; food governance; food systems; Indigenous food systems; settler colonialism

Introduction

We situate this research within the diverse landscape of food systems scholarship and seek an interdisciplinary audience for this work. We recognize stark binaries rarely exist in complex societies, however this paper deals with a decidedly simplified heuristic to distinguish concepts constructed outside the assumptions of the dominant order. We seek the indulgence of our readers as we suspend the nuance a rich discussion requires, briefly, to discuss these novel concepts in a manner that de-centres the dominant point of view in which food is a commodity. Several terms we use lack a singular definition. As such, we offer the following clarifications.

Food systems

In Canada, the concept of “Food Systems” rather than “Food Chains” has been promoted by Food Secure Canada and the various grass roots organizations, researchers, and advocates engaged domestically and internationally for two decades (Martorell & Andrée 2019; Hammelman et al., 2020). Canada’s Food Policy, adopted in 2019, states that food systems “include the way food is produced, processed, distributed, consumed, and disposed of, and they have direct impacts on the lives of Canadians” and that “Food systems are interconnected and are integral to the wellbeing of communities” (Government of Canada, 2019, p. 3). We work with an expanded conceptualization of “food system” to include not just “production” in terms of annual agriculture, but also “production” within Indigenous food systems management within the broad territories and waters that have for hundreds, and in most cases for thousands of years, sustained First Nations and Inuit—active participants in creating food abundance—for whom inherent title and rights are recognized (Levkoe et al., 2019). We accept the analyses and working definitions in the International Panel of Food Systems Experts’ major work, “From Uniformity to Diversity” (Frison, 2016).

Industrial food systems

Our working definition as represented in the IPES-Food report “From Uniformity to Diversity” (Table 1) “refers to modes of farming that are analogous to industrial processes in their scale and task segregation and seek to derive productivity gains from specialization and intensification of production”

(Frison, 2016, p. 11). Green Revolution efforts in India, Mexico, and now Africa are extension of food systems industrialization, and the increasing specialization across industrial food systems amplifies reliance on an ever-smaller number of players (Shiva, 2016; Clapp & Isakson, 2018).

Agroecological food systems

Our working definition is represented in the IPES-Food report “From Uniformity to Diversity,” in which Gliessman defines agroecology as “the science of applying ecological concepts and principles to the design and management of sustainable food systems” (Gliessman, 2015, p. 345). Further, Agroecology “encompasses various approaches to maximise biodiversity and stimulate interactions between different plants and species, as part of holistic strategies to build long-term fertility, healthy agro-ecosystems and secure livelihoods. It also represents a social movement; this usage will be specified where relevant” (Frison, 2016, p. 11).

Indigenous food systems

We are reticent to offer a universal definition for “Indigenous food systems,” as the diverse First Nations, Inuit, and Métis communities whose economic systems predate European contact have cultural and place-based approaches that defy tidy labels. Generally, such systems share in common a challenge to “the limitations of the linear production paradigm that has mechanized the spirit and soul out of the land and food system as a whole” (Morrison, 2020, p. 19). The Pan-Canadian Indigenous Food Systems Network describes food systems as the “vast myriad of rivers, watersheds, land-forms, vegetation and climatic zones [that] have worked together for thousands of years to shape and form Indigenous land and food systems. Consisting of a multitude of natural communities, Indigenous food systems include all of the land, air, water, soil and culturally important plant, animal, and fungi species that have sustained Indigenous peoples over thousands of years” (Levkoe et al., 2019, p. 102).

Food sovereignty

Our approach to food sovereignty is guided by Via Campesina’s Food Sovereignty Declaration at the 1996 World Food Summit—an alternative vision to the neoliberalization that underscores industrial food systems (Val et al., 2019). Further, our approach is informed by our work with Indigenous communities and decades of Indigenous scholarship that connects “food sovereignty” with land and lifeways. It is impossible to be ‘sovereign’ in regard to one’s food if one lacks the sufficient land base to support a food system (Martens et al., 2016; King et al., 2019). Wiebe et al. (2010) reference the 2007 international gathering in Mali, where “a vision of food sovereignty” was put forwarded and adopted “that sees food as being integral to local cultures, closes the gap between production and consumption, is based on local knowledge and seeks to democratize the food system.” (Wiebe et al., 2010). Canada’s food systems movements embraced a food sovereignty approach when undertaking the People’s Food Policy Project (PFPP). A comprehensive, crowd-sourced document involving communities from coast to coast, the PFPP articulated food sovereignty-informed social and ecological contexts for policymakers (Levkoe et al., 2019).

Canada’s food policy context

Since the onset of the 2020 COVID-19 pandemic, vulnerabilities in the “just-in-time food system” became visible to Canadians in a way it has long been visible to those who study food systems. The disruption to just-in-time food systems caused by the pandemic revealed untenable

trade-offs the commodity production sector previously hid from the average consumer. Canadians were shocked by news coverage of farmers dumping milk and produce rotting in fields as a result of labour and market disruption in early spring 2020. In what we call Canada today, there are roughly 15,000 major grocery chain outlets and over 60,000 charitable organizations that support people with food. That's four food charities providing food for Canadians who cannot afford to eat for every one major grocery chain store selling food (Nikkel et al., 2021). For Indigenous peoples, food insecurity is experienced at a rate that outpaces non-Indigenous peoples with one in five Indigenous peoples off-reserve experiencing food insecurity before the pandemic hit Canada (Levkoe et al., 2019, p. 106).

Coupled with ongoing impacts to global food systems from catastrophic fire, flooding, infestations, drought, and disease intensity and frequency connected to climate breakdown, (UNCTAD, 2013; Frison, 2016; Noiret, 2016) the notion that business as usual can continue has been dealt a significant blow. Canada's lack of a comprehensive food policy has been a focus of civil society organizations for more than two decades, as an effort to deal with Canada's policy in a "joined-up" manner. Launching a nationwide campaign to "join up" policies to create sustaining food systems, the Peoples' Food Policy Project (2008–2001) was a Pan-Canadian initiative mobilizing over 3,500 people through a grassroots initiative resulting in a national food sovereignty platform (Levkoe & Sheedy, 2019). This civil society effort played a role in Canada adopting a National Food Policy in 2019, which seeks to assure that "All people in Canada are able to access a sufficient amount of safe, nutritious, and culturally diverse food" and that "Canada's food system is resilient and innovative, sustains our environment and supports our economy" (Government of Canada, 2019 p. 5). The emphasis in the funding for the first five years is on "market-based" solutions over social and ecological dimensions of food systems. A little more than 10 percent of that budget—\$15M—was allocated for Northern Communities Fund to combat challenges accessing healthy options in the north. Canada's 2019 Food Policy prioritizes "Strong Indigenous Food Systems" —providing a framework for Indigenous-led advocacy and articulation of what strong Indigenous food systems entail in relation to various First Nations, Inuit, and Métis governance approaches.

With these assumptions and understandings, we turn our attention to the content of our research, beginning with a short overview of the frameworks we applied in our analyses of the Anishinaabek and Nutrition North case studies, followed by a discussion of a normative shift from food commodity to food commons in the settler colonial context.

Frameworks: critical food guidance

Food guidance informs policy, priorities, and regulations that impact public health, ecological health, and the economy. Conventional food guidance in Canada in the latter half of the twentieth century defines key food groups by nutrient category corresponding to Canada's commodity groupings, from which dietary recommendations arise (Institute of Medicine, 2003). This approach encourages personal responsibility for health, like choosing fruit over candy bars, while avoiding collective responsibility—like asking why candy bars are sold at schools, who is selling those candies and what are the consequences of those candies to public health. Hidden within this conventional approach are assumptions about the role of individuals, communities, markets, and states in shaping our food choices.

Critical food guidance, on the other hand, provides a framework for dynamic, responsive approaches to food policy, rather than relying on fixed standards and current practice alone for

guidance. Koç et al. (2017) maintain that being “critical” in social science has four components or pillars: 1) examining evidence; 2) unearthing values; 3) questioning power; and 4) encouraging social change. With this in mind, Critical food guidance is “a multifaceted approach to food buying, growing, and harvesting” aiming “to link food sustainably with the environment, the economy, society, culture and governance” noting that as “food interacts with all of these aspects of life, it is crucial to recognize and work to improve them” (Sumner & Desjardin, 2021, p. 4). This approach seeks to consider the collective decisions, policies, and institutions in determining food “choice.”

In the conventional approach to food guidance, food remains a commodity. Food systems researchers have established that relying on industrial approaches to food systems is an inherently unsustainable approach (Frison, 2016; UNCTAD, 2013; Clapp & Isakson, 2018). For example, reducing the climate implications of food production systems is a central challenge for Canada. Food systems industrialization is a leading cause of climate change, with the global rise in consumption of animal products over the past century considered a key driver (Lappe, 2021; Weis, 2013; Rockström et al., 2009). Livestock production alone accounts for some 18 percent of greenhouse gases (GHG) output, thus reducing the amount of meat and livestock products consumed globally would have an immediate and measurable impact on GHG release (UNCTAD, 2013; FAO, 2009; Weis, 2013). Canadians waste 11 million metric tonnes of food annually at a cost of \$50 billion (Government of Canada, 2019).

Since the early decades of the twenty first-century, Canada’s approach to food guidance has improved starkly. Sumner and Desjardin (2021) point out the new Canada Food Guide follows recent health and environmental evidence, replacing the meat, grain, and dairy-heavy Food Pyramid with a plate filled mostly with plant-based foods. While a significant improvement in food guidance, this approach negates the cultural and geographically-dependent, meat-based diets of many First Nations peoples (Sumner & Desjardins, 2021) that a critical food guidance approach offers. Critical food guidance considers evidence from social scientists, community food security activists, farmers, nutritionists, consumers, Indigenous communities, and other perspectives. It is in this context that we explore normative shifts for articulating and creating a food system decoupled from commodity valuation and the socio-ecological crises to which the commodity food system is a major contributor (Weis, 2013; Holt-Gimenez, 2017; UNCTAD, 2013; Frison, 2016).

Frameworks: Food as a commons

Commons research—an emergent field that crosses disciplinary boundaries—builds on the late economist Elinor Ostrom’s (1999) work, which positions commons as resources held by an identifiable community of interdependent users. These users exclude outsiders, while regulating use by members of the local community through institutional arrangements supported by collective action (Ostrom, 1999). Rivalry (competition for use) and excludability (prohibition of access) are the two features used by economists to define private/public/common goods.

Neoclassical economists, including Ostrom, considered those properties as ontological (i.e., inherent to the goods); thus, they defined goods as being private, public, or commons. The consideration of food as inherently a private good by nature helped configure a for-profit market for food items, particularly during the second half of the twentieth century (Pettenati et al., 2019). However, considering goods as private, public or commons is arguably a social construct and not an ontological property of the goods themselves. With this understanding, it follows that societies can

mould those goods according to prevalent values, existing technologies, current availability, and number of users.

In practice, commons can go beyond material goods to include territories, life support systems, governing arrangements, and immaterial knowledge upon which local communities rely to meet social, cultural, and economic needs and identities (Vivero Pol, 2017a). Commons can be characterized by their “commoning” practices and not by the properties of the goods (Dardot & Laval, 2014). Indeed, collective governance and common property regimes have a long history of being efficient systems for managing shared natural resources. Despite centuries of liberalization, enclosure, and misappropriation, over twelve million hectares of commons lands still remain in Europe (European Commons Assembly, 2016).

The current industrial way of producing, transforming, transporting, and consuming food, with its multiple unaccounted externalities (e.g., ill health, reduced biodiversity, climate impact), is the major driver of planetary transformation (Rockström et al., 2016). It already pushes four planetary boundaries beyond their safety thresholds—climate change, loss of biosphere integrity, land-system change, and altered biogeochemical cycles (Steffen et al., 2015). A normative shift in how we value food may function as a precursor to both implement meaningful policies that institutionalize multifunctionality over uniformity and legitimize multiple understandings of ecosystems other than as “natural capital.”

The dominant economic discourse reduces food to a commodity based on rivalry and excludability, which conventional economists insist is best managed by markets, absolute proprietary rights, purchasing power, and privatization. Yet food has been produced and distributed through non-market mechanisms for millennia. Being traded is not the same as being commodified. All commodities are traded but not all traded goods are commodities. A commodity is a special kind of good or service associated with capitalist modes of production (Radin, 1996) where its exchangeability for some other thing is the only socially relevant dimension (Appadurai, 2005). Commodification is therefore the outcome of food systems under capitalism—an economy predicated on the fallacy of endless growth (Holt-Giménez, 2017).

Understanding food as a commons raises fundamental questions about the currently dominant mode of exchange, namely, food as a commodity. Indeed, Karatani (2014) contextualizes private property and market economies as just one of four typologies of modes of exchange, building on the tradition of Polanyi (1957) and others. The first typology Karatani offers is reciprocity of the gift, where groups were either pooling resources (e.g., nomadic peoples) or establishing gift exchange mechanisms (e.g., agrarian/ semi-agrarian peoples). The second is rule and protection, where first feudal lords and then the state exchanged protection and governance for goods produced by commoners. The third typology is commodity exchange, whereby money is traded for a given commodity according to market rules. The final typology Karatani characterizes is post-capitalist value regimes that can utilize technological opportunities to revive reciprocity practices enabled by web-based platforms and self-regulated local collective actions (Karatani, 2014). In that sense, commoning can be seen as a form of reciprocity that brings together people’s labour to collectively own and govern a good or resource. This collective action can take various forms, including owning and governing food as a commons, which is a direct challenge to its increasingly commodified form (Martorell & Andrée, 2019). It would create alternative spaces for action and legitimize alternative forms of governance and distribution of food that are not exclusively based on commodification or commerce.

Historically, common lands were pivotal in underpinning food as a commons by developing small farming agriculture since the Middle Ages across what is known today as Europe. Common lands are still important to produce seafood, and as water catchments, carbon sinks, or priority areas for conservation (Vivero Pol, 2017b). La Mela (2014) notes that Scandinavian countries recognize foraging rights for mushrooms and berries for every citizen, while in Portugal *Baldios* are legally recognized collective arrangements to govern certain forested areas in which foods are harvested. America, Brazil, Honduras, Venezuela, and Nicaragua formally recognize the communal rights of Indigenous communities to traditional territories, which again impacts Indigenous food systems (Robson & Lichtenstein, 2013). In Asia, over 10,000 villages in Vietnam collectively manage over two million hectares of traditional community forests (Marschke et al., 2012). Food as a commons also includes knowledge such as medicinal uses of blueberry leaves, or how to sustainably harvest, clean, and prepare a lake trout. In fact, knowledge held in food commons is often represented in language, culture, art, ceremony, and traditional practices related to food, cooking or cultural traditions.

Food dimensions framework: The theoretical basis for food as a commons

The theoretical aspect of the normative shift towards food as a commons is based on the Food Dimensions Framework (Vivero Pol, 2017a). This framework began with six dimensions with which all food is endowed: an essential resource for humans, a human right, a cultural determinant, a natural resource, a public good, and a tradable good. Only the latter can be valued in monetary terms, but it dominates over the others in the contemporary industrial food system. Since the framework was initially proposed, food as medicine (Tirado-von der Pahlen, 2019) and food as sacred (the authors) were added. Figure 1 illustrates these eight food dimensions, showing the commodity valuation contextualized within a commons governance structure, alongside non-economic values. When engaging this term, sacred, we add a cautionary note to warn against “new age” interpretations of this cultural concept. For Levkoe et al. (2017), whose research on food systems score cards recommends recognizing food as sacred, “this principle speaks to recognizing that food is a gift of life and should not be squandered. It asserts that food cannot be commodified” (p. 74).

The holistic valuation of all eight dimensions opens up consideration of food as a commons, opposing its current designation as a commodity whereby only the tradeable dimension is valued. It is this expanded dimensionality that can serve as a form of food guidance for those who are inspired to act, advocate for, and build awareness about systemic shifts toward food as commons. Respectful and relationship oriented participatory action research is required to conceptualize “sacred” meaningfully as it relates to the multidimensionality of food itself and the importance of food (plant- or animal-based) to both Indigenous and non-Indigenous food systems. An entry point for Western readers reflecting on food as sacred includes the recognition of that dimension in the Christian eucharist, namely the sacredness of Jesus Christ’s blood and body represented by wine and bread, which would not be commodified as such. Another key example comes from the Dené belief in the sacredness of the caribou. Respect for the caribou when killed for food—also ensuring that the caribou will then “allow” themselves to remain as a food source—includes sharing all parts of the animal with the entire community as a commons (Walsh, 2015).

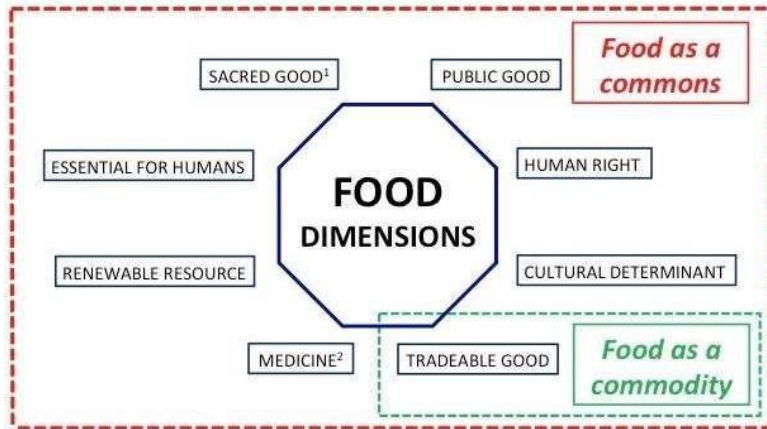


Figure 3.1: Multidimensional food values: Eight food dimensions (Source: original diagram Vivero Pol, 2017a; ¹Jodi Koberinski; ²Tirado-von der Pahlen, 2019).

The dominant narrative in the industrial food system focusses on monetized food values exclusively, and values that cannot be monetized become secondary or neglected. This explains, for example, why ecosystem services have to be valued in monetary terms, transforming into dollars the value of bee pollination. Yet, the multidimensional valuation of food is not a new narrative. It has been the “normal” narrative since human beings were organized in hunter-gatherer groups (Shepperson, 2017; Pettenati et al., 2019). Moreover, the value-based narrative of food as a commons can fit with current, and growing, alternatives to the dominant industrial food system, such as food democracy, food councils, community-supported agriculture, food justice, or food sovereignty. Radical reorientations of worldviews are necessary to bring about fundamental change in food systems, and Koç et al. (2017) identify “encouraging social change” as the fourth component of critical food guidance. Therefore, this paper proposes to reconceptualize food as a commons and to reorientate governance structures (e.g., policies, legal frameworks, financial incentives, prohibitions) to produce, transform and distribute food differently, so as to ensure healthy food is accessible to all, preserve food-producing resources and maintain human societies within Earth’s limits.

Transition pathways to food as a commons: The tricentric governance model

How can this narrative be practically operationalized? Vivero Pol (2017a) proposes a transition pathway towards food as a commons, adapted here to reflect the Canadian context (Figure 3.2). In this model, three realms of governance—the state, collective actions, and the market—form a collaboration. State actions are redistributive, policy enabling, and limiting on privatization.

Collective actions refer to the various engagements of citizens as common property rights holders with their food system. Markets in this governance model lose the capacity to speculate on food (i.e., by banning speculation)—capacities that are relatively recent in the realm of finance but are creating new monopolies of capital that wield immense power over food systems (Clapp & Isakson, 2018).

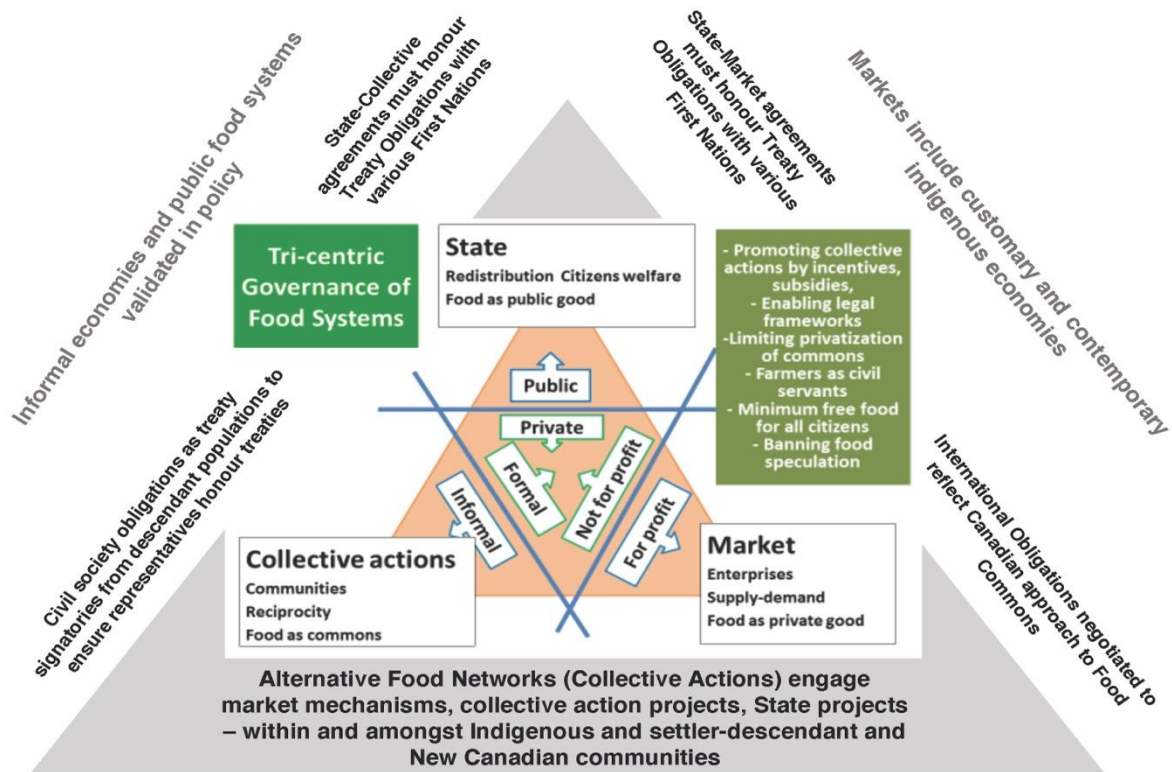


Figure 3.2: A tri-governance framework for food commons adapted to Canada’s settler colonial context. (Source: adapted by Jodi Koberinski from Vivero Pol, 2017 with permission).

The original model exists within the dotted lined box. The authors have offered some considerations for Canada’s settler colonial context. In this model, the state assumes a redistributive function and may work with both public employees and private enterprises to provide food as a public good to all citizens, fulfilling its role as guarantor of food as a human right. The state also has a role in creating enabling legislation, redirecting subsidies to stimulate development in target areas (e.g., agroecology, small-scale farming) as well as regulating/preventing new privatizations of food-producing commons (e.g., land, water, seeds, traditional agricultural knowledge). Additionally, the state can lead the re-commoning of previously privatized/commodified resources, either material (e.g., fish stocks, hunting territories, water sources) or non-material (e.g., genetic resources, traditional medical practices, First Nation images). Preliminary modifications added to the source model to consider Indigenous food systems, existing Treaty obligations and the impact of food governance amongst settler populations on those Treaties, and a Nation to Nation (rather than subjugation of Indigenous peoples to Canadian governance) approach built into settler governments’ new mechanisms for food governance. This tri-governance model presents one heuristic technique for possible approaches to implementation, yet we have examples of both customary and contemporary food commons in Canada from which we can also gain insights for a food system that moves beyond commercial values.

Food as a commons in Canada: Customary and contemporary systems

Commons are still poorly understood in Canada where the dominant economic view reflects the fact that private property rights are the basis of the legal system. The primacy of absolute private property today renders notions of common property an antiquated, pre-industrial form of governance. Yet examples of commons in daily Canadian life abound, including libraries, open-source software, municipal squares, and parks, recipes, and schools—resources shared by citizens and collectively managed in some manner for their benefit. Commons are predominantly expressed as collective proprietary regimes but can also include collective governance mechanisms or peer-to-peer production of any given good. This broadened expression allows food commons to find commonalities with aspects of various Aboriginal peoples' food traditions, governance structures, and agro-ecological practices rooted in well-informed customary traditions, such as the Potlatch system of the Pacific Northwestern Indigenous peoples, and the Moose Hunt gifting system of the Anishinaabek (LeBlanc, 2014).

An investigation into customary and contemporary food commons in Canada is rooted in the context of Canada's relationships with Indigenous Nations in historical times and nowadays. The Canadian context is complicated by murky legal foundations for nationhood and a Treaty-making legacy from the British Empire (McFarlane & Schabus, 2017). Indigenous peoples entered into Treaty-making processes with the British Crown, which explains why there are numbered Treaties covering different physical territories. Canada did not have its own Constitution until 1982, and as a successor state to the British Crown, Canada has a duty to implement the various Treaties as originally negotiated in good faith (Makokis, 2013; McIvor, 2021) and to continue to engage in Treaty making with Indigenous Nations in unceded territories as a prerequisite for the Crown's subjects to access Indigenous lands (Venne, 2017). Friendship Treaties signed by the British Crown and Indigenous peoples cannot be understood simply as surrender of land for purchase, and actually the Indigenous people still retain certain rights and entitlements over the territories governed by the treaties. These were built on the recognition of inherent rights of the original inhabitants and were meant to provide benefits in exchange for access to Indigenous territories (Makokis, 2013). Two of the case studies in this paper involve First Nations with whom the British Crown entered into treaties and who maintain Aboriginal title, rights, and treaty rights.

Through colonization, the diets of Aboriginal peoples in Canada have undergone a significant transition from local foods to processed foods (Pelto & Pelto, 1983), facilitated by various factors including physical estrangement from the land, practices, and knowledge (Vecsey, 1987), assimilative pressures to change existing social, economic and food systems (Mihesuah, 2003), and contamination of the natural environments that support local food systems (Rosenberg et al., 1997; Willows, 2005).

The current food systems of northern Aboriginal peoples are characterized by a mixed diet of harvested food from the land and imported food sold in stores, posing unique considerations for understanding food security and health (Galloway, 2017). Food insecurity is rampant, with dietary disease such as diabetes and various inflammatory conditions at epidemic levels on reserves the result of poor access to both "health" options at stores and disruption of traditional harvesting and cultivation economies (DeSchutter, 2013). However, a resurgence in traditional food systems among Indigenous peoples heralds a return to healthier diets and establishes a set of commonalities for understanding food as a commons.

Traditional food systems in Northern Ontario

Food production by farming, hunting and gathering, fishing, and trapping was the basis of traditional food systems for millennia (Kuhnlein et al., 2001; Willows, 2005). A variety of forest and freshwater foods—including fish, deer, caribou, moose, rabbit, bear, beaver, partridge, goose, cattail roots, berries, seeds, rose hips, edible flowers, and teas—are the foundation of a traditional diet, one based on seasonal and regional availability of these and other edible plants and animals (Ontario Nature, 2014). The contemporary importance of traditional food goes beyond nutrition as Aboriginal peoples see it, as food is an important indicator of cultural expression and has great sociological meaning (Kuhnlein et al., 2001; Willows, 2005). Many Indigenous peoples view food and medicines as one and the same. Traditional foods—also called country foods by the Anishinaabek (LeBlanc, 2014)—are key drivers in the reduction and mitigation of diet-related non-communicable diseases experienced in some communities as epidemics, including diabetes, cardiovascular disease, and obesity. This food-as-medicine dimension has recently been proposed to further enrich the food commons framework (Tirado-von der Pahlen, 2019). Quantitative valuations of the forest and freshwater food contributions in northern Ontario are sparse, although in the Ojibway community of Webequie, local fish contributed approximately half a pound of meat per person per day (Hopper & Power, 1991), and for the Omushkego Cree, local meats contributed a monetary value of \$7.8 million, equal to one-third of their annual economy (Berkes et al., 1994). The perception held among Aboriginal people that their traditional forest and freshwater foods hold high health values has been well documented (LeBlanc, 2014; Gittelsohn et al., 1996; McGregor, 2013). Many Indigenous peoples also believe that the restoration of traditional subsistence foods and practices is essential to community vitality (Conti, 2006; Diabo, 2018). For them, the concept of health reflects a state of connectedness with spirit, culture, community, land, family and within the individual self (Ray, 2017). These realities must inform critical food guidance when developing policies that impact Indigenous peoples.

Case studies of Indigenous food commons

This section presents three case studies that help to explain Indigenous food commons. The first two cases present aspects of Indigenous food commons, while the third is a counter-case that highlights the problems associated with valuing food as a commodity, rather than valuing food as a commons.

TEK Elders Group

Belonging to, using, and stewarding the commons

The TEK Elders Group case study is informed by a series of interviews and public appearances with three Anishinaabek Elders from the Robinson Huron Treaty territories—Ray Owl, Willie Pine, and Art Petahtegoose—and Sue Chiblow in her volunteer role as the TEK Elders Group coordinator. This case study is informed by interviews, discussions, and speeches recorded during public events, including public protests held in October 2016 (Ottawa), May 2017 and April 2018 (Toronto); meetings in June 2017 and August 2018 with TEK Elders Group; an open-ended interview with Ray Owl and Sue Chiblow in November 2018 at the Parliament of World Religions; and reporting by Dorothy Schrieber of AnishnabekNews.ca between 2015 and 2018.

Anishinaabek territories are located above and around the Great Lakes, spanning three provinces and six states. The Anishinaabek are the second largest Indigenous cultural and language group in North America. The Traditional Ecological Knowledge (TEK) Elders Group of the North Shore of Lake Huron was formed in 2014 to end aerial herbicide use in the Robinson Huron Treaty territories. At the TEK Elders Group meeting with RHW on August 3, 2021, lawyer and friend of the TEK Elders group Stephen O’Neill reminded attendees of the winter of 2017 Chiefs Resolution initiated by TEK Elders Group founders Ray Owl and Willie Pine calling for a Moratorium on Spraying. In that unpublished document, the majority of Band Councils acknowledged the TEK Elders’ leadership on environmental governance within the 1850 Robinson-Huron Treaty Territory (TEK Elders, 2021).

The Elders are holders of Indigenous scientific knowledge, which focusses on place-based ecological relationships. Anishinaabek clans are connected to specific animals or totems. The totem system weaves two concepts, *enawendiwin* (strands connecting all parts of creation) and *waawiyeyaag* (interwoven systems of circularity) together to articulate the interconnected ways in which circles of Anishinaabek relationality operate. These strands come together to form a law known as *nindinawemaganidog* (all of my relations), commanding Anishinaabek to consider the web of life (Sinclair, 2013). As woodland peoples, Anishinaabek are dependent socially, economically, spiritually, and culturally on the health of the forest, including the health of the wildlife, plants, water, and the soil. The Elders speak of Treaty rights recognized and affirmed in section 35(1) of the *Constitution Act*, 1982, which acknowledge the Anishinaabek of the territories as the caretakers of the lands and waters: “These were given to us by the Creator so that we may continue to live as Anishinaabek people for generations to come. We have never relinquished these sacred responsibilities” (Pine, 2018).

Conservation of ecological values in western science is “point-focussed,” aimed at surveying land to exploit resources, according to Art Petahtegoose, former Chief and a TEK Group Elder from White Fish Lake First Nation (Petahtegoose, 2018). Environmental assessments include statistical data and cultural relevancy on specific “values” or points of cultural significance such as nests of a particular bird, or traditional trap lines. This point-focussed approach objectifies lifeforms, obscuring Anishinaabek presence in their own home. In contrast to this, as Petahtegoose illustrated during a meeting with the forestry company EACOM, “when we put the Anishinaabek name on a water body, we say there is a life there, an ecology that has to remain intact” (Petahtegoose, 2018). Anishinaabek food systems invoke responsibility towards both previous generations’ efforts and towards future generations’ needs, including non-humans.

In that sense, the stewardship of natural resources is intergenerational. Anishinaabek knowledge includes institutions such as the clan system, which identifies kin groups with non-human family members to maintain ecosystem integrity and encodes understanding of socio-ecological sustainability. “Users” of the food commons include all living beings within the ecosystem, not only the human ones. Thus, one can see how the Anishinaabek do not hold an individual property consideration on food-producing natural resources, all of them endowed with non-economic attributes and spiritual values that evidently escape from economic valuations in monetary terms.

TEK Elders have been pursuing legal arguments that are supported by an active court case regarding the Annuities clause in the Robinson Huron Treaty. Since December 2018, courts have upheld the Anishinaabek Nation’s interpretations of the Treaty, which according to Giima Dean Sayers (Batchewana FN), includes the argument that the Anishinaabek Nation never ceded jurisdiction over land and water stewardship (Petahtegoose, 2018; Jones, 2018; Sayers, 2021). Food economies are

connected to the land for the TEK Elders, and decisions that have impacted forest health and river systems have dramatically reduced the presence of deer, berries, fish, clams, medicines, and other cultural dietary staples. The process of taking only enough and leaving all that can be left for others and for future generations is a food way that arises from the Seven Grandmother/ Grandfather Teachings, or Seven Sacred Teachings (Chiblow, 2020), which act as guidance for living a good life (Sayers, 2021; Borrows, 2019; Pine, 2018).

Aroland Youth Blueberry Initiative

A commons approach based on cultural worldviews

The Aroland Youth Blueberry Initiative case study is a result of participatory action research undertaken by co-author Joseph LeBlanc in 2014 with community members/ researchers Mark Bell and Sheldon Atlookan to describe the impacts of Ontario's natural resource management regime on the accessibility and availability of forest and freshwater foods by the Aroland First Nation members. Rather than engage community members as 'participants' or 'key informants,' a participatory action research methodology and Indigenous research framework were employed to integrate Indigenous knowledge systems (LeBlanc, 2014; Martens et al., 2016). The Aroland Youth Blueberry Initiative was created in the summer of 2008 by five key actors as a result of a larger community-university relationship in which community members generated their research priorities and questions in collaboration with Lakehead university partners. The research group then undertook actions in four focus areas, one of which was non-timber forest product marketing. Key participants included community members, as well as Aroland First Nation staff and leadership along with staff, graduate students, and faculty members associated with Lakehead University's Food Security Research Network.

As an example of critical food guidance, this case study explores the relationship between food-as-commons leanings of Indigenous food systems and the food-as-commodity approach of the dominant industrial food economy. The community of Aroland First Nation is located in the boreal forest region of northern Ontario. The people are the descendants of signatories to Treaty #9—known today as the Nishnawbe Aski Nation (NAN). Reserve lands encompass 19,599 hectares and extend northwards from Highway 643 to land along the western and northern shores of Esnagami Lake—a territory overlapping two-thirds of the province in Ontario (Aroland First Nation, 2022, para. 4).

The Aroland Youth Blueberry Project is a community-driven initiative, with local knowledge and youth involvement as main pillars. Launched in 2006 with \$1500 in self-funding by community members and countless volunteer hours, the venture became profitable and financially viable within a few months. This initiative aims to build leadership and social entrepreneurial skills in the community's youth, seeking actions that are emergent from the Indigenous worldview. Undertaken through collective actions, this initiative relies on members sharing opportunities with each other, respecting the labour and knowledge of pickers through engagement as equals and demonstrating reciprocity to buyers and workers through fair prices.

The initiative seeks to provide real-world experiential learning opportunities. Members learn and teach practical skills that support life in their places, and they seek advice from local knowledge holders. On the day prior to setting up the buying depot, "contracts" are issued to interested community members who will pick the berries. After being bought from pickers, the berries are

marketed throughout the region of northern Ontario. As the Anishinaabek participants in the research say, “we honour our responsibility to all creation by not taking more than we need” (LeBlanc, 2014, p. 139). As a result of this cultural teaching, the members grapple with whether it is acceptable to harvest food for sale and if harvesting food beyond personal consumption constitutes taking more than one’s needs. In the past, the community generated livelihood through participation in the traditional economy. Community and family bonds were stronger and reciprocal, and goals such as profit maximization and individual competition were not found. The Elders emphasized conviviality in their speeches, citing the role of families in primary production and interactions with each other and neighbouring communities to trade food, goods, fuel, and knowledge. These exchanges were steeped in respect, reciprocity, and the expectation of mutual responsibility (LeBlanc, 2014).

This behaviour has been amply documented by many researchers, with two classical works explaining in detail this type of moral economy that was prevalent in human history for centuries: the gift economy and reciprocity (Mauss, 1970; Sahlins, 1972). This project is an example of a mixed-economy approach, blending customary food commons (the blueberries growing on collectively held lands and harvested collectively) and contemporary food commons (the business linked to outside markets in Thunder Bay). In 2012, the project brought an estimated \$30,000 to \$50,000 into the local economy. The greatest barrier to success for this initiative is transportation. A return trip between Aroland and markets in Thunder Bay is more than eight hours (Stolz et al., 2017). Another issue the youth face is the aerial spraying of glyphosate-based herbicides across the northern Great Lakes’ forests and the impact on blueberry production (Pine, 2018).

Informing the cooperative actions with an Indigenous worldview has created unique opportunities on shared lands and reinvigorated food commons approaches within the territories. And while poverty, disenfranchisement, and interpersonal health issues—legacies of Canada’s defaulting on treaty obligations and the residential school system—continue to impact Aroland youth, this project sets a template for further opportunities to develop commons regimes in the territories, with similar benefits.

Nutrition North Canada

A counter-case that obscures non-Western valuations

The Nutrition North Canada case study is informed by research resulting from a comprehensive five-year program review to provide critical guidance (Galloway, 2017), including an example of how valuing food strictly as a commodity is impacting the effectiveness of Indigenous food security policies. As part of his work with the Sudbury Social Policy Council, co-author Joseph LeBlanc engaged in project development aimed to improve the health and self-sufficiency of aboriginal communities. Within this initiative, the government was prepared to give training money to one farmer who would make a business to sell to ten people, but not to ten people whose aim was food self-sufficiency and reciprocity. The market-oriented policy priorities were clear in this example. Similar problems were encountered when LeBlanc attempted to develop a program to involve First Nations engaged in the moose hunt in the Nutrition North Canada program, learning first-hand the impacts of imposing “food-as-commodity” solutions. The Nutrition North Canada case study illustrates the disconnect between the top-down imposition of a commoditized food narrative (an ideological construct) and the resistance to this narrative by those who are supposed to benefit from the governmental support at the bottom.

Launched in April 2011, Nutrition North Canada (NNC) is a governmental program designed to address food insecurity in northern communities that works with, and subsidizes, registered retailers and suppliers across the North (Galloway, 2017). NNC airships food items, from industrial food system staples like fruits, vegetables, milk products, eggs, and meat to “country food” staples like Arctic char, caribou, and muskox. Indigenous and Northern Affairs Canada is charged with monitoring compliance to ensure savings are passed on to northern residents. The program budget is \$60 million a year with new funds in 2016 to extend the number of communities participating and adding a healthy eating education component for an additional \$4.7 million annually. In 2020, an additional \$25M for Nutrition North as a COVID-19 response (Cooper, 2020).

Galloway (2017) enumerated several shortcomings in the program prior to 2016 that allowed retailers to maximize profits at the expense of community wellbeing. The review revealed gaps in food cost reporting and lack of price caps and other means of ensuring program targets were met. These gaps may have been avoided if multidimensional food values were taken into account (see Figure 1). Galloway’s research confirmed the critique held within Indigenous communities that NNC made no provision for country food to be sourced locally using traditional methods of harvesting and processing foods. In that sense, NNC approached the food security issues faced by northern Aboriginal peoples through market mechanisms exclusively, using a food-as-commodity worldview. This lack of recognition of the multidimensionality of food misses the opportunity to enhance community self-sufficiency through customary food economies. The program as of 2021 continues its focus on direct subsidy for a handful of retailers to lower prices and make southern-sourced foods more affordable to First Nations and Inuit communities in what is broadly termed “the North.” As the program under the Liberal government still fails to cover costs of hunting or fishing gear, bottled water, or locally provided culturally appropriate foods, the program is even more problematic for Inuit peoples (Cooper, 2020) whose colonization has only occurred in the last seventy years.

This market-based model works on the basis of unaccountable competition between a few corporations that are heavily subsidized with public funds. Additionally, subsidy claims are outsourced for processing, leaving the Northern (and local) public little oversight of the claims process. Moreover, retail consolidation in the North affects what is available where, and with the NNC filing to set price caps on subsidized items, the main beneficiaries of the program seem to be the retailers. Lack of competition is so profound that one entity, the North West Company, received half of all NNC subsidies, amounting to \$32.8 million in 2014 to 2015 alone (Galloway, 2017). Galloway’s report and the ongoing attestations of those relying on NNC arrive at similar conclusions: engendering sustainable improvements to food security in target communities requires consideration of alternative forms of policy. And yet, those alternative policies cannot be expected to produce a new result while food continues to be framed as a pure commodity to be distributed through market mechanisms. The Liberal government that defeated Harper in 2015 has to date maintained NNC’s market-based solutions approach, which only further entrenches an exploitative market relationship that corporations have in Northern communities (Cooper, 2020). In this way, the current Canada Food Policy approach reinforces the existing food system as if it were the only food system. When taken in context of other policy areas, Canada’s material and legislative support for development projects that undermine land-based food self-sufficiency and Indigenous food systems appears to conflict with the Canada Food Policy (Government of Canada, 2019) goal of strengthening Indigenous food systems. During the COVID pandemic in 2020, Trudeau’s Liberal government invested an additional \$25 million to address rising food crises amongst Indigenous communities as the pandemic continued. Rather than supporting mutual aid networks on the ground, the bulk of these additional funds are being applied to Nutrition North and other direct-to-business subsidies.

Critical food guidance in the case of Nutrition North draws attention to a gap in fiduciary duty to guarantee that food has the same legal protection and universal access as health or education for Treaty people and for those identifying as Canadian within the Canadian state. First Nations, Métis, and Inuit communities experiencing food insecurity find in Nutrition North a subsidy for further imposition of settler colonial food systems. At the same time, federal programs and Ministries oversee destruction of the very habitat the Indigenous food systems rely upon for providing adequate and appropriate levels of food security. Advocates argue there are missed opportunities to have invested pandemic-related funds to address rising food costs with programs that could support and enhance food sovereignty rather than further dependence on grocers.

Discussion

The theoretical and practical framework of food as a commons offers critical food guidance for addressing multiple socio-ecological issues connected with food systems. Following this guidance framework involves adopting the eight food dimensions (Figure 3.1) as a policy lens at various levels of decision making—from household choices through to the emerging National Food Policy in Canada (Government of Canada, 2019). In relation to the case studies, we see that Anishinaabek food systems share values identified in the multidimensional food values framework (Figure 3.1). Scholars have echoed the participants in these case studies in describing food as sacred (Levkoe et al., 2019; Bartlett et al., 2012; Pine, 2018), while food as a cultural determinant is expressed in the gifting relationship some Indigenous societies have with food (Settee & Shukla, 2020). Within Figure 3.1, we find Food as cultural determinant, as seen in the role food gift-giving plays in governance and the role various staple foods play in various societies. We find Food as a renewable resource, as sacred, and as medicine—all dimensions of food value expressed by Indigenous peoples across all three case studies. (Settee & Shukla, 2020).

Adopting a tri-governance model (Figure 3.2) in resource development initiatives that prioritizes industrial food systems over short-term resource exploitation could strengthen Canada's Nation-to-Nation relationships with Indigenous peoples. These shifts could correct the disconnection of treaty rights from food security in policy—a connection that is evident in the pre-Confederation treaties (Venne, 2017; Sayers, 2021; Borrows, 2019). Application of these two frameworks within the “Canadian” context must consider implications for honouring agreements (or lack of such agreements) between the Government of Canada as the body accepting the Crown's duties, and the various First Nations, Inuit, and Métis Nations with whom the Crown has sought to Treaty.

For the Aroland Cooperative and the TEK Elders case studies in particular, applying what Melanie Goodchild calls Anishinaabek Gikendaasowin (knowledge) and governance could expand the utility of the model in both rural and urban food systems contexts by introducing an expanded conceptualization of “what” is being governed and for “whom” (McGregor, 2013; Whyte, 2021). Further inquiry designed and led by Indigenous researchers and knowledge keepers is informing the development of this tri-governance model (Figure 3.2) in the context of the 1850 Robinson Huron Treaty (Robinson Huron Waawiindaamaagewin, 2020). The authors of this work are cautiously optimistic about the potential for Canada's National Food Policy legislation to create points of access for the normative shift the authors identify in this paper, particularly through the Food Policy Advisory, for approaching food as a commons within the context of Indigenous-Canada relations.

Indigenous food systems advocates are not waiting on theoretical consensus before engaging in the spaces of nuance where industrial and Indigenous food systems currently intersect. For example, Thunder Bay Area Food Strategy (TBAFS) began to develop partnerships with regional

Indigenous leaders and organizations to better understand the barriers and opportunities to engagement with the TBAFS and their efforts to affect food policy and improve food security in the region. Their efforts led to the establishment of the Indigenous Food Circle, “which aimed to reduce Indigenous food insecurity, increase food self-determination, and establish meaningful relationships with the settler population through food” (Levkoe et al., 2019, p. 102). Such relationship building particularly in urban contexts predates discussion on models for normative shifts away from food as commodity towards visions of what scholars refer to as “food commons” that are centred in Indigenous governance systems (DeSchutter, 2013; McGregor, 2013).

Application of frameworks—like the Tri-governance framework (Figure 2)—derived without direct input from language speakers and the community members themselves is a recolonizing approach (Levkoe et al, 2019; Tuck & Wang, 2012). Further work on Food as Commons concepts within the Canadian Food Policy context will benefit from centering resurgent Indigenous governance priorities and reflect the worldviews of the specific Indigenous peoples in a given region. Adding an Indigenous governance layer to this framework must be based on community input and reflect the unique Nation-to-Nation relationships of that region. Without such care, application of the tri-governance framework as a tool for shifting to food commons re-colonizes Indigenous food systems (Tuck & Wang, 2012; Reo et al., 2017)

Some would assume Canada’s adoption of United Nations Declaration on the Rights of Indigenous Peoples (known as UNDRIP) legislation in 2021 would have a positive impact on food policy. Proponents of UNDRIP advance the legislation as a method to respect Indigenous food sovereignty (APTN, 2021). Arguments against development projects, for example, as infringements on Anishnaabe treaty “common” rights to “hunt and fish” can be made relative to UNDRIP. Critics of Canada’s UNDRIP note that there exists plenty of current legislation and legal obligations in place now that Canada fails to implement. Chief Dean Sayers rejects UNDRIP as an inferior deal for Robinson Huron treaty Territory signatories (Sayers, 2021). A lack of will to implement the already existing legislation rather than a lack of instruments is at play, with those expressing concerns about UNDRIP concerned the Canadian interpretation of UNDRIP will undermine specific Treaty agreements in place today (McIvor, 2020; APTN, 2021) and further municipalize Indigenous governance in the process (Schmidt 2022). As the act currently stands, there is no provision for either land back or for respecting veto on projects that interfere with Indigenous food systems. To date, Canada has treated the diverse Indigenous traditions around food “with contempt by settler governments and viewed as detrimental to colonial notions of progress and development” (Levkoe et al., 2019, p. 103). As with all areas of policy, there is no “Pan-Indigenous” solution.

With resource exploitation sanctioned by the government through contracts with private enterprises—as the TEK Elders’ face in the Robinson Huron Treaty territory with forestry giant AECOM—the capacity to maintain or rebuild traditional food economies is weakened. The complex agro-forestry ecosystems that supported cranberries, blueberries, deer, fish, and moose populations long replaced with forestry monocultures (Pine, 2018.; Stolz et al., 2017). Revisiting commodification not only of foods but of forests and water resources is crucial to address Indigenous peoples’ food security issues (Desmarais & Wittman, 2014). Forest commodification treats vast swaths of ecosystems as timber, and after cutting, commercially valuable species are prioritized turning once biodiverse food forests into sterile plantations. Yet forests and waters provide traditional foods, including migratory species like caribou and fish, and thus vast territories of intact wilderness are required to ensure a functioning food system. Adjusting Canada’s environmental assessment processes at the provincial and the federal level to prioritize this broad view of food production would ensure resource developers would have to consider

impacts on Indigenous food systems before development permits could be issued. In this situation, application of UNDRIP could provide further legal support within Canada's court system to uphold food rights connected to land management.

Collaboration with and leadership from Indigenous peoples is necessary to push past the commodity view and embrace the commons in an appropriate context to the lands, languages and Peoples who inhabit them that “Canadians” occupy. Before such work can meaningfully emerge, Canada's food movements must first “critically interrogate oppressive structures that include capitalism, patriarchy, white supremacy, and colonialism” (Levkoe et al., 2019, p. 103). Health units and other municipal institutions have made significant improvements in food guidance over the past few decades, as evidenced with the adoption of the Food Pyramid discussed earlier in this paper. Yet this approach uncritically applied negates “the cultural and geographically-dependent, meat-based diets of many First Nations peoples” (Sumner & Desjardins, 2019, p. 3).

A commodified view of life is wrapped up in these oppressive structures, and thus to adopt a commons framework is not a separate exercise from dismantling these. It is arguable in a settler-colonial context that preliminary work to shift these norms is required before any meaningful engagement with food as a commons can take place. A normative shift in how we value food, away from pure economic considerations and towards legitimizing non-economic dimensions, develops the capacity to act politically based on these other considerations. Food advocates could champion this shift everywhere—from food policy councils to regional health units. Food as a human right, an essential resource for survival, a public good, and a commons cannot just be judged by its economic returns, investment costs, or economic feasibility, but by the social impact it can have on our common wealth, reducing inequalities, securing essential rights, and safeguarding natural resources for current and future generations.

Public policies that incorporate this normative shift can be instruments for transformation if Canada chooses to recognize the multidimensionality of food and its consideration as a commons, public good, and human right in the preamble of the new National Food Policy (ad hoc Committee, 2017). Examples across Canada suggest this normative shift is already under way in the form of various municipal food charters in communities like Fredericton and Kamloops to the provincial food charter adopted in Manitoba, all of which view food in multidimensional ways. Such normative shifts become vehicles for the third component or pillar of critical guidance identified by Koç et al. (2017), questioning power. Food as a commons offers policy levers for mitigating and adapting to climate breakdown.

The benefit for public good can be modeled by utilizing public properties, such as schools, libraries, municipal lands, and government buildings to initiate or amplify food commons projects. Public institutions can promote freely-accessible urban gardens, purchase and offer organic food in schools, hospitals, army headquarters and the like, include green rooftops as compulsory architectural measures, ban ultra-processed foods on their premises, or employ farmers as public servants just to name a few. Another concrete policy action triggered by a normative shift: food provided to our children in school lunch programs should be locally-sourced, seasonal, organic, and freshly prepared. In this way, the fourth pillar Koç et al. (2017) identify—encouraging social change—is built. There are political implications for this counter-hegemonic approach to food systems, but they require a broader valuation of food and a new social construct to view, produce and distribute food differently. Without a solid sense of this altered landscape—a narrative to guide change—policy explorations for reframing food as a commons will be less effective in articulating pathways for transformation.

Nutrition North, today a failed policy, could implement the multidimensional food values model (Figure 1) to help address fundamental flaws embedded in a food-as-commodity approach. Research across the North suggests that developing co-management agencies and nutritional monitoring, promoting knowledge exchange on how northern Aboriginal peoples adapt to consumption of alternative species, and fostering regional sharing networks (which are currently excluded from the NNC Program) together preserve nutritional integrity and cultural survival (Armitage et al., 2011; Berkes & Jolly, 2002; LeBlanc, 2014; Rosol et al., 2016).

Yellowhead Institute's 2019 Red Paper states, "as food sources dwindle and face extinction due to the long-term impacts of industrial infrastructure, extraction, habitat loss, and human settlement" it is crucial for Canadians to recognize "Traditional foods are not just about sustenance, but medicine and education as well" (King et al., 2019, pp. 32–33). Canadian governments' ongoing focus on "food security" is an exercise of simply supplying ample caloric count to avoid crisis while allowing destruction of the ecosystems that provide stable food systems and lead to food sovereignty.

Conclusion

Successful transition to food as a commons depends in part on ensuring this interconnectedness is captured in the way we collectively define goals and institutions for governing that transition. Applied to sustainable and fair food systems, the way we define food (values, purpose, meanings) shapes the governing mechanisms we can devise to better produce, distribute, and consume that food. The framework proposed here offers critical food guidance to embed the multidimensionality of food and its consideration as a commons in alternative collective decision making structures that clearly would require different institutions, policies, subsidies, and legal frameworks. This normative shift offers not only guiding principles relevant for regional and urban food policy councils within the Canadian state, but also critical food guidance for government policies that shape First Nations food initiatives. Programs aimed to improve Indigenous peoples' food security that adopt a multidimensional food values framework give space for program delivery to recognize non-economic and relational values (Pascual et al., 2017), which are largely obscured in Western policies and subsidies. Moreover, by accepting non-economic dimensions of food as well as economic ones, food commons programmes can promote localized traditional or country food networks and fulfill the duty to protect wild spaces in which Aboriginal peoples engage in the food forestry, harvesting and hunting economies as protected in various Treaties—the Robinson Huron Treaty in particular.

Further research is required to make the case for the Canadian government to adopt a declaration of the multidimensionality of food, such that food is no longer considered as a mere commodity but a commons, public good, and human right that shall be guaranteed to every Canadian citizen. Adopting this framework could relieve state, private sector, and civil society from engaging in the conceptual and economic gymnastics involved with trying to commodify other non-economic food dimensions. Such work requires building momentum to engage what Koç et al. (2017) call the third component or pillar of critical food guidance—questioning power.

Deeper attention must also be paid to shifts in policy frameworks provincially, territorially, and federally—from self-governance negotiations to "moderate livelihood fisheries" to adopting UNDRIP. These policy changes are reshaping treaty relationships and further entrenching an approach to "Nation-to-Nation" that reduces the Anishinaabek Nation and other Indigenous communities with

inherent title and rights to what Russ Diabo calls fourth level municipal-style governments (Diabo, 2018). Food movements must become involved in and uplift Land Back movements to ensure these assimilative efforts do not undermine hundreds of years of resistance and the regenerative efforts of Indigenous communities seeking to recover their own foodways and lands and waters for the sake of their health and that of their grandchildren's grandchildren.

The ongoing COVID-19 pandemic has raised the alarm on hunger, as well as the opportunity for mutual aid. Pursuing partnerships for land to be used in food commons schemes could be a mutual aid “tool for localizing the food system and decolonizing land at the same time” (Bowness, 2015, pp. 24–25). The desire to create commons on public lands has both the potential for both decolonization (Grey & Patel, 2014) as well as the extension of existing conflicts.

Employing participatory action research, as the one used here with Anishinaabek communities, as a methodology for food commoning scholarship offers another tool for building local capacity to transform food systems and decolonizing relationships. In that sense, valuing and governing food as a commons is itself critical food guidance. Food commons offers a set of principles that inform practice, reconnecting food to its multiple dimensions that are not valued when food is simply a commodity.

Chapter 4: Cumulative impacts of settler colonial policy on Anishinaabek foodways

The second manuscript, to be submitted to Settler Colonial Studies, seeks to overcome limitations of settler colonial knowledge systems by centring an Anishinaabek research paradigm in collaboration with TEK Elders. We analyze the impacts changes to forestry legislation in 2020 have on Anishinaabek foodways. We ask what this study reveals about limitations of settler colonial knowledge systems for understanding the impacts of forest 'management' decisions on Anishinaabek governance and law.

Before engaging the second manuscript, I reflected on the implications of the first manuscript for imagining shared food futures. In the face of biodiversity loss and ongoing climate breakdown, shifting settler colonial governance towards governing food as a commons based on customary and contemporary experiences could play a role in increasing socio-ecological resilience (Vivero Pol, 2015; Holt-Giménez & van Lammeren, 2019; Raworth, 2017). Recognizing food values beyond that of food as a commodity can be an entry point for moving past agricultural frameworks for food systems towards embracing river, lake, and ocean systems as well as grassland, forest, and mountain ecosystems as vital to Indigenous food systems function. Separating forestry and agriculture at the ministerial level siloes of “food” and “timber” is a failure of Ontario policymakers to recognize the intrinsic role forested watersheds play in upholding the Anishinaabek Nation’s food security. Shifting these settler colonial perspectives on forests is central to meet Crown obligations Canada has assumed laid out in the treaties that are currently unmet (Diabo, 2018; Manuel, 2018). Such a transformation would build forest health for future generations to benefit.

Western or, more accurately, settler colonial, impositions of “democracy” and liberal governance mechanisms (along with its perspective on individual rights rather than on collective responsibilities to humans and non-humans) are inherently problematic for Indigenous peoples engaged in resurgent movements (Henhawk, 2018; Mills, 2019). The adapted tri-centric governance model proposed for food commons in this chapter may offer a useful heuristic through which those educated in what Rachel Ann Snow calls ‘the colonized mind’ within settler colonial education systems to think more expansively. This approach, however, ought not be applied as a launch point for cross-cultural organizing nor as a proposed policy framework. This framework still centres Canada’s liberal constitutional order and builds on a “rights” based conceptualization of food commons that remains transactional. It is most useful as a tool for supporting re-conceptualization for settler society steeped in a commodity view of food and food governance.

What does analyzing customary and contemporary Indigenous food initiatives through a food commons lens reveal about limitations of applying settler colonial frameworks for imagining shared food futures? After publication, I reviewed the proposed framework from Chapter 3 with colleagues and collaborators prior to bringing the framework to Anishinaabek Elders to review, as I had initially proposed as a next step in this dissertation. I was directed to reflect on the settler urge to develop novel frameworks that reference Indigenist standpoints within Eurocentric or settler colonial frameworks. As Kepkiewicz and Rotz (2018) pointed out, it is “crucial to consider what it means to ask for Indigenous involvement in the development of government policies. For settlers, involvement might feel like a step toward reconciliation. However, are settlers actually giving up power if we enter into a process with pre-formed frameworks, scales, and limits in place?” (Kepkiewicz & Rotz, 2018, p. 19). To Kepkiewicz and Rotz’ point, the manuscript in Chapter 3’s analysis of customary and contemporary Indigenous food

initiatives through a food commons lens reveals limitations of applying settler colonial frameworks for imagining shared food futures.

If in the process of developing a national food strategy, settlers are looking for affirmation or are unwilling to challenge our “right” to define food systems in Canada, settlers risk performing what Tuck and Yang (2012) call “settler moves to innocence.” These moves “are those strategies or positionings that attempt to relieve the settler of feelings of guilt or responsibility without giving up land or power or privilege, without having to change much at all” (p. 14). Instead, settlers are often credited “for being so sensitive or self-aware,” thus increasing their own credibility, professional standing and ability to work with marginalized groups. Yet, as Tuck and Yang explain, settler moves to innocence “only serve the settler”. (Kepkiewicz & Rotz, 2018, p. 20)

This critique includes the depoliticization of food systems research within settler colonial scholarship through the erasure of the role settler agricultural systems have played in facilitating land dispossession and occupation of food-producing lands within Indigenous economies. Land dispossession and occupation under the *Indian Act* (1874) relied on enclosure of Indigenous peoples within imposed reserve boundaries. Such impositions directly contributed to the food insecurity experienced throughout the Anishinaabek Nation. This erasure and enclosure depended on “removal from homelands and land-based food practices towards a rigidly controlled landscape in which humans dominated nature,” itself “enforced as a kind of salvation for Indigenous communities” (Robin et al., 2023). In both food democracy literature and in sustainable forest management literature (SFM), settler colonial views of “forest,” “sustainability,” and “environment” set the playing field on which Anishinaabek intelligence must translate and adapt and upon which negotiations must occur. They have little consideration of the impact of the claims supporting these views of “forest,” “sustainability,” and “environment” let alone the veracity of the narratives upholding these views.

In such a context, Anishinaabek governance and law are erased prior to even beginning a conversation about strategies like adaptive co-management. This critique would be too harsh if it implied the researchers and the various communities engaging in forms of adaptive co-management and other tools developed to bring the intentions of the sustainable forest management approach to fruition are not keenly aware of the discrepancies between intent and outcome, as well as the role colonization plays in disadvantaging Indigenous peoples within systems designed by and with western science-based perspectives in mind. I engage in this study with great respect and reverence for the settler researchers whose work has laid foundations for the work I have engaged in over six years.

Respecting Anishinaabek foodways means adjusting how settler society views forests. Resisting the colonial temptation to separate spirit and matter, person and environment, and thus reproducing colonial logics has been a central warning within the literature and the transcripts. Rotz et al. (2023, p. 93-94) “examines the extent to which Indigenous-led food systems and sovereignty goals, frameworks, and priorities are recognized, affirmed, and supported within the agri-food public sector,” concluding that “non-Indigenous people lack crucial knowledge concerning treaties and Indigenous relationships to land and stewardship, which creates ongoing and significant barriers to reconciliation.” To that end, Chapter 4 presents Anishinaabek understandings of treaties and Anishinaabek relationships to land and stewardship, while Chapter 5 explores the underlying limitations of colonial knowledge systems and frameworks that prevent understanding these Anishinaabek perspectives even when shared. In Chapter 5, I reflect on what it means as scholars within colonial knowledge systems (CKS) to actively confront colonial systems and prevent their work from replicating settler colonial dynamics.

Indigenous scholars, knowledge holders, Elders, and community leaders are engaged in resurgence and continuance of Indigenous laws and governance. In 2019, the Canadian federal government issued a policy directive to include ‘Indigenous knowledge’ in project reviews and regulatory decisions relating to the *Impact Assessment Act* (S.C. 2019, c.28, s.1), the *Canadian Energy Regulator Act* (S.C. 2019, c.28, s.10), the *Fisheries Act* (R.S.C. 1985, c. F-14), and the *Canadian Navigable Waters Act* (R.S.C. 1985, c. N-22).

Yet Indigenous scholars teach us from their bodies of work that ‘inclusion’ and ‘recognition’ of Indigenous knowledges are insufficient to engender sustaining food systems within Indigenous nations (Jewell, 2018; Whyte, 2011; Coulthard & Taiaiake, 2014). Further, focusing on inclusion and recognition serves to de-politicize the analyses that connect Indigenous foodways to land back movements and a resolution to settler colonial occupation and over-reach in Indigenous lands. Indigenous narratives are erased through the retelling of Canada’s narratives.

Imagining food futures through frameworks arising from within limitations of settler colonial knowledge systems will replicate the dynamics of the settler colonial knowledge system. This situation is evident when considering the case of glyphosate use in Indigenous forests across central and northern Ontario. To better understand this exploration in colonial knowledge systems’ limitations, I offer the following co-authored case study with the TEK Elders in the Robinson Huron Treaty Territory. Our study centres an Anishinaabek-led analysis of cumulative ‘impacts to rights’ for Anishinaabek in the Robinson Huron Treaty Territory under recent changes to Ontario’s forestry industry legislation. TEK Elders and this author adopt a view that a liberal democratic rights-based framework is a settler colonial framing that does not uphold Anishinaabek Law and governance. Yet even by the standards of Canada’s rights-based framework, changes to Ontario forestry legislation obstruct Anishinaabek foodways by fundamentally altering the landscapes in which Anishinaabek exercise Treaty-protected hunting and fishing rights.

Recognizing that food is more than a commodity, I seek to re-imagine how, in a settler colonial context, we might govern ourselves to ensure our foodways are sustaining (Chapter 3). To re-imagine food systems governance, settler society must first come to understand the truth of Canada’s occupation of Indigenous lands and the impacts Canadian economies have on Indigenous foodways. Engaging with Indigenous food sovereignty literature and deepening my relationships with TEK Elders and other collaborators, I heard Indigenous scholars, community leaders, and knowledge holders calling for settler colonial institutions and industry to listen to and prioritize Indigenous Knowledges (IK) and knowledge holders. As Latulippe (2017) demonstrated, IK is no more a monolith than is knowledge generated within colonial knowledge systems frameworks (Chapter 5). How settler colonial systems “include” or “recognize” IK has profound impacts on outcomes. Chapter 5 reflects on deficits in colonial knowledge systems that create barriers for CKS scholars to engage with Indigenous knowledge systems (IKS) with integrity. In Chapter 4, we examine ways that major changes in 2020 to Ontario legislation impede Anishinaabek foodways. Written in collaboration with Dr. Sue Chiblow and Traditional Ecological Knowledge Elders coordinator Caroline Recollet, Chapter 5 is an Anishinaabek-led, cross-cultural study characterizing cumulative impacts of settler colonial development on Anishinaabek foodways. This participation action research study required being on the land and gathering in community between 2017 and 2024 with members of the TEK Elders. It involved travelling and listening with my whole being to Elder Wille Pine (Naganobi) touring me through his “Lab” along the Mississauga River, and walking the land with Elder Raymond Owl, and having tea with Elder Grace Manitowabi, and listening. In this chapter, my co-authors Sue Chiblow and Caroline Recollet characterize cumulative socio-ecological impacts of settler colonial policies on Anishinaabek foodways informed by Anishinaabek knowledge

holders' analyses. This study is in part a response to Indigenist scholars, radical geographers, First Nations leadership, and front-line land defenders all calling for reflection and transformative scholarship in which settler colonialism is made a visible part of the analyses. For TEK Elders, articulating the following manuscript contributes to education efforts as well as to future legal, political, and social action.

Cumulative impacts of legislation on Anishnaabe foodways

Jodi Koberinski, Dr. S. B. Chiblow, and Caroline Recollet, MSW

SUBMITTING TO *SETTLER COLONIAL STUDIES*

Overview

For the Anishinaabek Nation, forests are sites of social, ancestral, and more-than-human relationships that sustain Life. Canada's settler colonial governments treat forests as sites of timber extraction that sustain industry. Canadian legislators fail to see the forest for the trees. This case study examines the cumulative impacts of Ontario's forestry legislation on Anishinaabek foodways. Foodways include cultural, economic, scientific, linguistic, spiritual, and intergenerational dimensions of food in a society. Anishinaabek foodways are affirmed in the 1850 Robinson Huron Treaty, a nation-to-nation land sharing agreement between the Anishinaabek Nation and the British Crown. This study discusses the impacts of changes to Ontario's forestry legislation on Crown obligations under the Robinson Huron Treaty (1850) to protect Anishinaabek foodways. The Chiefs of Ontario issued a 2008 call for a moratorium on glyphosate use in forestry. Forest operators claim herbicide use speeds commercial species regeneration, yet this strategy converts food and medicine-bearing forests to pine plantations that lack the biodiversity upon which Anishinaabek foodways depend. This case study begins with Anishinaabek Elders' reflections on the use of the herbicide glyphosate to 'manage' regrowth following clearcuts. Anishinaabek Elders observe Ontario's approach to management results in the trees having no parents, the grocery store being empty, and more-than-human relatives being harmed. Results demonstrate that Ontario forestry legislation disregards the Crown's Treaty-affirmed obligations to uphold Anishinaabek hunting and fishing rights. This study shows efforts to 'include' Indigenous knowledges in colonial frameworks, like EAA (1987) and CFSA (1995), end up reproducing false narratives that uphold unsustainable forestry practices and undermine Indigenous governance. The study recommends that settler scholars and forest practitioners update their understandings of Crown responsibilities through Indigenous peoples' Treaty perspectives. Respecting Anishinaabek foodways means adjusting how settler society views forests.

Key words: Anishinaabe foodways; Settler Colonialism; cumulative impacts; Environmental Assessment; Glyphosate.

4.1 Introduction

Canada approaches forests as 'resources' to be 'managed' for timber extraction (McGregor, 2000) resulting in changes in forest composition that impact Anishinaabek foodways. Dr. Anna Powar offered the term 'foodways' as an alternative concept to 'food systems' (Powar, 2007). Foodways are distinct cultural practices a Nation engages to maintain nutritious, culturally determined, economically viable, sustaining food practices. Foodways include lived, scientific, spiritual, economic, ancestral, cosmological, and place-based knowledge and governance instructions connected to those knowledges (Powar, 2007). Traditional Ecological Knowledge (TEK) Elders of the North Shore of Lake Huron came together in 2013 to protect Anishinaabek forests and water ways upon which Anishinaabek foodways depend. Anishinaabek legal scholars demonstrate that Anishinaabek never ceded governance over Anishinaabek territories (Mills, 2022; Luby, 2010; Borrows, 1997).

A recent study by Patterson et al. (2013) centred an Anishinaabek research paradigm (Chiblow, 2021; 2024; Patterson et al., 2013) to reflect on impacts of changes to Crown ‘forest management’ legislation on Anishinaabek foodways. Patterson et al. (2013) examined perspectives from Indigenous knowledge and western science on socio-ecological impacts of glyphosate spraying in Anishinaabek forests and identified three knowledge gaps. This manuscript offers a case study to begin addressing the third of Peterson et al.’s three gaps: research regarding the impacts of glyphosate-based herbicides to Indigenous culture and community wellbeing. A short review of settler colonialism in Canada and of the 1850 Robinson Huron Treaty and the Traditional Ecological Knowledge Elders will give context before stating this study’s research questions aimed at addressing this gap.

Settler Colonialism in Canada

Canada is a settler colonial state. Carlson (2016, p.26) described settler colonialism as a “process whereby settlers have come to North America, taken Indigenous land, set up their own systems and structures, perpetrated genocidal policies and actions, and murdered, dispossessed, and marginalized original Indigenous inhabitants.” Plains Cree Metis scholar Emma LaRocque reminded us invasion is only the opening act, after which the colonizer moves in many ways “to protect and enhance his newly gained position of power” filling space colonizers perceive as ‘empty,’ renaming people and places, and “occupying strategic roles as (re)educators, employers, and, gradually, as legislators” (LaRoque, 2010, in Carlson, 2016). Potawomi philosopher Kyle Whyte offered a succinct view on settler colonialism:

Settler colonialism refers to complex social processes in which at least one society seeks to move permanently onto the terrestrial, aquatic, and aerial places lived in by one or more other societies who already derive economic vitality, cultural flourishing, and political self-determination from the relationships they have established with the plants, animals, physical entities, and ecosystems of those places. When the process of settler colonialism takes place or has already occurred in some region, the societies who are moving in or have already done so can be called “settlers,” and the societies already living there at the beginning of settlement, “Indigenous peoples.” The settlers’ aspirations are to transform Indigenous homelands into settler homelands. Settlers create moralizing narratives about why it is (or was) necessary to destroy other peoples (e.g., military or cultural inferiority), or they take great pains to forget or cover up the inevitable militancy and brutality of settlement. Settlement is deeply harmful and risk-laden for Indigenous peoples because settlers are literally seeking to erase Indigenous economies, cultures, and political organizations for the sake of establishing their own. Settler colonialism, then, is a type of injustice driven by settlers’ desire, conscious and tacit, to erase Indigenous peoples and to erase or legitimate settlers’ causation of such domination. (Whyte, in Dhillon, 2022, p. 137)

This study focuses on settler destruction of Anishinaabek food economies through landscape-wide transition from natural forests to monocultural pine plantations. This destruction is sped up by the use of aerial herbicides across Anishinaabek lands, or Anishinaabek *gdakiimnaan*, commonly known as the Robinson Huron Treaty Territory.

Robinson Huron Treaty 1850

The 1763 Royal Proclamation and the 1764 Treaty of Niagara established nation-to-nation relationships in which First Nations sovereignty is recognized by the British Crown (Venne, 2017; Borrows, in Asch, 1997). While Canada ignores the Treaty of Niagara, the two agreements are intended to be taken together, upholding Indigenous “Nationhood” or sovereignty and establishing a relationship of Crown non-interference in Indigenous governance and lands (Borrows, 1997; Corbiere, 2024).

Anishinaabek scholars characterize the 1850 Robinson Huron Treaty (RHT 1850) as a nation-to-nation agreement that honours pre-existing treaties Anishinaabek have with the Crown, with other Indigenous nations, and with ‘more-than-human’ Nations as reflected in Anishinaabek Clan governance systems (Kelly, 2022; Corbiere, 2024; Campeau, 2019). Anishinaabek legal scholar Aaron Mills quoted Elder Harry Bone, who says a treaty relationship “is about sharing and so it’s about responsibilities both for the government and our side as well obligations to do something for our people—that’s what treaty is all about” (Mills, 2022). During the Treaty of Niagara and Robinson Huron Treaty negotiations, Crown negotiators were fully aware Anishinaabek would not surrender primary attachment of their relationship with the land, regardless of any agreements allowing others to use it (Bohaker, 2024). The RHT 1850 outlines responsibilities for the Crown while upholding responsibilities for Anishinaabek (Kelly, 2022; Corbiere, 2024; Campeau, 2019). While these are solemn agreements binding generations in nation-to-nation relationship, settler governments re-purposed Treaties as tools to move Indigenous peoples off lands to facilitate settlement and extraction (Bohaker, 2024; Craft, 2013).

The Crown’s written accounts of Treaty represent a one-sided view. Anishinaabek include wampum, oral agreements, and other forms of documentation in Treaty interpretation, whereas Canadian governments treat written documents as the entirety of the Treaty. Written agreements are not understood to mean the same things in Canadian law and in Anishinaabek law, and no single document outlines Treaty terms and conditions accurately (Luby, 2010; Mills, 2019). Written accounts of various settler officials and businessmen show clear intention to defraud or mislead Indigenous peoples. The *Indian Act* (1874) prevented Indigenous peoples from hiring legal supports and attending law school to address discrepancies between oral and written histories until the 1950s (Switzer, 2011; Borrows, 2019; McIvor, 2021). Over 100 years of Canadian jurisprudence misrepresenting Treaty agreements has led to unchallenged land annexation and occupation.

According to Duhamel, contemporary Anishinaabek efforts to clarify original terms of the Treaty with the Crown cannot be dismissed considering the historic “misinterpretation of Treaties in general has generated a substantial body of case law in both the public and corporate sectors” (Duhamel, 2018). Anishinaabek legal scholars say Crown obligations arise from the RHT 1850 and the agreements that predate it including the Treaty of Niagara (1764) and the Dish with One Spoon Treaty made with other First Nations (Mills, 2019; Campeau, 2019; Corbiere, 2024).

Traditional Ecological Knowledge Elders

As Anishinaabek Peoples of the land, we have our inherent responsibilities, obligations and rights ... rooted in our *gdakiimnaan* (Robinson Huron Treaty area/ lands/ territories), in our own governments and laws and for our ability to make decisions for ourselves and for the future generations, our spiritual beliefs and practices, our languages, our cultures, customs and traditions, our freedom to move in our territories. (Dr. Sue Chiblow, 2024, p. 7)

Traditional Ecological Knowledge (TEK) Elders formed in 2013 when Elders Raymond Owl, Wille Pine (Naganobi), Emma Meawasige, and Grace Manitowabi began rallying Elders to address mismanagement of Anishinaabek forests (Owl, 2018). While the term ‘traditional’ invokes the past, traditional ecological knowledge (TEK) is alive, contemporary, and relevant. The term “TEK” was chosen by the Elders to communicate an Anishinaabek way of thinking and behaving that is distinct from colonial thinking. Traditional Ecological Knowledge is “a way of life, a relationship that requires doing” (McGregor, 2004, p. 396). TEK Elders have met with corporations, government, and NGOs over the past decade advocating for a moratorium on aerial herbicide use and a halt to plantation conversion. TEK

Elders called for this study as changes to Ontario legislation present fresh hazards to forests already under threat.

Research questions

In this paper, we ask what the cumulative impacts of Ontario's 'forest management' are on Anishinaabek foodways in the context of the 1850 Robinson Huron Treaty. We ask how the 2020 changes to Crown forestry policies impact Ontario's capacity to meet Treaty obligations as understood by the Anishinaabek Nation.

4.2 Methods

Cross-cultural collaboration brings together multiple paradigms. Held described paradigms as "fluid scholarly constructs that are not homogeneously applicable to the entire research community" in which nothing is "static nor is it applicable to any and all researchers" (Held, 2021, p. 7). Indigenous methods derive from Indigenous paradigms, and critical-liberatory methods derive from transformative paradigms. Multi-paradigmatic spaces risk being a superficial effort to decolonize methods. Meaningful decolonization, according to Held (2021), is a "radical and unsettling prospect that is about land, resources, and sovereignty" (Held, 2021, p. 7). Levac et al. (2018) cautioned against impulses to "integrate" Indigenous Knowledges with Colonial Knowledges, and instead apply frameworks that link knowledges. Applying a "cultural interface" framework prioritizes context and privileges local place-based knowledge from a standpoint of Indigenous knowledges as sophisticated systems (Levac et al., 2018, p. 5).

Case study

The case study characterizes impacts of changes in Crown forestry legislation on Anishinaabek foodways. Case studies centre context, offering epistemological advantages over other research methodologies (Cooper, 2023; Creswell, 2014; Wilson, 2007), particularly for critiques of colonial ways of knowing (Mills, 2019; Watts, 2016). Anishinaabek standpoints are prioritized as the orienting "gaze" of the analysis. Moreton-Robinson summarized the relationship between settler colonial knowledge system's feminist standpoint theory and Indigenous standpoint theory as follows: "Indigenous and feminist scholars share an understanding that their respective production of knowledge is a site of constant struggle against normative dominant patriarchal conceptual frameworks" (Moreton-Robinson, 2013, p. 331). Such standpoint theories challenge scholars to reject sociology scholarship's colonizing practices while articulating culturally relevant, liberatory narratives and frameworks (Moreton-Robinson, 2013, p. 332). Story-telling was the main method for 'data' gathering within this case study, which included listening to knowledge holders over time and in various contexts (Wilson, 2008; Mills, 2019).

TEK Elders whose words are directly reflected in this study provided permission include Elder Joe Jones, Elder Skip Jones, Elder Evelyn Roy, Elder Grace Manitowabi, Elder Raymond Owl, Elder Art Pethategoose, Elder Caroline Recollet, Elder Linda Toulouse, and Elder Urban Mejaki. This study references knowledge holders on Anishinaabek law, treaty, and governance at various Robinson Huron Waawiindaamaagewin (RHW) events the authors attended including Dr. Alan Corbiere, PhD Candidate Sharon Venne, Dr. John Borrowes, Dr. Aaron Mills, Dr. Heidi Stark, Dr. Heidi Bohaker, Elder Fred Kelly, Dr. Dan Beaudry, and Dr. Deb McGregor. Transcripts from TEK Elders recordings and published videos from events available on the 'Robinson Huron Waawiindemaagewin' Youtube channel were generated in Otter.ai and reviewed for accuracy.

Participatory action research

As volunteers with TEK Elders, the authors applied participatory action research methods. Participatory action research has been innovated by food sovereigntists and anti-globalization activists over the past forty years within colonial knowledge systems research paradigms (Levkoe, 2014; Golden et al., 2016). This study meets both criteria recommended in Coombes et al. for assessing whether PAR is appropriate for studies involving Indigenous and non-Indigenous leads: 1) This collaborative study uplifts capacity of TEK Elders to engage research independently; and 2) This collaboration is configured to centre TEK Elders' leadership of our cross cultural team of researchers for larger projects, including a future impact to rights assessment (Coombes et al., 2014, p. 848).

Anishinaabe research methods in cross-cultural studies

Over the past several years, published works have characterized the unique and distinct paradigm of *Anishinaabek g'kendaasowin* and Anishinaabek research paradigms (ARP), as summarized in Srigley and Varley (2018):

Anishinaabeg have their own methodologies (Absolon, 2011; Geniusz, 2009; Kovach, 2009; Leddy, 2010; Simpson, 2011, 2013, 2014; Wilson, 2008). We have listened, learned, recorded, and passed on knowledge in our own ways since time immemorial (Absolon, 2011; Battiste, 2013; Cote-Meek, 2014; Kirkness, 2013). We also have our own research ethics and responsibilities that we expect researchers, both Indigenous and non-Indigenous, to follow.” (Srigley and Varley, 2018, p. 55)

This cross-cultural study is possible through existing relationships. The authors affirmed permissions granted at each step of the engagement and adhered to Anishinaabek protocols. An Anishinaabek Research Paradigm draws on spirit, heart (emotional), the mental, and the physical. By trusting ourselves on the interconnectedness of the spiritual, heart (emotional), mental, and physical, we can deepen our experience of knowledge (Chiblow, 2021; p. 3). This study met the Ethics requirements for research involving Indigenous peoples according to guidelines set out by SSHRC and the University of Waterloo, which meets obligations under the Tri-Council Policy Statement for Ethical Conduct of Research. This study moves beyond these requirements by following Anishinaabek protocols. The authors offered *asema* prior to engaging Elders and knowledge holders in the study relationship. According to Chiblow, the Anishinaabek protocol of offering *asema* holds us “accountable to standing with (Tallbear, 2014) participants and their knowledge as a means of ensuring ethical research is conducted (Reid, 2020)” (Chiblow, 2023, p. 3). This “offering of *asema* activates relationships which involves a great deal of responsibility and ensures we work to strengthen and uplift those we are doing research with (Wilson and Restoule, 2010)” (Chiblow, 2023, p. 3). These relationships are reciprocal.

Meaning-making

Recordings transcribed both by the author and using Otter.ai referenced in this study are from TEK Elders meetings, public events, or published talks that one or more of the authors attended. Direct quotes are made at length, honouring commitments to faithfully reflect contributions. The primary method of meaning-making (Archibald et al, 2019) involves the spirit heart, mind, and body. In keeping with Jim Dumont's Indigenous Intelligence (2002), this study worked within a conceptual foundation of *bizindaage* (I listen to someone), *ozhibii'igi* (I write things down) in section 4.3 'results,' and *naanaagadawendam* (I consider, notice, think, reflect, realize) in section 4.4, 'discussion,' and *Nisidotaagwad* (it is understood) section 4.5, 'conclusion' (Chiblow, 2021; Dumont, 2002).

Positionality

This study is a TEK Elders-led effort to recognize, respect, and reinvigorate Anishinaabek governance across Anishinaabek ancestral lands with food and water security at the heart of our inquiry. Dr. Sue Chiblow is crane clan born, Anishinaabe, and raised in Garden River First Nation and has assisted the TEK Elders since the beginning. Her work focuses on “N’bi G’giikendaaswinmin” exploring humanity’s relationship to N’bi (Water) and how improving this relation can support well-being for N’bi, other beings and humanity. Caroline Recollet is an Anishinaabekwe Elder, community leader, and current coordinator for the TEK Elders. She is pursuing a PhD with Dr. Daryll Manitowabi. Jodi Koberinski is a settler-descended scholar-activist working with TEK Elders since 2016 and actively engaging a reflexive process with the co-authors and the TEK Elders throughout the study (Cooper, 2023). The authors respect that their learning is limited, and—as authors—will have made mistakes. The authors seek to faithfully represent the perspectives of the Anishinaabemowin speakers, knowledge holders, and TEK Elders whose thinking, knowledge, observations, and science inform this study.

4.3 Results: bizindaage*, ozhibii’igi**

***I listen to someone, **I write things down (Chiblow, 2021)*

The results are gathered from various meetings, events, gatherings, and publications that TEK Elders attended or produced between 2017 and 2024 and are organized according to themes that emerged from engaging the TEK Elders over time. Dr. Deb McGregor’s 2000 dissertation is heavily referenced as the relevant analysis offering context for examining changes in Ontario forest legislation and Anishinaabek knowledge over time. The Elders offered their wisdom in various settings over time. TEK Elder Joe Jones (Ketegaunseebee or [Garden River](#) First Nation) offers the following in regard to sharing knowledge: “In honoring the truth that I understand in our initial way, like it’s a very honorable, respectful Anishinaabe way of life. Not to close the door, not to close my mouth. To open it to all that wants to listen. In that respect of those treaties, and our people and our way of doing them, I’d be proud to speak with the honor that we were they were taught and to hold ourselves in our hearts, we all have that.” (Jones, 2024, transcript of TEK Elders meeting).

Limitations of rights-based frameworks

Canada’s rights-based framework derives from Canada’s liberal constitutional order (Mills, 2019). The *British North American Act* (1867), the repatriated Constitution (1982) and the Charter of Rights and Freedoms (1982) form Canada’s ‘origin story.’ Brewster Kneen’s book *The Tyranny of Rights* (2008) critiqued Canada’s rights-based framework as a celebration of individuality at the expense of collective well-being, uplifting “rights” over “responsibilities.” Kneen’s thesis is that any claim to a ‘right’ is made to an authority presumed to have the power to grant that right. This presumption places those claiming a right in a subservient position to that authority. Such frameworks contradict what Mills (2019) describes as rooted constitutional orders, which centre relationships and responsibilities, rather than ‘rights’ (Mills, 2019; Chapeau, 2019).

Indigenous peoples, whose rooted constitutional orders based on relationship, reciprocity, renewal, and responsibility, find themselves using the language of rights to engage with Canada’s ‘liberal democratic’ legal system (Mills, 2019; Kneen, 2008). Canada positioning of itself as the authority to whom Indigenous peoples must appeal to have their “rights” respected stems from the racist Doctrine of Discovery. The Doctrine of Discovery was upheld in the 1880s within the Canadian Court through the St.

Catherines Milling decision (McIvor, 2023; Walters, 2015). A century later, McIvor points out, Canada relies on this Doctrine for “modern consideration of Indigenous rights to explain how colonizing European countries supposedly gained the underlying title to Indigenous lands” (McIvor, 2021, p. 16). Anishinaabek reject the idea “rights” are “given” by the Crown. Elder Fred Kelly rejects settler colonial framing that Indigenous peoples seek “recognition” of their rights: “we don’t need recognition we need RESPECT of our ways so we can live in accordance to the treaties” (Kelly, 2022).

A major limitation of rights-based frameworks in the Canadian context is the assertion of Section 35 within Canada’s Constitution (1982) and its narrow interpretation by a handful of non-Indigenous judges within Canada’s legal system. Bruce McIvor of First Peoples Law reminds us Section 35 has been applied by a Court that “did not recognize Indigenous Peoples as nations with legal rights rooted in their own legal orders and lifeworlds” (McIvor, 2023). By imposing Section 35(1) recognition of Aboriginal *rights*, Canada’s Supreme Court fails to recognize ‘Aboriginal’ *legal orders*. McIvor points to *R. v. Desautel* (2021) as an example of this narrow interpretation in Canadian jurisprudence. *R. v. Desautel* (2021) interprets Section 35(1) as serving “to recognize the prior occupation of Canada by Aboriginal societies and to reconcile their contemporary existence with Crown sovereignty,” making Section 35 about Canada’s legitimacy and not about upholding Indigenous Nations. Yet even in this case, the Supreme Court acknowledged that Section 35(1) does not create ‘Aboriginal rights’ as “the practices, customs and traditions that underlie these rights existed before 1982” (*R. v. Desautel*, 2021 SCC 17, [2021] 1 S.C.R. 533). Canada does not ‘give’ rights to Indigenous peoples, yet within Canada’s liberal-democratic rights-based framework Indigenous peoples seeking to have their rights respected are appealing to Canada as if Canada is that authority.

Having acknowledged limitations of rights-based frameworks, the language of “impacts to rights” frames observations in this study in the context of current environmental assessment protocols in Canada’s *Impact Assessment Act* (2019). Canada’s *Impact Assessment Act* (2019) has a seven-step process for assessing potential impacts of a proposed project on the rights of Indigenous peoples. The first step is to understand the rights held by a community, which “may exist in documentation such as treaties” (*Impact Assessment Act*, SC 2019, c 28, s 1). This study points to Anishinaabek Elders’ views on impacted treaty rights, contributing towards this first step in a more comprehensive “impacts to rights” assessment.

Treaty perspectives

According to international law, land can be acquired by a) an invading force conquering inhabitants who surrender; b) by discovery; or c) by cession. Canada’s own courts have acknowledged the first two do not apply to its land acquisition origin story (Mills, 2022; Corbiere, 2024; Kelly, 2022). Thus, Canada has an interest in interpreting treaties as cessation agreements to legitimize Canadian claims on lands, claims that counter Anishinaabek understandings of the RHT 1850 (Restoule, 2018; Kelly, 2022). TEK Elders reject Canada’s contractual approach. Heidi Bohaker and Alan Corbiere showed that the written document is only one of three bases for treaty (Bohaker, 2024; Corbiere, 2024). The exchange of gifts that took place between the Treaty partners, the ceremonies that were conducted, and written documents that signed by the English together form the basis of treaty relationships. These relationships must be renewed annually, as stipulated by the 1850 Robinson Huron Treaty (Mills, 2022; Kelly, 2022; Corbiere, 2024). While Canada may wish to treat these agreements as relics of a bygone era, Elder Fred Kelly observes that the 1850 Treaty is a consecrated covenant that states this agreement lasts as long as the sun shines, the grass grows, and the rivers flow. This language is not mere poetry, according to Elder Fred Kelly, it is part of the constitution: It is spiritual. The language of the treaty is *Anishnaabemowin*.

English written records are not accurate nor consistent... Because the treaty exists, the parties must pursue a mutual understanding and fulfillment... “Oh the noble savage is so poetic!” . . . no, this is how long this covenant is going to last. It is not just poetic words; the meaning is in sacred law. (Kelly, 2022)

Restoule v. Canada 2018 successfully contested Canada’s interpretation of the Treaty, compelling settler governments to uphold annuities obligations. The Justice indicated that any attempt to fairly assess the Treaty’s intention must “take into consideration the fundamentally different worldviews of the parties, their shared history, and their shared images in the century leading up to the Robinson Huron Treaty” (Restoule, 2018, p. 80-81). As Elder Rita Corbiere revealed in the Restoule (2018) case, there is no Anishinaabemowin concept for ceding lands. The authors accept Anishinaabek understandings that the 1850 Treaty is a land sharing agreement, not land surrender (Restoule, 2018; Sayers, 2021; Mills, 2021).

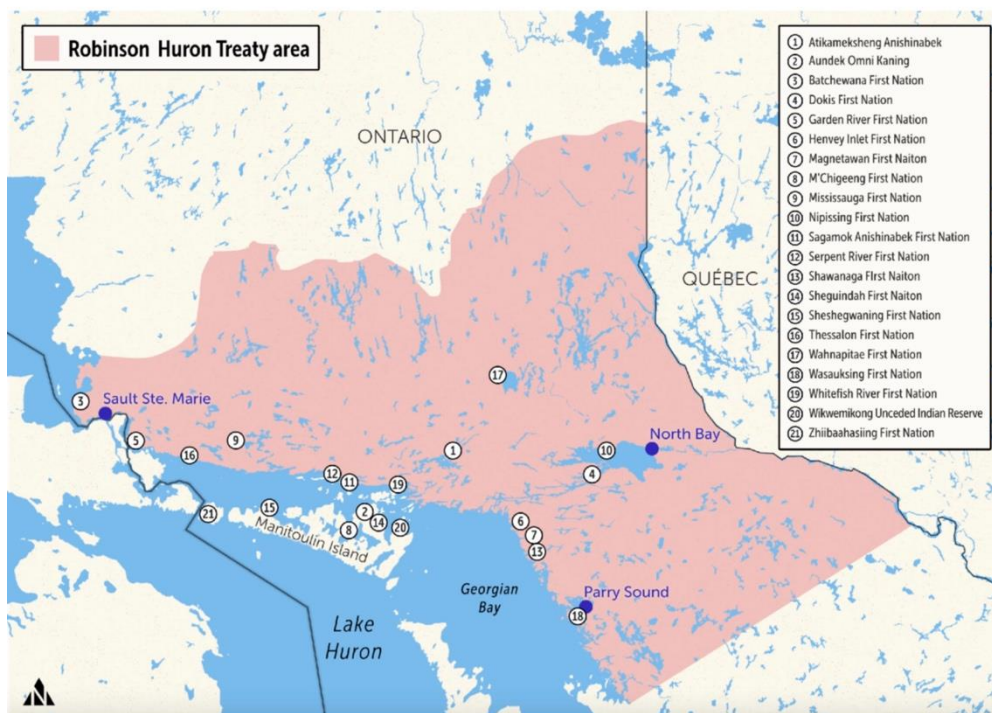


Figure. 4.1. Map of the Robinson Huron Treaty area. (Source: Shawn Parkinson / The Narwhal. <https://thenarwhal.ca/robinson-huron-treaty-explainer/>).

From Parry Sound to Sudbury, and North Bay to Sault Ste. Marie along the shores of Lake Huron, some First Nations in the map area are not signatories to the Robinson Huron Treaty.

TEK Elder Art Petahtegoose on Anishinaabek Treaty with the British
From TEK Elders archive, recorded in November 2021.

“We go into court and say why should I have to fight for the right to live in my own house? That's what's being forced on me by what's currently present in the governance. And so that's just, you know, that's what that was not supposed to happen. So the first treaty that we made in 1764, which was more inclusive, that's what it was designed to protect, that you would not become lost in your own house. So we just said this agreement that we make. It doesn't talk about the taking of the land and giving it it talks about sharing the land with the newcomer. That's the nature of what the Agreement

protects. Inside for the agreement of what happened, but it didn't include a participation. But there was an event that was occurring before 1764 1763, the year before.

There are global events that were producing outcomes that were being brought into North America. But more so internal world of the digitus nations that were present in this part of the world. And it was Britain, that became the successor of the global conflict that was occurring, they became the occupier delete, leads seat at the table. So when we sat down with them, it was because we sent them a message. If you think you're going to come here, and start to this is largest from our home. Pontiac had the wisdom at the time to say, we have to block this before we become too weakened, and we're not able to stop it from happening. So we began to rally the military force. Because Britain was not able to actually really defend itself, it just couldn't get its armies here, it was a nation that with health also was lacking capacity. And doesn't want to talk about that a lot. But that's the position that was it was in because they were asking for our help. They were asking for us to go and fight your battles for them. That we understood that they said, Why am I fighting my, my neighbors, I have treaties with those people, you're fighting with them about what we've settled 200 years ago.

So inside our teaching models inside our governance systems, we talk about these nice belts, these beaded belts, they won't come back. These wampum belt capture critical moments in time about decisions that were critical, were made. That's what's inside those, those belts, outcomes that were to change the way that we are going to live together as friendly people. So when we sat down 1764, we were dealing with the victor into global conflict. And they wanted to come in there with us. And their treaty interests? interests primarily about trade. And we said yes, that's good. Because we're going to get to use the technology that you bring with you, we're going to get to pick some of that up. And we're going to be cautious about what it is that we're going to pick up because that's what's inside the teaching model that we're following.” Art Petahtegoose is an Elder from the White Fish Lake First Nation and Atikameksheng Anishnawbek

The Anishinaabek Nation is the totality of the Anishinaabek who are in relationship with each other politically and economically around and beyond the Great Lakes Region (Kelly, 2022). Jurisdiction of the whole territory, or Anishinaabek *gdakiimnaan*, (Fig. 4.1) referenced in the RHT 1850 falls collectively to all Anishinaabek (Owl, 2018; Kelly, 2022). Claims the 1850 Treaty represents a cession of Anishinaabek jurisdiction over lands is inconsistent with settler government policies. Why consult Indigenous peoples over development if Crown lands “belong” to Canada? Anishinaabek ancestors negotiated sharing agreements with the Crown, built on earlier agreements and commitments upheld by Anishinaabek over centuries, including the Dish with the One Spoon Treaty (Chapeau, 2019; Corbiere, 2024). TEK Elders consider the shared obligation to caretake the territories to maintain Anishinaabek foodways as a key purpose of the Treaty (Pine, 2018).

Table 4.1. Examples of forest values from Canada Forest Service 1998

Examples of Commercial Values (can be assigned monetary equivalents)	
Forest Industry Activities	Non-industry Activities
-timber	-hunting
-pulp and paper production	-tourism

Examples of Non-Commercial Values	
•	Intrinsic
•	inherent value of the forest itself
•	value of the forest is independent of any other value
•	Spiritual
•	directly associated with Aboriginal people
•	reflects a special relationship and cultural identity that is tied to the forest
•	religious feeling associated with the forest
•	meaning and symbols associated with the forest
•	Ecological
•	maintaining or enhancing ecological integrity and biological diversity of the forest
•	acknowledges the relationship between ecological functions of the forest and human survival
•	Community
•	related to community identity and quality of life
•	local knowledge and values
•	non-industry commercial opportunities (tourism and recreation)
•	non-timber aspects of forest provide food, medicines, shelter, craft materials
•	Existence
a)	knowing the forest will exist for future generations
b)	associated with Aboriginal peoples' seventh generation principle

Source: CFS 1998, reproduced from McGregor, 2000, Table 6.1. p.81.

TEK Elders reflections on forest 'management'

Distinct worldviews shape Canadian and Anishinaabek conceptions of forests. Canadian policy for over 100 years reduced forests strictly to “timber value,” dismissing all other roles trees play and devaluing all life forms dependent on intact forests. By contrast, TEK Elders view all beings that form “a forest” as relatives in reciprocal relationships (Owl, 2018). Further, Anishinaabek rely on intact, diverse forests and unmolested waterways for harvesting animals, plants, fish and water creatures, medicines, and birds as well as the development and cultivation of wild rice, berry patches made through controlled burns, and corn and other terrestrial crops (Beaudry, 2023). The underlying reductionism in colonial knowledge that leads to perceiving of forests as timber for exploit is slowly giving way to systems thinking (Meadows, 2018) evident in Ontario’s adoption of the 1995 *Crown Forest Sustainability Act* (CFSA). CFSA in 1995 gestured towards an expansion of values beyond timber to be considered in forest planning by identifying “non-commercial values” as seen in Table 1 (source McGregor, 2000, p. 81). ‘Sustainability’ as understood in CFSA seeks to sustain timber supply for Canada’s forestry sector. Such single-mindedness has led to silviculture practices that are converting natural forests to commercial species plantations.

Glyphosate-based herbicides in forestry

Conversion of biodiverse food-producing forests into plantations has been worsened by glyphosate use. We offer the following short review of the concerns about glyphosate-based herbicides in forestry from within colonial knowledge systems literature.

Glyphosate is the most commonly used herbicide in Canadian forestry, initially applied 1–5 years post planting and typically during the late summer to maintain competitive advantage of conifers over hardwoods (Edge et al., 2023). Of the many underlying assumptions settler colonial scientists make when defending glyphosate-based herbicides in forests, we’ve focused on three: 1) Gly-BH use protects the commercially viable species from nutrient competition from non-commercial species (Edge et al., 2021); 2) Gly-BH use permits intensive management in plantations to spare primary forest (Wagner et al., 2004); and 3) Gly-BH use is cost effective and benign environmentally (Dampier et al., 2006). Recently, colonial knowledge systems-based research on aerial herbicide tending in forestry raises questions about these underlying assumptions.

1) Gly-BH use protects the commercially viable species from nutrient competition

Glyphosate-based herbicides suppress competition against a few commercially desirable species, largely jack pine and spruce. Aspen and other fast growing deciduous plants are of no commercial value in a system set up to process conifers. Researchers within colonial knowledge systems now understand what TEK Elders have conveyed for years: aspen is a cornerstone species, providing a home to vast populations of other dependent lifeforms (Kusbach et al., 2024) and reducing the intensity of forest fires (Nesbit et al., 2023). Aspen is an early succession species after a disturbance. Whereas aspen seek to regenerate after clear-cutting, protecting soil and returning nutrients in leaf litter, spraying with Gly-BH takes away aspen’s vital contributions to the regeneration cycle. Aspen creates conditions for emergence of healthy conifers (Rogers et al., 2020; Kusbach et al., 2024).

Clear-cut areas sprayed to eliminate “competition” risk producing poorer wood quality and tree growth than areas applying companion-tree planting approaches (Russo et al., 2020). Studies show maturing jack pine and spruce are not as healthy nor as high grade for “timber” value as their same species at maturity in a naturally but slower regenerating forest (Deighton et al., 2021; Russo et al., 2020). Pinno et al. (2013, p. 517) concluded that plantations of “young jack pine may not be as resilient to high severity fires as previously thought and that a large area of burned boreal forest may be at risk of conversion from a closed canopy forest to a more open canopy woodland ecosystem given the predicted changes in fire regime.” Herbicide management and plantation conversion deplete soils of nutrients by reducing nutrient feedback from broadleaf trees and plants, facilitating faster export of wood, harming future production, and altering the soil microbiome (Wang et al., 2021). Jack pine and spruce initially grow at accelerated speeds, yet over the longer term this management approach results in drier forests with altered soil biochemistry.

2) Gly-BH use permits intensive management in plantations to spare primary forest

Some scientists claim intensive plantation management protects biodiversity by reducing reliance on primary forest (Wagner et al., 2006; Hartley, 2002). How current plantation management is delivering on that claim is challenging to verify, as government statistics do not distinguish primary forests from plantations. Recent studies raise questions about underlying aims of managing for plantation regrowth (Kellett et al., 2023; Deighton et al., 2021). Research published in the journal *Frontiers in Forests and Global Change* concludes that in the face of urgent global crises in climate, biodiversity, and human health, public land forest and wildlife management programs must be reevaluated to balance the prioritization and funding of early-successional habitat with strong and lasting protection for old-growth and mature forests, and, going forward, must ensure far more robust, unbiased, and ongoing monitoring and evaluation (Kellett et al., 2023).

3) Gly-BH use is cost effective and safe

Pressure from Quebec's lucrative maple syrup industry in 2001 led to rejection of glyphosate use. Quebec foresters manage without Gly-BH. Thiffault and Roy (2011) showed that "early reforestation, the use of tall planting stock and intensive mechanical release brings crop trees to the free-to-grow stage without the use of herbicides and without resulting in major effects on vegetation diversity" (Thiffault & Roy, 2011, p. 117). The study acknowledges that, where maximizing "wood production" from "plantation" forests is the primary aim, Quebec's approach to management presents cost challenges. There are several ways to consider cost, however, including cost to health.

A 2023 meta-analysis by Rana et al. examined the literature addressing health impacts of glyphosate-based herbicides as commercial formulas. They found glyphosate-based formulas exhibited five characteristics of carcinogens: genotoxicity; causing epigenetic alterations, inducing oxidative stress; inducing chronic inflammation; and modulating receptor-mediated effects. Exposure causes endocrine disruption, induces chronic inflammation, and alters the gut microbiome (Rana et al., 2023). Despite protestations from pro-pesticide voices that Gly-BH dissipate quickly, research on Gly-BH in forestry by Botten et al. (2021) detected Gly-BH residue in plant tissues more than a decade after they were sprayed.

TEK Elders' perspectives on glyphosate

TEK Elders released a Position Paper in 2014, saying, "in the weeks and months that they persist in the environment, glyphosate-containing herbicides and their derivatives can do significant damage to humans and non-humans. We know this from first-hand knowledge of our territories and the ecological relationships of which we are a part." This study expands on the TEK Elders' concept of "ecological relationships," offering three observations from TEK Elders that illustrate cumulative impacts of settler policies on "ecological relationships."

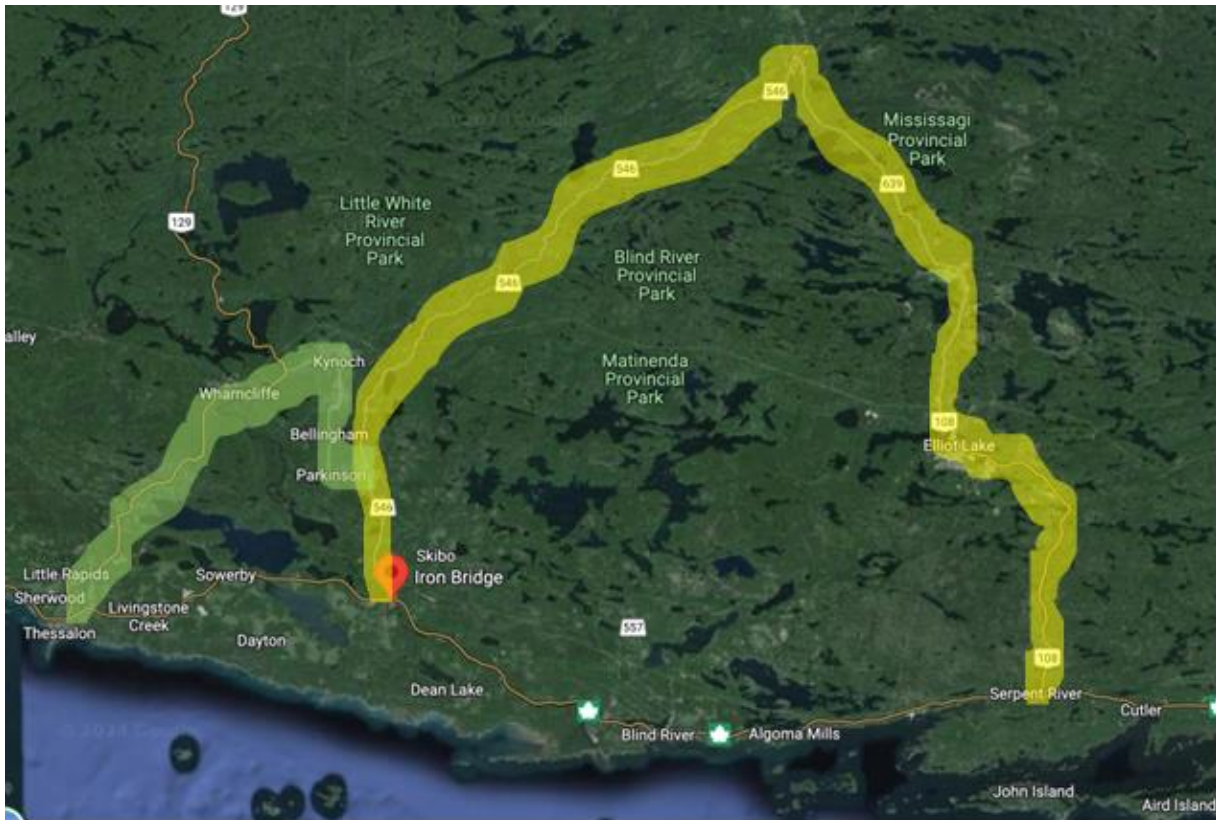
"The trees have no parents"

On one of many drives along the Mississauga River (Fig. 2), Elder Willie Pine (Naganobi) drew attention to the jack pine plantations that line highways 129, 546 and 639. He spoke about how jack pine appeared to be "trying to grow up too fast because they don't have their parents and kin to show them how to live." Anishinaabek view plants, animals, and other beings as having agency and relationships with all who share lands and waters and participate in governance. When clearcuts happen and herbicide is used to speed conversion to pine plantations, this agency is disrupted. Knowledge transmission within and between species is disrupted.

Elder Willie Pine (Naganobi) was raised to view the forest as a shared home for all the beings engaged in a dynamic set of woven relationships involving soil creatures, the plant life, the animals, the birds, the insects, and the Anishinaabek: "It's all connected" (Pine, 2021, August 8, personal correspondence). Colonization not only disrupts Anishinaabek knowledge transfer, but it also disrupts knowledge transfer amongst more-than-human kin and causes harm to kinship ties. Elder Raymond Owl spoke frequently during the study period of the fact Anishinaabek science is time-tested and practical, while settler colonial safety assessments are based on short term parameters that disregard myriad relationships within the forest.

By illustration, the TEK Elders met in 2019 with the head forester from the largest timber operator on the North Shore at that time. The head forester defended using herbicides for "tending" forests, reducing leaf litter and shade plants, and allowing the jack pine a better start to out compete commercially insignificant species like aspen. Elders told the head forester her short-term thinking does not consider aspen's role as a succession species providing nutrients and fire protection for jack pine and other species to come up in a subsequent growth wave after aspen have begun regenerating forests. Elder

Art Pethategoose reminded the forester that plants work together, as a community. Elder Joe Jones spoke of the role fire plays in this system, and of the reductionist view within settler practices equating clear cuts with fire disturbances (Pethategoose et al., 2018). Anishinaabek science observes these relationships and considers seven generations of impacts on human and more-than-human family.



Our route included Highways 129, 639, 546, and 108. We drove these routes at various points throughout the spring, summer and fall between 2018 and 2022, with each trip taking roughly 3 hours depending on our routes and where we stopped. Elder Willie spoke along the drive and pointed out changes he’s observed in the forest since the 1940s, and the changes he was made aware of prior to that time by the Elders in his life including his parents

Fig. 4.2 Elder Willie Pine’s “Lab” in Mississauga River watershed route. (Source: Author modified screenshot from Google Maps).

“The grocery store is empty”

Elder Willie Pine (Naganobi) took the lead author on a total of six full-day journeys between 2018 and 2022 on highways following the Mississauga River (Fig. 2), an area Elder Willie called his “Lab.” Elder Willie has been traversing these lands since childhood, canoeing the Mississauga River in

the 1940s with his grandparents and living in the bush. The highways were flanked by long stretches of pine plantations with practically nothing growing among the pine stands. “The grocery store is empty” for the deer and the moose, Elder Wille remarked on one such journey (Pine, 2021, August 8 personal correspondence). The foods these animals need to survive are simply not available. Normally following clear cuts, young plants edible to bear, deer, moose, and other forest creatures would repopulate. Glyphosate-based herbicides destroy this cycle. While settlers opposed to herbicide use tend to focus on industry claims about personal safety as discussed earlier. TEK Elders focus on lost foods and medicines for their communities and for the more than human relatives today and in future generations.

Harvester and TEK Elder Joe Jones (Garden River First Nation) speaks of Anishinaabek harvesters and trappers sharing their stories with him of cancerous and diseased moose, of muskrats disappearing as their forest foods disappear in this glyphosate-led conversion to pine plantation. He speaks of food plants and medicines no longer growing as the forest soils, covered in pH altering pine needles, can no longer host such plant life (Recollet et al., 2023). Throughout the study period, TEK Elders raised concerns about cumulative impacts of glyphosate-based herbicide use on availability of medicine plants that cannot grow in pine plantation soils. Settler colonial policy ignores the role biodiversity plays in forest functioning and, as a result, Elders tell us the grocery store is empty. Where are the non-humans to go to find food in a pine plantation? Berry patches that fed Elder Willie Pine (Naganobi) and his community for generations have shriveled and died, the moose roam starving to death, and birth defects are evident along trapper runs (Recollet et al., 2023). At a TEK Elders workshop in Garden River in 2023, Elder Grace Manitowabi spoke about the local blueberry harvests being disrupted due to arial Gly-BH. Acknowledging it has been painful enough to lose Anishinaabek foods this way, and Elder Grace expressed dismay about cumulative impacts of forest changes on the animals, the birds, all of the creatures in the forests who also depend on those berries and plants, with many disappearing in her lifetime.

“These are our relatives”

Canadian policies position forests as resource holding spaces to be commodified. This transactional view of forests depends on separation of humans from nature and reduction of tree relatives to their utility once dead, an arrogance of colonial thinking that literally misses the forest for the trees. For Anishinaabek, there is no separation from nature. Elder Grace Manitowabi speaks of the Water, *N’bi*, as a being. She reminds participants at a 2023 TEK Elders Workshop that the term “All our Relations” reflects kinship with the more-than-humans at the centre of Anishinaabek law and governance. For Anishinaabek, all forest creatures are relatives, and each has a role in creation with none of lesser importance than the other (Recollet et al., 2023). Colonial thinking places man at the apex and regards all other species relative to their commercial utility, disregarding harm that is caused in service of commerce.

Disruption to the more-than-human relatives is evidenced in settler science as well. Wood (2019) scanned six forest cut blocks to collect samples from 23 species of plants one year after glyphosate application. Sampling for residue levels on edible plants and berries returned an average of 0.79 ppm when the Health Canada limit on undesignated foods is 0.1 ppm (Wood, 2019). This practice disrupts foodways for aquatic and terrestrial relatives that are more-than-human for years following Gly-BH application, upsetting food systems for all forest relatives.

Anishinaabek governance through the Clan System binds Anishinaabek in covenant with the plant and animal relatives: “If it hurts one blade of grass” says Raymond Owl of Gly-BH, “it is not permitted” (Owl, 2018). With this analysis from TEK Elders in mind, we turn to the central inquiry of our

case study to review changes in 2020 to Ontario forestry policies and their cumulative impacts on Anishinaabek foodways.

Changes to Crown forestry policy

Ontarians think of ‘Crown’ forests as public lands managed for the collective benefit of all. For 100 years forests had been managed to maximize timber extraction. Beginning in the mid 1970s, responsibility for forest management was privatized through the creation of Forest Management Agreements (FMAs) without consultation with First Nations (McGregor, 2000). While previously within the Ministry of Natural Resources, FMAs transferred all forest management practices of planning, road construction, harvesting, regeneration, and forest tending to private forestry companies. The exclusive focus on maximizing extraction began to wane with the introduction of the 1990 *Environmental Assessment Act*. The EAA worked in tandem with 1995’s *Crown Forest Sustainability Act* (CFSA) which replaced the old *Crown Timber Act*. The CFSA mandated the creation of four manuals, each resulting in a series of guidelines. Taken together, EAA, CFSA, and the four manuals provided mechanisms for resource industries to consider socio-ecological dimensions forest ‘management.’

Changes to forestry legislation in 2020

Over nearly three decades, Environmental Assessments had become the major tool for addressing non-commercial forest values. In 2020 Ontario introduced Bill 197, phasing in major changes in how Environmental Assessment (EA) is applied and who can intervene in environmental assessments. Schedule 6 of Bill 197 gutted the already insufficient *Environmental Assessment Act* while also removing mechanisms for the public to challenge EA decisions on projects not supported by science or community priorities, allowing only for appeals on existing aboriginal and treaty rights issues, which the province narrowly interprets (Ontario Legislature, 2020, July 21). Bill 197 allows the province to move to a project list approach for triggering Environmental Assessments.

Ecojustice’s Laura Bowman described Bill 197 as reverting “environmental protection standards back to the 1970s, when the default was zero assessment and minimal regulatory oversight unless political decision-makers found it expedient” (Bowman, 2020). Sweeping changes to the *Environmental Assessment Act* under Schedule 6 of Bill 197 are worsened by changes to General Regulation 334 under the *Environmental Assessment Act* exempted forestry activities from the requirements of the *Environmental Assessment Act* (“EAA”) in July 2020. Dr. Jeremy Williams commented in the Environmental Registry of Ontario that this exemption represents a “significant change to forest management with virtually no consultation outside of financially vested interests,” adding that “It is unethical to disregard the groups that created the original and successful legislation” drafted in 1993 with the “direct input of over 3000 Ontarians” (Williams, 2020). These changes take land use planning oversight away from Ministry of Natural Resources and Forests place it in the Forest Management Planning process, repeating a failed management experiment of the second half of the 20th century that led to the creation of the *Crown Forests Sustainability Act* (1994) and EAA in the first place.

Environmental assessment has become the primary mechanism to hold developers accountable for reducing ecological impacts. This regressive legislation returns to forest-as-timber management at the expense of all other forest values (Williams, 2020) The province removed aspects of forest management from the EA process altogether and made changes to how assessments are conducted, further reducing oversight (Bowman, 2020). With these sweeping changes to Environmental Assessment, a key mechanism for asserting non-timber values in Ontario’s Crown forests has been taken away.

Reflections from TEK Elder Caroline Recollet, Whanapitae First Nation, November 8, 2022:

Indigenous science is the science of the way of knowing the land, it's a way of knowing the water, the air, everything about the Earth, knowledge of our elders, their knowledge of weather patterns, their knowledge about how species migrate everything that that Ray Owl, our prime elder here has been speaking about, since that since he started the TEK Elders... it is this knowledge that has enabled them to survive for generations.. Listening to Anishinaabemowin reminds me when Ray speaks about the spirit who visited him, and motivated him to start the tech elders, and, and to stop the spraying. re all said, The Spirit spoke in the old language. That spirit awakened something in him, when he spoke in the old language, it spoke to His Spirit. And, you know, when Anishinaabemowin is spoken in that spirit, in that language does speak to you, I was raised, and I come to know that as a child growing up with my mom, who was also a very fluent speaker in the national big language, and she used to take me to every, lots of lots of funerals, we used to have so and weeks and I remember being at those weeks, and all the elders being there, and talking in that language. And, and that, you know, the, you pick that up, the vibration is in there to spirit. And even though I went out and then and off to school, and went off reserve and did a lot of my time off reserve and kind of forgot how to speak the language because it wasn't around me.

But when I came back home, and I was talking to an elder and the elder spoken the language when he was giving me a teaching, I remembered my spirit remembered my mind couldn't understand the exact word interpretation. But my Spirit did. And it brought me back home to that place of my spirit, which I, you know, which had gone to sleep for a long time while I was out there in the city. And that happens to us, right? So for me, it's a direct experience that I had had with with that relationship with spirits. So I understood what Ray was talking about. We talked about the elders talking to him in the in the language. And what Ballard says in her research about indigenous languages, Anishinaabemowin, she says, but it's not better when has a scientific management tool embedded within her research looks at what indigenous languages reveal about local ecosystems.

As Anishinaabemowin speakers we have words for various spaces, and places right across the country, that are very significant to the natural state of the ecosystem. So that knowledge exists. And we need to our indigenous scholars or young people to go out there and put it in into the language of the academics so that we can speak to the scientists, you know, on on that level, so that they can understand what what our elders are saying, and we can understand what our elders have been saying all along. They're the ones to spend all that time in the bush and they've studied the ecosystem and You know, they live their life by knowing that and having that knowledge. And it's important that we bring that forward.

So when I say indigenous scientists, a science of the have a way of knowing the land, it's a way of knowing the water, I think already said that. So about the Earth Mother, the knowledge of weather patterns, knowledge about how species migrate, I've heard a lot of elders talking about, you know, a lot of our animals are migrating up north... So, the TEK elders on this territory here saying stop that spraying, say, you know, Ray always says, no, stop. We don't want that spraying happening in our in our territory.

So that's the primary goal of the TEK Elders -- to ask the provincial government to stop that spraying it. It's happened in other places. I did a quick scan around what our scholars are saying about, you know, across the literature in the in the academic world. So they're saying the destructing of our national basic food sources. Our homes, and medicines violate our spiritual, physical, emotional and social well being in ways that are similar to traumatic violent assault. The physical environment and connections to land have both been noted as critical elements of health for indigenous populations, indigenous groups have equated the decline of their traditional territories as a process akin to either a family dying, or a physical dismemberment. As traditional custodians of the land, dispossessed indigenous peoples have lost their primary reasons for being... As Anishinaabek, we believe that the devastation of our lands to globalization and commercial exploitation and climate change is equivalent to the same physical assault. So we I just want to also say that the declaration of the Rights of Indigenous Peoples Act has been passed by the Canadian government. And they just released a

statement in September 2022, about how they're going to start implementing, implementing that in Canada, and we need to be involved in that” (Recollet, 2022, Presentation at RHW Event)

4.4 Discussion: *naanaagadawendam**

***I consider, notice, think, reflect, realize (Chiblow, 2021)**

Based on these results, the following discussion examines cumulative impacts of Ontario’s ‘forest management’ on Anishinaabek foodways in the context of the 2020 changes to Crown forestry policies outlined in the results section. The discussion centres on impacts these changes have on Ontario’s capacity to meet Crown Treaty obligations as understood by the TEK Elders.

Impacts of changes to Settler legislation on Anishinaabek foodways

Changes to the various pieces of legislation governing forestry in Ontario impact Crown Treaty obligations to uphold Anishinaabek foodways. Canadian jurisprudence recognizes only one of four elements captured in Robinson’s written portion of the 1850 Treaty: “an assurance that the Anishinaabe maintained the rights of wildlife harvesting and the ways of life associated with them” (Restoule, 2018, p. 78), which is the focus of this case study. Anishinaabek interpretation of “hunting and fishing” rights includes the protection of the forests, waterways, plants, and animal life. Professor Dominic Beaudry teaches that the Dish with One Spoon Treaty between Indigenous Nations prior to European contact is about how to share the garden, yet negotiations with the Crown have focused on hunting and mining rights (Beaudry, 2023). Conversion of food-producing forests to plantations directly undermines Anishinaabek foodways by altering the composition of vast tracks of land, reducing biodiversity and eliminating food plants for deer, moose, muskrat, beaver, and other forest relatives in favour of jack pine and spruce. Removing forestry from the EAA leaves Anishinaabek communities vulnerable to practices that further degrade the lands and waters upon which Anishinaabek foodways depend, primarily plantation conversion.

Legal guidance to industry on 2020 changes to the *Environmental Assessment Act* suggests that limits introduced in Bill 197 to the EA process for projects affecting Indigenous communities “may create a risky regulatory landscape for Indigenous communities” (Chamberlain & Hummal, 2020). Within Canadian law, Section 35(1) of the *Constitution Act* (1982) compels the Government of Ontario to consult and accommodate Indigenous communities before issuing development permits (Morellato, 2008). Specifically, Chamberlain and Hummal (2020) cautioned that reducing red tape under Bill 197 simply means reducing oversight, which “risks ignoring effects on Indigenous rights and stifling Indigenous participation, thereby leaving project approvals vulnerable to judicial intervention.” Bill 197 removes mechanisms intended to uphold 1) Aboriginal Title and rights; 2) multiple Treaty agreements and the legal commitments Canadian governments have inherited and cannot unilaterally discharge; and 3) Canada’s international human rights commitments through UNDRIP and other agreements (McIvor, 2021). UNDRIP Article 19 stipulates that “States shall consult and cooperate in good faith with the Indigenous peoples concerned through their own representative institutions in order to obtain their free, prior and informed consent before adopting and implementing legislative or administrative measures that may affect them” (UNDRIP, Article 19). Simply put, companies who follow Ontario’s regressive legislation risk being out of compliance with both international colonial law and Anishinaabek law, contributing to disruption of Anishinaabek foodways counter to Treaty obligations.

Prior to Ontario's sweeping changes under Bill 197, environmental assessment processes were the tool for including what government called "non-commercial values" which include "Native forest values" (McGregor, 2000). Taking away EA tools takes away a major mechanism through which Ontario could compel logging companies it licenses to consider "Native Forest values." McGregor (2000) reminded us "Native forest values" is a concept based within settler colonial world views and is an inadequate mechanism for presenting Anishinaabek concepts. And yet even this inadequate mechanism of environmental assessment for introducing non-timber forest values to decision-making disappears under Bill 197 changes. Prior to the changes, First Nations could request Comprehensive EAs, which are individual rather than class assessments and are more thorough. Under the new rules, Ontario has exempted forestry projects from the Environmental Assessment process altogether, removing a statutory barrier to causing harm to First Nations (Castrilli, 2020).

These impacts of legislation are cumulative. Anishinaabek were not consulted in the class environmental assessment (1984) process to structure forest management planning committees. These agreements do not appear in the Robinson Huron Treaty, nor are there provisions within the Treaty that would impose such broad systems of management (Pine, 2018; McGregor, 2000). Anishinaabek roles within Forest Management planning committees afford no power to make decisions about forest management (Pethategoose et al., 2018; Owl, 2018). With the 2020 changes, opportunities for Anishinaabek to affect forestry planning are even more limited. TEK Elders maintain that a duty to consult was owed to the Anishinaabek Nation in respect of aerial spraying of chemical herbicides in forestry operations in various locations throughout the Robinson Huron Treaty territory, or Anishinaabek *gdakiimnaan*, and this duty was not fulfilled. Such management choices are effectively a re-development of the forest into plantations.

A recent ruling in BC in favour of Blueberry River First Nation acknowledged that development within the territory had crossed a tipping point, and the First Nation could no longer observe their treaty rights as laid out in their treaty due to over-cutting, oil and gas development, and other mining activities (McIvor, 2021). Similarly, conversion of food forests to plantations is undermining Anishinaabek treaty rights to hunt and fish. McGregor (2000) documented that during the Environmental Assessment Board Hearings in the late 1980s the Ministry of Natural Resources responded to the Hearing Report saying that "implementation guidelines will be developed to prevent or mitigate impacts of timber management operations on hunting, fishing and trapping (EA Board 1994, 365)" (McGregor, 2000, p. 86). Bill 197 removes the few tools for reducing impact of forestry on Anishinaabek foodways.

Incommensurability of settler and Anishinaabek forest governance

Colonial knowledge systems-based forest governance is incommensurable with both Anishinaabek governance and with the spirit of the 1850 Treaty as understood by Anishinaabek legal scholars (Mills, 2022; Kelly, 2022; Borrows, 2019; Corbiere, 2024). Narrow interpretations of Treaty rights to "hunt and fish" ignore the seed-saving, plant cultivation and harvesting, intergenerational skills and knowledge transmission, the nutritional science involved in the steps to prepare foods at the heart of Anishinaabek foodways. Our lead author acknowledges the settler colonial worldview at the centre of narratives informing Ontario interpretations of treaty obligations further erases foodways contributions made by Anishinaabek as invisible women's work.

Acknowledging incommensurability and erasure of Anishinaabek foodways does not erase the necessity of creating compatible, symbiotic relations between Canadian settlers and the Anishinaabek Nation and other Indigenous hosts. No one is going away. Instead, such acknowledgements are offered

respectfully of all parties as an honest reflection on power and who wields power currently to articulate ways to move towards relationality and in reciprocity. Imagining shared food futures in the settler colonial context of Ontario, Canada requires centering Anishinaabek foodways and Anishinaabek understandings of various Treaty obligations if a true nation-to-nation approach is respected. Anishinaabek scholars continue to uplift co-management structures that acknowledge Anishinaabek territorial governance (Chiblow, 2021; McGregor, 2010; Priadka et al., 2022).

Some Anishinaabek scholars seek to bring Anishinaabek Law and Colonial Law into deeper conversation just as environmental policymakers seek to bring Indigenous knowledges more broadly into deeper conversation with colonial knowledges (Borrows, 2019; Chapeau, 2019). In both scenarios, the question of standpoint and framing arises. Settler management perspectives do not recognize the relationships with non-human relations nor the autonomy and right-to-life of those non-human relatives.

For Anishinaabemowin speakers like Elder Raymond Owl, the colonized mind holds a child's view of things, operating with all this technology to alter and manipulate the landscape for short-term profit, "but at what cost?" he asks (Owl, 2018). Our study reveals that limitations of colonial knowledge systems' conceptualizations of forests as "resources" to be exploited for human profit have led to mischaracterizations of Treaty obligations that have been enshrined in settler colonial jurisprudence and government policy.

Rethinking settler colonial narratives

Limitations within the colonial knowledge systems narrative impede nation to nation cooperation begin with Canadian governments' historic and contemporary dismissals of Anishinaabe socio-political institutions and worldviews (McIvor, 2021). Anishinaabek interpretations of the 1850 Treaty and the historical record reflect an intention to share lands with newcomers. Yet Canadian settler governments at all levels remain attached to untenable stories of land surrender built initially on the faulty and racist Doctrine of Discovery. Today, Canada relies on the Doctrine of Discovery for "modern consideration of Indigenous rights to explain how colonizing European countries supposedly gained the underlying title to Indigenous lands" (McIvor, 2021, p. 16).

Anishinaabek perceive each Being as vested with a gift and given an injunction to share that gift with the rest of creation, creating a kind of harmony in which most beings most of the time sustain a state of wellness. According to Mills (2022), Anishinaabek "view each dependent on all the others, and ongoing circulation, our wellbeing depends on everyone else's ... a fundamental Law of this view of creation is Sharing or as an academic would call Mutual Aid" (Mills, 2022). This view is in striking contrast to the settler colonial narrative that "assumes a natural condition of disorder, mirroring the wildness of undeveloped nature, that we escape by creating human-nature and public-private divides and imposing rules on ourselves" (Campeau, 2019, p. 24). Colonial knowledge is built on a world of separation of Man from Nature in which Nature is disorder that Man seeks to control.

The colonial narrative captured in the Charter of Rights and Freedoms (1982) involves a zero-sum dynamic of distributing rights and obligations, where one side gains and the other side incurs loss. Mills (2022) described this as "an adversarial model of contract" that "predictably often leads to conflict." Canada's origin story requires believing Anishinaabek just voluntarily gave up all their territory, Anishinaabek *gdakiimnaan*, to the Crown for nothing in return. Even if one imagines the hardship of encroachment on Anishinaabek ancestors, "it is hard to tell the story with a straight face if the bargain was Indigenous land and jurisdiction for what seems now as a trifle" (Mills, 2022). Mills invited us to "acknowledge the faults of that story and inquire what a better one might be. We could say some form of

colonial reduction was sufficient to secure such an agreement... that choice would have to be freely made to be genuine, but none of them say that” (Mills, 2022). Indeed, Bohaker (2024) referred to the letters and documents from negotiators at the time of the Treaty of Niagara (1764) and the Robinson Huron Treaty (1850) who communicated clearly to their superiors that any interpretation the Anishinaabek were ceding land was untrustworthy (Bohaker, 2024).

On a very practical level, forest companies and the legislators meant to regulate them could embrace the insights offered in Deb McGregor’s 2000 dissertation, “From Exclusion to Co-existence: Aboriginal Participation in Ontario Forest Management Planning,” which has been in the public domain for just shy of two and a half decades as of the writing of this paper. In this important work, McGregor writes:

The history of Native Canadian relations in Canada and Ontario directly impacts Canadian forest management in relation to Aboriginal people. Moreover, with the lack of understanding of Aboriginal people in general comes a lack of understanding of Aboriginal relationships to the land. Dr. Lorelei Colomeda, writes (1999, p. 20): “Europeans never really understood the culture they were trying to subjugate, nor did they wish to until almost too late. What eluded and continues to elude Europeans was a sensibility, common to Native People, of intimate abiding interconnectedness with nature . . . Europeans also failed to comprehend the complexities of the relationship between Native People and the diverse presences that formed their world: mountains, lakes, rivers, trees, animals, and so on. For Native People, the presences inhabiting nature comprise the very center of existence, a great unifying Life Force or spirit. Kinship with all creatures is very real.” (McGregor, 2000, p. 169-170)

Indigenous resurgence in language, ceremony, governance, and foodways across lands that Canada falsely declares as “Crown land” challenges colonial narratives. Recall that foodways include cultural, economic, scientific, linguistic, spiritual, and intergenerational dimensions of food in a society. Elders across the Anishinaabek Nation are affirming their roles within Anishinaabek Law as caretakers of the Waters and the lands per their Clan obligations and gifts. Sākihito-win Awāsis describes Anishinaabek law as law “that can be observed in the environment and helps build good relations among humans and with the natural world” (Awāsis, 2021). Settler colonial narratives need updating, as the current narratives fail to come to terms with this natural law.

4.5 Conclusion: nisidotaagwad *

*it is understood (Chiblow, 2021)

This cross-cultural study considered the cumulative impacts of settler colonial development on Anishinaabek foodways in the so-called Robinson Huron Treaty Territory, or Anishinaabek *gdakiimnaan*, from an Anishinaabek standpoint. Changes in 2020 to Ontario’s forestry legislation include elimination of public engagement, removal of forestry activity from the *Environmental Assessment Act*, and a regression in focus of planning on commodity value of “Crown” forests. These changes undermine the small gains towards consideration of Anishinaabek forest values that had been made under the *Crown Forest Sustainability Act* (1995) and *Environmental Assessment Act*. These changes impact Anishinaabek foodways by doubling down on conversion of primary forests to plantations, which research shows reduces biodiversity and alters species composition and diversity. Such impacts interfere with Anishinaabek harvesting plants, aquatic foods, and forest animals in accordance with guarantees made

under the Robinson Huron Treaty (1850). We found changes to environmental assessment requirements remove mechanisms for including Anishinaabek priorities and upholding treaty rights.

If the forests within Anishinaabek lands are converted to plantations, the recognized right to maintain Anishinaabek foodways (hunting and fishing) cannot be maintained, as Ontario's management choices have fundamentally altered the forest composition. In this sense, clear cuts managed with herbicides directly interfere with expression of Anishinaabe Treaty rights. Colonial knowledge cited to uphold extractive resource management frameworks does not consider biodiversity loss, life cycles, intergenerational impacts, interspecies interactions, dynamics of climate breakdown, and watershed scale disruptions. Further, science conducted within colonial knowledge systems conceives man as separate from the natural world and capable of "managing" the natural world, all while centering man and neglecting the reality we share this planet with all other life forms who are no lesser.

Further research to characterize these impacts relative to other assaults of colonial development on Anishinaabek *gdakiimnaan* is underway, with the TEK Elders pursuing an impacts to rights assessment for the Serpent River Watershed, building on this study. This study is in part a response to calls for reflection and transformative scholarship in which settler colonialism is made a visible part of the analyses. Examining settler colonial assumptions and deficits in colonial knowledge systems is a necessary step towards Canada's stated goal of reconciliation. Settler scholars and forest practitioners have a responsibility to update understandings of Crown responsibilities to Treaty partnerships as understood by Indigenous peoples in order to stop reproducing the false narratives leading to the kind of forestry practices normalized today. Further study on the limitations of settler colonial knowledge systems for understanding the impacts of forest 'management' decisions would fill gaps left by this study. Recommendations for future research include supporting settler scholars to inquire meaningfully what a better narrative could be.

Data availability statement

The raw data supporting the conclusions of this article can be made available by the authors in accordance with the agreements between the authors and the TEK Elders. Any data sharing must respect the research agreement between the lead author and the TEK Elders in keeping with OCAP and data sovereignty principles outlined in our ethics agreement.

Ethics statement

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Committee #45831, meeting the standards set by Tri-Council Research and SSHRC.

Chapter 5: Epistemic violence in settler narratives: appropriations of Indigenous knowledges in sustainability research

To better understand the limitations of colonial knowledge systems for engaging Indigenous knowledge systems' concepts, I turn to Indigenous scholars. Applying participatory action research methods, I analyse transcripts from ecological economics events I co-organized and attended between 2019 and 2023, where Indigenous scholars expressed frustration with colonial cooptation of Indigenous concepts. I ask what Indigenous Knowledge keepers and language speakers have to say about sustainability researchers within colonial knowledge systems repackaging Indigenous concepts. Gestures towards 'inclusion' of Indigenous knowledges are being made through adoption of frameworks like 'two-eyed seeing' within settler colonial frameworks. Yet this 'inclusion' of Indigenous knowledges without addressing the epistemic violence at the centre of settler narratives functions to a) depoliticize Indigenous resurgence and b) reinforce colonial narratives of land cessation and dispossession. Sustainability scholars and the policy makers relying on their research must address underlying settler colonial assumptions and structures to avoid the risk of replicating the violence inherent in policy frameworks built on settler supremacy. This manuscript will be submitted to Human Geography.

Canadian governments have behaved as though treaties between the Crown and the Anishinaabek Nation that date back to the 1760s are mere contracts or resource sharing agreements, presuming cessation or sale of land where no such agreement of cessation nor 'receipt' of sale can be produced. The study in Chapter 4 in partnership with TEK Elders centres Anishinaabek perspectives on treaty obligations.

Settler colonial views of forests as timber governed to maximize commodity timber output and Anishinaabek views of forests as co-created spaces of sustenance governed with consideration for seven generations and the more-than-human relatives are incompatible for 'co-management.' From Canada's standpoint, trees exist as "renewable resources" to be commodified. From an Anishinaabe standpoint, trees are autonomous beings and relatives with whom Anishinaabe are in treaty. Ontario forestry legislation undermines Canada's obligations to Anishinaabek foodways that the 1850 Treaty was entered into to protect. Canada *gestures* towards including Indigenous knowledge in management decisions yet *prioritizes* commodity market profitability over mitigating climate and biodiversity loss by excluding Indigenous knowledges in resource management decisions when acting on that knowledge would disrupt industry-favoured practices.

In a settler colonial context like Canada's, forestry policy has an outsized impact on Indigenous foodways. Canadian governments hold a transactional view of forests and apply a resource management framework based on extraction. With this framework in place, several provinces, including Ontario, permit the use of aerial herbicides containing glyphosate to be used along the north shore of Lake Huron and north towards the height of the land boundary, converting these Anishinaabek Nation lands and waters to pine plantations. Indigenous scholarship characterizes the Anishinaabek Nation view of forests through a lens of kin relationships, applying Anishinaabek governance frameworks embedded in their Clan system (Jewell, 2018). Non-Indigenous scholars engaging in research impacting Anishinaabek forests have a responsibility to build relationships with Indigenous communities built on reciprocity, respect, relationship, and relevance (Bell, 2013).

In Chapter 3, the study concluded that “food movements must become involved in and uplift Land Back movements to ensure these assimilative efforts do not undermine hundreds of years of resistance and the regenerative efforts of Indigenous communities seeking to recover their own foodways and lands and waters for the sake of their health and that of their grandchildren’s grandchildren.” We proposed that partnerships for land to be used in food commons schemes could be a mutual aid “tool for localizing the food system and decolonizing land at the same time” (Bowness, 2015, pp. 24–25). The desire to create commons on public lands has the potential for both decolonization (Grey & Patel, 2014) and for the extension of existing conflicts. As we’ve seen in Chapter 4, existing conflicts over land use stem from a resource extraction mindset that cannot see the forest for the trees. Colonial knowledge systems perpetuate a commodity view of the ‘woods’ while the forest community-as-relatives and the basic ecosystems functions forests provide remains outside the sphere of concern. And while this study concludes it is settler society’s obligation to learn about Treaties, Indigenous scholars express concerns about such education taking place within colonial knowledge systems frameworks, or as conceived within the ‘colonized mind’ to borrow a phrase from legal scholar Rachel Ann Snow.

Limitations of the colonial narrative for understanding the impacts of settler colonial policy on Indigenous foodways were raised in Chapters 3 and 4 of this dissertation. In the next chapter, I examine the limitations of colonial knowledge systems for engaging with Indigenous knowledge systems concepts. This final case study is a reflection on what it means as scholars within colonial knowledge systems (CKS) to actively confront colonial systems and prevent replication of settler colonial dynamics. Offering case studies of sustainability scholars’ efforts to do this work, I explore what being a collaborator and co-conspirator looks like for settler-descended scholars by reflecting on what Indigenous scholars and knowledge holders say on the matter.

The overarching inquiry articulated in Chapter 1 asks, what are the cumulative impacts of settler colonial approaches to resource management on Indigenous foodways. In Chapter 2, I introduced theoretical and conceptual foundations that inform my approach to the research questions. I offered some insights into my positionality as a settler-descended scholar and offer an overview of the methods used in this transdisciplinary dissertation. In Chapter 3, I adapt Vivero Pol’s tri-governance framework to examine food commons as a pathway for imagining food futures in Canada’s settler colonial context. I then reflected on this framework reviewing two case studies on Anishinaabek food economies and a third on the Nutrition North program (Koberinski et al., 2022). Next, I reviewed the proposed framework from Chapter 3 with colleagues and collaborators prior to bringing the framework to Anishinaabek colleagues to review. Re-engaging with the literature following this first manuscript, I agree with Kepkiewicz and Rotz (2018) that “moving food work forward is premised on the actions and resistance of Indigenous nations, and is directed by their visions of liberation and decolonization. This might mean creating a food policy for Canada that works together but separate from Indigenous nations and their frameworks for food sovereignty, or it may mean multiple regional policies are developed by different Indigenous nations (including those already developed)” (Kepkiewicz & Rotz, 2018, p. 21). These and other reflections on our conclusions from the article in Chapter 3 led to adjustments in the focus of inquiry in Chapters 4 and 5. Given the learning from my reflection on Chapter 3, it was impractical to continue with a Eurocentric framework and invite Anishinaabek Elders’ engagement, however useful internally within settler colonial food governance structures such an exercise might be.

Setting aside further discussion of Canada’s food policy, I turned my focus in Chapter 4 toward the food policy priorities of the Anishinaabek Nation as articulated by TEK Elders in their desire to protect and regenerate forest biodiversity and health. Centering frameworks offered by

Anishinaabemowin speakers, knowledge holders, and Elders, the study in Chapter 4 examines impacts of settler colonial policy on Anishinaabek foodways. Specifically in Chapter 4, I worked with TEK Elders to reflect on Ontario forestry practices and Anishinaabek foodways. Our study focused on changes to forestry legislation and the cumulative impact these changes have on Anishinaabek foodways. We centered Anishinaabek Elders' and knowledge holders' interpretations of the Robinson Huron Treaty (1850) to discuss ways Ontario's approach to forest 'management' undermines Anishinaabek foodways.

At the time of designing the research outline for the dissertation in 2019, I envisioned the final study would re-orient colonial knowledge systems sustainability concepts towards adopting Anishinaabemowin terminology and understandings. While such a glossary and re-conceptualization for sustainability studies is a priority for TEK Elders, this task has currently been taken up by Anishinaabemowin speakers and Elders Barb Nolan and Nelson Toulouse with the support of the Robinson Huron Waawindamaagewin and Anishinaabek scholars. My efforts as a settler scholar refocused on a critical theme emerging in Chapters 3 and 4: the extractive nature of settler scholars' and legislators' calls for 'inclusion' of Indigenous knowledges 'in' Settler colonial knowledge or policy frameworks. This theme was confirmed by several Indigenous scholars whose works informed the first four chapters of this dissertation, and whose own studies point to appropriation and cooptation of Indigenous knowledge within sustainability studies, including Dr. Deb McGregor, Dr. Kyle Whyte, Dr. Sue Chiblow, Dr. John Borrows, Dr. Aaron Mills, Dr. Kathleen Absolon, and many others whose works are cited throughout Chapters 4, 5 and 6 of this dissertation.

To better understand this phenomenon, I ask in Chapter 5 what deficits or limitations are present in the colonial knowledge system that tend toward appropriation of Indigenous knowledges. I am aware that during the time I have been engaging this study, Fishy Philosopher and Métis researcher Dr. Zoe Todd has cultivated a critique of the cooptation of concepts like weaving, braiding, and two-eyed seeing as "settler moves to innocence" (Moreton-Robinson, 2013), which has influenced my work and which Todd will be publishing in 2024. What emerged from the integrative literature review for Chapter 5 is the need for deeper reflection from non-Indigenous sustainability scholars of all disciplines on appropriations of Indigenous knowledge (IK) within colonial knowledge systems. Such reflection can help overcome barriers for settler scholars engaging Indigenous knowledges and Indigenous knowledge holders with integrity.

I offer the case study in Chapter 5 to characterize the epistemic violence of sustainability scholarship within settler colonial institutions that increasingly misrepresents and appropriates Indigenous concepts. As the Liaison with Indigenous Climate Action on behalf of Canadian Society for Ecological Economics (CANSEE) between 2019 and 2022, I contributed to planning and collaborative reporting for Indigenous Climate Action's Indigenous Economics Conference (2021). I served on the CANSEE conference organizing committees for the 2019, 2021, and 2023 biennial conferences. This relationship building is nascent. I have focused my case study reflections on published talks arising from these conferences. My reflections on relationship building will be constrained to my own contributions and shortcomings in "creating kinship across worlds" (Mills, 2022) in this cross-cultural work.

I express my gratitude to CANSEE conference organizers Sophia Sanitti, Truzaar Dordi, and Katie Kish along with several other dedicated CANSEE board members for their vision, dedication, and hundreds of hours of volunteerism organizing the 2019, 2021, and 2023 CANSEE conferences and the student symposiums in between. This study is possible in part due to CANSEE Board members' willingness to not just analyze but also act intersectionally.

I also wish to express profound gratitude and respect to Eriel Deranger, Keara Lightning, and all the dedicated colleagues at Indigenous Climate Action (ICA), whose honest feedback, generous guidance, and unwavering leadership was central to creating ICA's 2021 Indigenous Economics: Reclaiming the Sacred conference. Gratitude extends also to Dr. McGregor, Dr. Trospen, Dr. Kim Tallbear, Dr. Whyte, Dr. Mills, Dr. A, Dr. Jewell, and Elder Fred Kelly upon whose published observations and lectures this study relies. This study is not a substitute for engaging with Indigenous scholars' and knowledge holders' teachings and observations directly.

Epistemic violence in settler narratives: appropriations of Indigenous knowledges in sustainability research

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Overview

Indigenous-led research draws attention to mischaracterizations of calls for *respecting* Indigenous knowledges as calls for *integration within* settler-colonial knowledge frameworks. Rather than, as Eriel Deranger describes, “just listen to the people who’ve been doing it for 1000s of years,” settler scholars repackage Indigenous knowledge as novel concepts. This case study examines Canadian Society for Ecological Economics (CANSEE) efforts to avoid re-production of epistemic violence when engaging with Indigenous knowledges. Epistemic violence is described by Williams et al. (2020) as “the delegitimation—and even erasure—of other ways of knowing.” Using Participatory Action Research methods, this study asks two questions: what do Indigenous scholars and knowledge holders have to say about settler colonial sustainability researchers re-packaging Indigenous concepts, and what is present in these results that could reduce epistemic violence in settler scholarship. I analyse transcripts from the CANSEE conferences in 2019 and 2021, and the Indigenous Climate Action led Indigenous Economics: Reclaiming the Sacred Conference in 2021, events I helped organize. Indigenous panelists, keynotes, and organizers offer reflections on the limitations of colonial knowledge systems for engaging with Indigenous knowledges generally, and for observing and learning about Indigenous governance specifically. Lack of awareness about the underlying assumptions of the settler colonial institutions into which Indigenous knowledge is being “included” is a central limitation. Researchers operating within colonial knowledge systems without this awareness may reinforce epistemic violence, leading researchers towards conceptual appropriation where collaboration was the goal. Three recommendations for settler scholars are discussed: 1) identifying limitations or deficits in colonial knowledge systems’ worldviews; 2) adopting concepts from Indigenous peoples in their languages as explained by language speakers, prioritizing language reclamation; and 3) avoiding depoliticization of Indigenous knowledges. All three actions require settler scholars to abandon settler colonial narratives that do not hold up to scrutiny.

KEY WORDS: SETTLER COLONIALISM; SUSTAINABILITY STUDIES; ECOLOGICAL ECONOMICS; COLONIAL KNOWLEDGE; RADICAL FOOD GEOGRAPHIES PRAXIS

5.1 Introduction

Ecological economics scholars in so-called western or settler colonial institutions have long looked to Indigenous societies for insights on economies of care. Scholars’ works have helped the United Nations recognize contributions that Indigenous knowledges make towards regenerating and caretaking crucial ecosystems functions (IPBES, 2020). In 2019, Canada’s federal government released an Indigenous Knowledge Policy Framework stating government intentions to include Indigenous knowledge in environmental assessment and policy generation. Yet how Indigenous knowledge is taken into account in non-Indigenous decision-making contexts, by whom, and with what oversight remains unclear. Indigenous-led research draws attention to mischaracterizations of calls for *respecting* Indigenous knowledges as calls for *integration within* settler-colonial knowledge frameworks (McGregor et al., 2019; LeBlanc, 2014; Jewell, 2018; Absolon, 2011; Trosper et al., 2008; Manning, 2018). This case

study examines Canadian Society for Ecological Economics (CANSEE) efforts to avoid reproduction of epistemic violence when engaging with Indigenous knowledges. Indigenous scholars and knowledge holders widely cited in Canadian literature and speakers whose work informs that literature characterize ways settler scholars coopt and appropriate Indigenous knowledges through repackaging concepts (Mills, 2022; Trospen, 2021; Avalos, 2023; McGregor et al., 2019; Deranger, 2021; Tallbear, 2021). These perspectives when taken together draw attention to specific limitations of colonial knowledges for engaging Indigenous knowledges with integrity.

“Colonial knowledges”

The term Indigenous knowledge is familiar, which we discuss below. We hear the corresponding term “colonial knowledge” less often. I pluralize these terms to reflect that neither Indigenous nor colonial ways of knowing are monolithic. I use the term “colonial knowledges” to speak to knowledges derived from within the paradigm conventionally called Western or Eurocentric, or what Anishinaabe law scholar Aaron Mills (2019) more accurately referred to as a liberal constitutional order. The terms colonial knowledges and colonial knowledge systems are adopted for this study specifically in place of the terms Western or Eurocentric to illuminate the ideological foundations for knowledge generation within Canadian institutions. Settler colonial knowledges comprise “forms and bodies of knowledge that enabled European colonizers to achieve domination over their colonized subjects around the globe” (Wagoner, 2003, p. 783). Settler colonial knowledges are perceived by practitioners trained within colonial knowledge systems as neutral pursuits of positivist truths, offering the colonizers’ accounts of the colonized that are reproduced in ideologies, narratives, institutions, academia, and imagination (Smith, 1999, 2021).

Moreton-Robinson named an absence of discussion on the presence and dominance of settler colonial worldviews: “Patriarchal whiteness is an invisible unnamed organizing principle that surreptitiously shapes social relations and economic development” (Moreton-Robinson, 2013, p.66). At the same time, colonial knowledge systems scholarship is not homogenous. Intersectional feminist research, radical geographies praxis, and ecological economics, among other disciplines, share methods with Indigenist researchers from storytelling to reflexive methodologies that embrace researcher subjectivities (Levac et al., 2018; Trospen, 2021; Hammelman et al., 2020). As scholars within colonial knowledge systems recognize a need for and actively engage in paradigm shifting, these categories in practice are dynamic, fluid, and nuanced.

“Indigenous knowledges”

The term Indigenous knowledges (IK) as I am using it refers to “an integral, inseparable feature of Indigenous societal systems” (McGregor et al. 2023, p. S23). The English term Indigenous knowledge (IK) is at times used interchangeably with Traditional Knowledge, Traditional Ecological Knowledge, Aboriginal Traditional Knowledge, Indigenous Knowledge Systems, and Indigenous Cultural Knowledge Systems among other English terms. Traditional Ecological Knowledges (TEK) or Traditional Knowledges (TK) is reflected in these words of Anishinaabe Grandmother and Ogitchidaakwe Josephine Mandamin-ba as documented in McGregor et al. (2019):

Traditional Knowledge is a way of life for the Anishinabek (Original) Peoples and is handed down to us from our ancestors. Our knowledge is being misused, abused and misunderstood. Science does not respect traditional knowledge. We need to come together as one. Scientists need to sit down with us and to understand where we come from. We have intricate knowledge of medicine, animals, and flow. Anishinabek (Original) peoples live in the environment, know the

elements, and know how to take care of ourselves. Many scientists have come to terms that traditional knowledge is as important as science and there needs to be a balance between science and traditional knowledge. We have to work together toward balance. (McGregor et al., 2019, p. 6)

A diversity of scholars are engaged in the field of traditional knowledge or Indigenous knowledge or Indigenous knowledge systems. The result is a broad, messy, and contested body of literature and policy-making practice (Latulippe, 2015; McGregor et al., 2019).

Research questions

In this study, I begin by asking what Indigenous knowledge keepers and language speakers have to say about researchers within colonial knowledge systems repackaging Indigenous environmental concepts. Next, I ask how these reflections on sustainability studies' appropriations of Indigenous knowledges could transform settler colonial knowledge systems-based theory and practice. Specifically, I ask what limitations of settler colonial knowledge systems must be overcome to engage Indigenous knowledges with integrity.

5.2 Methods

The theoretical framework for the broader scholar-activist research program in which this study is situated is a radical food geographies praxis (Hemmelman et al., 2020) building on decades of transdisciplinary scholarship at the intersection of food, water, climate, and what Sherry Pictou (2019) called neoliberal colonial capitalism (Lappe & Collins, 2015; Frison, 2016; Shiva, 2010). I've followed a mixed methods approach to the research questions that involves both an integrative literature review and a case study using participatory action research methods.

5.2.1 Participatory action research

As a scholar directly involved through my role as CANSEE Liaison with Indigenous Climate Action (ICA), I chose participatory action research as the method for this study. I occupied a privileged position to observe-as-participant, over time, the cultural shifts within CANSEE as an academic society responsible for a major academic conference. Participatory action research has been innovated for decades by food sovereigntists and anti-globalization activists, among other disciplines, within western science-based research paradigms (Levkoe, 2014; Golden et al., 2016; Srigley & Varley, 2018). Generally, participatory action research involves research by members of the group itself at the centre of a study (Coombes et al., 2014, p. 848). As a sustainability scholar engaged with an academic society called into action on our discipline's appropriation of Indigenous knowledges, I am a member of the group at the centre of the study. My direct involvement in taking in lessons from the 2019 Conference and applying them to CANSEE's approach for 2021 provides the beginning-middle-end and the "action" context of the case study. The "Action" came in listening to Indigenous colleagues who were uncomfortable with CANSEE's post 2019 conference proposal to create a "stream" for an Indigenous Ecological Economics discussion within the 2021 Conference and instead advocating for and then served as liaison to an Indigenous led, Indigenous focused Conference separate from the CANSEE conference. I was instrumental in developing the relationship between CANSEE and ICA, and applied the learning from this case study in real time to avoid the epistemic violence of "inclusion" in this sense.

5.2.2 Data gathering: case study

For the case study, I apply an interpretivist perspective as an inductive approach and qualitative method. Case studies centre context and reflect on specific temporal locations, offering epistemological advantages over other research methodologies (Cooper, 2023; Creswell, 2014; Wilson, 2007), particularly for critiques of colonial ways of knowing (Mills, 2019; Watts, 2016). This case study draws on the published record from three conferences examining ways Indigenous scholars and activists reflect on cooptation and appropriation of Indigenous knowledges, informed by my participation as an organizer and conference attendee. This study is the third in three related papers centering Elders' reflections for imagining shared food futures. Where appropriate I have included the Nations of various knowledge holders and scholars quoted in this study.

The conference planning team for the CANSEE 2019 conference sought deeper engagement with Indigenous scholars and knowledge holders upon whose works the ecological economics community has relied heavily. Conference organizers wrote a paper reflecting on planning conferences that centre equity and sustainability (Sanniti & Ruder, 2019). In CANSEE's ongoing effort to build cultures within academia that end cycles of epistemic violence, feedback from Indigenous keynote speakers and CANSEE members leading up to and following the 2019 event resulted in CANSEE shifting direction. CANSEE Conference planners had originally envisioned an "Indigenous Economics" stream within the CANSEE Conference for 2021. As a result of feedback in 2019 from Indigenous presenters and scholars, I worked on behalf of CANSEE with Dr. Sophia Sanniti and Eriel Deranger and her team at Indigenous Climate Action to coordinate the 2021 Indigenous Economics: Reclaiming the Sacred Conference. I acted as CANSEE's liaison with Indigenous Climate Action. In this case study I reviewed transcripts of public talks at CANSEE 2019, CANSEE 2021, and Reclaiming the Sacred 2021 to reflect on Indigenous knowledge holders and scholars' thoughts on ecological economics and repackaging Indigenous environmental concepts. In addition to transcribing recordings of public talks, I referenced the literature to gather additional reflections on observations and insights.

5.2.3 Data Analysis

The study's data includes an integrative literature review, transcriptions from audio and video recordings, and notes taken during events. As a settler scholar, I offer as many direct quotes from Indigenous knowledge keepers as space permits. My analysis was further informed by collegial discussion with Indigenous keynote speakers, co-organizers, and a range of participants at the 2019 CANSEE Conference. After articulating the research question, I listened recordings engaging my mind, body, heart, and spirit in the coding process (Chiblow, 2021; Dumont, 2002). I used this form of listening and coding when re-engaging select literature and when reviewing transcripts. This process gave rise to four themes: 1) colonial knowledge as extractive; 2) colonial urge to reinvent; 3) Indigenous urge to reclaim; and 4) Indigenous knowledges in settler colonial environmental policy contexts. These four themes were used to code the data gathered from the CANSEE and Indigenous Economics: Reclaiming the Sacred 2021 conferences. The coded data was further analysed by reflecting on what Indigenous scholars and knowledge holders have to say about settler scholarship repackaging Indigenous concepts, expressed in section 5.3 as five observations. In section 5.4, I listened for what is present in these results that could reduce epistemic violence in settler sustainability studies theory and practice. Four key limitations of settler colonial knowledge frameworks emerged.

5.2.4 Positionality

As a non-Indigenous, white assigned, mature scholar, it is easy to be blind to my own culturally specific experiences and epistemological assumptions (Cooper, 2023; Moreton-Robinson, 2013). I adopt what Hammelman et al. (2020) described as a radical food geographies praxis “rooted in political, social, economic, and environmental theorizing and action” and providing a framework for my analysis of power, capital, gender, and socio-ecological systems (Gilbert et al., 2020; Levkoe et al., 2020; Hammelman et al., 2020). Standpoint theory was first introduced to me as “a feminist epistemology that makes explicit the value of the relational perspective and collective vantage point of the other” (Pemberton, 2012, p. 157). Moreton-Robinson summarized the relationship between settler colonial knowledge system’s feminist standpoint theory and Indigenous standpoint theory as follows: “Indigenous and feminist scholars share an understanding that their respective production of knowledge is a site of constant struggle against normative dominant patriarchal conceptual frameworks” (Moreton-Robinson, 2013, p. 331). Such standpoint theories remain in constant struggle to reject sociology scholarship’s colonizing practices while articulating culturally relevant, liberatory frameworks (Moreton-Robinson, 2013, p. 332; Coulthard, 2014). I also occupied a privileged position within the organization hosting the events at the centre of this case study, and was asked personally by Indigenous speakers and scholars at the 2019 event in addition to a general call to ecological economics scholars to address this settler scholar habit of repackaging Indigenous knowledges as “novel” concepts.

5.3 Results

Case study

In 2019, Indigenous Climate Action’s Executive Director, Eriel Deranger, was invited by the Canadian Society for Ecological Economics to offer reflections as a keynote at the “Engaging Economies of Change” academic conference at the University of Waterloo. Deranger expressed frustration that presentations throughout the conference were taking from Indigenous knowledge systems and repackaging what Indigenous Peoples have been doing for thousands of years as “ecological economics.” In 2019, Dr. Ron Trosper, Professor of American Indian Studies at the University of Arizona, member of Confederated Salish and Kootenai Tribes of the Flathead Indian Reservation Montana and a long time CANSEE Board member and professor in ecological economics, offered the following distinction

“so I say that indigenous economic theory is grounded in an indigenous worldview that relationships are primary and I’ll talk about what a relationship means and land and all its components are conscious and able to respond in their own manner to the actions of humans for example the Western concept of natural resource management could be restated as building healthy relationships with everyone in our territory with everyone understood to mean all conscious beings in the place whereas standard economics... considers individuals the basic unit of analysis indigenous economics considers relationships as the basic units of analysis persons do not stand alone they depend on their relationships they create them and act in the context of them just to start off there’s three examples most from Canada that illustrate these principles the indigenous people of the North West Coast prospered because of relationships with salmon as I explained in my book they learned from the salmon that giving to others is good and for the gift of salmon lives the peoples cared for the rivers the streams the lakes that were the home of the salmon on land they harvested the salmon wisely with respect a second example is indigenous peoples who supplied the fur trade based on relationships in the hunting territories in what became Canada the fur trade was based on solid relationships between humans and beavers indigenous beaver stewards of the boreal forest

harvested neither too much nor too little in their relationship with beaver the beaver from its viewpoint gave the right amount of love their lives to have the humans tend their home range in both examples of first you hear humans and animals engaged with each other in a mutually benefit beneficial relationship which by the way challenge is the idea of wild” (Trosper, 2019, transcript from video recording, min 00:02:32).

In her keynote, Eriel Tchekwie Deranger of Indigenous Climate Action set the stage for the newfound interest in Indigenous knowledge and climate change:

“for centuries, we have not had the opportunities to enter into spaces where we are able to have self determining decision making powers over our lands and territories. And that has been imposed on a threat posed on us through colonial structures. Now, I can appreciate the fact that as we are coming and butting up against the fact that, you know, economic growth, and the sort of models of infinite growth that we have predicated our entire economic structures on is finally having this moment of like actualization of, oh shit, we can't do this anymore. And that we're creating these models where we're like reevaluating and creating different metrics and value systems to determine how we can move forward. But the challenge is, is it still being done within the confines and the structures of colonial frameworks? So how do we start to bend and move those lines, not just to include all of the great stuff that was included in the first presentation in the first grasp? Because all those things are valid, we're not trying to take away from but trying to expand the value systems and the perspectives and how we determine what is happiness? What is, you know, wellness and wellbeing for our communities. And we have to recognize that colonization isn't something that happened. It's still happening today. You know, my people, I come from the treaty eight territory in northern Alberta. We are downstream from the largest industrial project on planet Earth, can anyone take a stab and what that is, pardon me? Tar Sands. So I know what the concept of infinite growth looks like, in actuality. And I can tell you that it has not served our people, we were told at the beginning of this development, that it would bring prosperity and well being and happiness to our community. But what it has done is it has created a system in where we are forced to make a decision between what is considered economic well being within the frameworks for Colonial ideology, versus our own traditional indigenous values and ideologies, we are forced to make those decisions. And when we do not actively participate, we are forced and coerced into participating in economic systems that we had no hand in creating. And so I'm really happy to see, you know, economists butting up against this really big challenge, because it offers an avenue for indigenous cosmologies perspectives and values to be integrated into what this new future looks like. I don't want us to, like get stuck on this idea that we're looking to the past as the solutions, this utopian past that has all the answers. And again, thank Deborah for being like we didn't have it right. We didn't have it perfect. But we had some things better than what they're currently at right now. So what does the future look like? What do you know, changing economies look like in this sort of global crisis world that we're in, you know, we're faced by this global crisis of climate change. But it is just adding insult to injury to the existing traumas of indigenous peoples where we're becoming reactionary. So we need to have an allow for those moments for indigenous peoples to see themselves as a part of these new economies. And that means that we have to create those spaces and avenues for people to do that.” (Deranger, 2019, transcript from CANSEE keynote, min 00:02:10).

Deranger reflected further at the 2019 conference that repackaging of indigenous concepts as “ecological economics” concepts by-passes Indigenous voices, leadership and communities in these discussions. Deranger issued a call to action at that conference, and we as CANSEE organizers responded, leading to the creation of an Indigenous-led, Indigenous-prioritized space to discuss what

sustainability scholars refer to as ‘Indigenous economics’ from the perspectives of Indigenous Peoples using a climate justice framework.

To address these shortcomings, CANSEE worked with Indigenous Climate Action to support ICA’s first ever “Indigenous Economics: reclaiming the sacred” conference held over three days in June 2021. I served as CANSEE liaison in a volunteer capacity from 2019 through 2021. This case study reflects on learnings from CANSEE’s 2021 Conference and Indigenous Climate Action’s Reclaiming the Sacred Conference. Five observations emerge from Indigenous scholars’ discussions of appropriation of Indigenous environmental concepts within sustainability studies:

1. ‘Indigenous Economics’ is not a subfield of ‘Ecological Economics.’
2. Appropriations and co-optations of Indigenous Knowledge concepts form foundations of ‘Ecological Economics.’
3. The notion of ‘Indigenous economics’ is itself a colonial framing.
4. Discussions of Indigenous Futures are a focal point for Indigenous scholars.
5. The importance of reclaiming the sacred.

After these results are presented in more detail, I discuss overcoming limitations of settler colonial knowledge systems to imagine shared food futures. CANSEE invited Dr. Ron Trosper, Dr. Kim Tallbear, Dr. Deb McGregor, and Indigenous Climate Action’s Eriel Deranger to speak specifically on Indigenous economics in various capacities as Indigenous people. Results of the case study are addressed thematically rather than chronologically.

OBSERVATION 1: Indigenous economics is not an academic subset of ecological economics

One clear theme is the distinction that Indigenous economics is not an academic subset of ecological economics. Ecological economics is an academic discipline that takes root in and is shaped by colonial knowledge systems. Eriel Deranger takes issue with the framing of “ecological economics” and “Indigenous economics”:

When we talk about these structures of Indigenous ecological economics or ecological economics, there is still this move towards separation, moving things and defining them and putting labels on them, utilizing the modalities of Western academics and data collection and science that still devalues the ways in which Indigenous folks have lived in relationship and have collected and stored and transmitted our data, i.e., storytelling, experiential experiences. And within that there is a move where scholars ask ‘how can we collect Indigenous knowledge? How can we decide which Indigenous knowledges can help develop economies or climate solutions or all of these things?’ There’s still this desire to divide who we are as Indigenous peoples into sort of categories that can move and continue to keep the systems of colonial structures in place. But that looks like we’re in partnership, but it’s still pushing us and pulling us apart as opposed to welcoming and meeting in systems of relationship and reciprocity and kinship. (Deranger, 2021, min 32:08)

Ecological economics scholars have operated from a false premise that Indigenous economics can be studied as a subset of ecological economics, obscuring Indigenous standpoints and decontextualizing Indigenous knowledges from their cultural, linguistic, and place-based contexts. As part of his CANSEE 2019 keynote, Dr. Ron Trosper, Professor of American Indian Studies, University of Arizona and a

CANSEE Board Member, offered another premise from which to operate. Trosper suggested western or settler colonial economics must revisit the underlying “economic man” narrative: “we have to recognize that there’s a cultural component to economics. And, in fact, I like to quote Marshall Sahlins, who says that the economic man is just Adam modernized. Because he’s the same sort of gluttonous person that they talked about in western theology. So if you’re going to change economics, you definitely have to have different kinds of persons” (Trosper, 2019, min 24:20). Trosper echoed Mills (2019) in calling for settler scholars to examine underlying cultural assumptions within colonial knowledge systems before trying to sense-make IK within systems built on western theological narratives about human nature. These are narratives that justified the occupation, manipulation, and destruction of Indigenous societies that had thrived for centuries in international trade arrangements through complex governance systems across vast territories with linguistic and cultural diversity.

OBSERVATION 2: Appropriations of Indigenous knowledges

Common themes from keynotes in both 2019 and 2021 focused on the frustrations Indigenous peoples feel, particularly scholars working in colonial knowledge systems spaces, about the cooptation of Indigenous knowledges. A prime example of this is the conceptualization of “ecological economics,” which re-packages concepts that are central to Indigenous values systems as novel concepts, including repackaging Indigenous epistemologies within the concept of ecological economics itself as “Indigenous economics.” This re-packaging was named during a keynote at CANSEE 2019, delivered by Eriel Deranger:

It’s really important to understand that a lot of the stuff that’s emerging within this idea of ecological economics is a regurgitation and rebranding and a repackaging of Indigenous systems that existed pre colonization. And just like many of the innovations that existed pre-contact, like the syringe and the baby bottle, and rubber, those things were appropriated by colonists and systems of white supremacy and repackaged as something that was theirs. And there was no recognition of that. And we can’t risk these same things from happening and continuing to perpetuate. And so the idea of Indigenous economics is less around getting the quantitative and qualitative data to prove how Indigenous economic systems are going to be better than current capitalist structures, but it’s about [concepts of] recentering relationships . . . that get talked about in ecological economics [and] are at the core of Indigenous value systems.” (Deranger, 2019, 1:06:10)

Appropriations occur in part due to the lack of adequate English phrasing to properly convey Indigenous concepts. Dr. Kim Tallbear acknowledged

there is a lot that we can’t say in English. And so, we resort to words like spirituality and sacred and I dispute the kind of veracity of those words... I think we are at a moment when if you’ve got non-Indigenous thinkers reaching for a way to reanimate the rest of the world, not just organisms, right, but rocks, stars, soil. I think that is a really good moment to have these conversations” (Kim Tallbear, 2021, min 27:40).

Dr. Tallbear speaks here to a central argument made earlier by Eriel Deranger as well as throughout the literature. Ending appropriation and cooptation requires an end to dumbing down into English the sophisticated and layered concepts best articulated in Indigenous languages. English speakers must begin to learn the concepts in the languages within which they are conceived as taught and translated by Indigenous peoples whose languages and concepts are being discussed.

OBSERVATION 3: Indigenous economics is colonial framing

Indigenous economics is not the correct framing for the discussion Indigenous peoples use to describe systems in which the structures are relational, not transactional. When considering the ways “Indigenous economics” is of value conceptually to Indigenous scholars, youth, community members, and leadership, ICA set the program within a just transitions framework. To explore the notion of an Indigenous economics that reclaims the sacred, organizers bundled the conference into four themes: healing justice, red deal, ransom economy, and place-based economies. Attendees rejected the colonial framing of Indigenous Knowledges being of ‘value’ as a ‘solution’ for climate change caused by colonial institutions. The following quote from an attendee who wished to remain anonymous summarizes this sentiment succinctly:

Indigenous peoples are not obligated to clean up your colonial climate mess.... This is our Mother and we are here to protect her ... she takes care of us We don't have to, but we do in the sense we are morally obligated by our connection to Land and our connection to spirit.
(Participant, ICA Conference, June 2021, personal correspondence with the author)

The learning and discussion about Indigenous economics must, for ICA conference attendees, be focused on forwarding the health and well-being of Indigenous communities, and not be reduced to a “Plan B” in service to settler colonial governments seeking to ‘include’ Indigenous knowledges to address inherent horrors of settler colonial extractivism.

OBSERVATION 4: Indigenous futures

Deranger challenged sustainability scholars to reimagine a future that pushes on the boundaries of colonial economic systems and science, uplifting Indigenous knowledge systems and Indigenous ways of being of kinship and relationality:

We have to break down the barriers, the misunderstanding . . . as Indigenous peoples, we have been devalued, demonized for hundreds of years, and we are important people with knowledge systems and ways of being that are just as important as systems of colonial white supremacist ideologies, and we must push back. Otherwise, we run the risk of continuing to push ourselves over the edge into complete global climate collapse because the current economic systems are structured on systems of capitalism extractivism upholding tenets of white supremacy and colonization, we must absolutely rethink what tomorrow can be” (Deranger, 2021, min 22:40).

While colonial knowledge systems have only begun to grapple with intersectionality since Kimberle Crenshaw coined the phrase in 1987, “Indigenous models of moving towards the recognition of our rights has been intersectional, from the beginning, we are intersectional, it is not just about advocating for the recognition of our existence, it’s about recognition of our economic systems, our, our education systems, our spirituality” (Deranger, 2021). This integrative view runs counter to colonial knowledge systems which Deranger, Tallbear, and Trospen contend in their CANSEE 2021 presentations seek to compartmentalize, label, define, and control. Indigenous futures do not consist of settler colonial institutions simply stopping at giving a land acknowledgement which serve to function as by-passing the difficult reality these institutions occupy stolen land and the Indigenous peoples “acknowledged” are still here, landless (Tallbear, 2021).

A common reflection in the literature and in the talks delivered was a need to focus on Indigenous futures celebrating Indigenous contributions and centering Indigenous visions. A need remains to tell the truth and acknowledge and address materially the trauma and theft Indigenous peoples have experienced and continue to experience as a result of settler colonial violence. When seeking to educate settler

scholars, centering Indigenous resistance, regeneration, and reclamation and expressions of Indigenous ways of being is central.

For Deranger and the CANSEE organizers who heeded her words, a first step in such a substantive shift was to create and host an Indigenous-led discussion on Indigenous economics. To that end, Indigenous Climate Action hosted Indigenous Economics: Reclaiming the Sacred, in June 2021. Originally, following the 2019 CANSEE conference, the CANSEE Board envisaged an “Indigenous Economics” stream in the 2021 Conference. Integrating lessons learned from hosting the 2019 event and heeding the challenge of 2019 keynote Eriel Deranger, the 2021 planning committee supported ICA to host a stand-alone conference following the CANSEE conference planned for the University of Victoria in 2021. Disrupted by a global pandemic, both CANSEE and ICA 2021 conferences shifted online. Indigenous Climate Action executive director Eriel Tchekwie Deranger described the event as follows:

As western and colonial academia and governments race to find solutions to the current crises, we must ensure Indigenous Peoples, our knowledge, our culture, our languages and our relationships with the natural world, are not co-opted, degraded, or minimized. It is prudent ecological economics, and other sustainability-oriented fields more broadly, re-centre Indigenous voices and leadership. This event is a first step for an Indigenous-led space to discuss the concept of ecological economics from our own perspectives and with our own experts. (Deranger, June 9, 2021)

The conference was organized according to several themes central to ICA’s conceptualization of an ‘Indigenous economics.’ As the integrative literature review highlighted sustainability scholarship’s erasure of the sacred dimensions of Indigenous knowledges, this study will focus on ICA’s 2021 conference theme ‘reclaiming the sacred.’

OBSERVATION 5: Reclaiming the sacred

For ICA and participants in the 2021 Conference, “reclaiming the sacred” included shifting from enumerating harms towards focusing on just transitions and imagining Indigenous futures. Throughout the three days, discussions came back to the notion of ‘sacred,’ and the limitations of working through English concepts to express Indigenous concepts. Humorous anecdotes about settler allies coming into First Nations communities seeking to connect with “spiritual people” or “shamans” elicited knowing laughter from Indigenous attendees, whose ways of knowing do not compartmentalize the spiritual and the mundane in the same manner of settlers whose Christian practices separate the priest class from society, and whose collective worship is contained to a building. The tendency in colonial knowledge systems is to approach references to “spirit” and any discussion of the “sacred” as outside the tidy boundaries of knowledge generation as an “other,” an extra for which scholars in colonial knowledge systems (CKS) have no conceptual container (Berkes & Davidson-Hunt, 2006; Armitage et al., 2009). In such a scenario, CKS fails to find language for this knowledge, and it is seen in the standpoint of CKS as at best “belief” oriented, and in no way reflecting what the myriad cosmological and epistemological experiences of what the very inept and heavy lifting word “sacred” means for Anishinaabek or any other Indigenous societies (Deranger, 2021; Tallbear, 2021). Participants at the ICA Conference brought awareness that rejecting settler colonial frameworks that reduce life to commodities is itself an act of reclaiming the sacred.

5.4 Discussion

I asked what Indigenous Knowledge keepers and language speakers have to say about researchers within colonial knowledge systems repackaging Indigenous environmental concepts. This question was central to section 5.3, presented as five observations from the case study. In section 5.4, I engage the second question: what is present in these results that could reduce epistemic violence in settler scholarship. Focus on settler accountability seems counter to the results seeking to re-centre Indigenous perspectives and well-being. As a settler scholar, centering Indigenous perspectives and well-being requires intervention in the unwitting epistemic violence within settler scholarship, practices which section 5.3 Results show currently reinforce settler supremacy.

5.4.1 Acknowledging limitations of colonial knowledge systems

Four limitations within colonial knowledge systems emerged from the results of the case study:

1. Settler colonial knowledges have not stood the test of time
2. Settler colonial narratives are based on the racist Doctrine of Discovery
3. “Economic Man” as an archetype within the settler colonial narrative offers a commodity view of life
4. Settler colonial scholarship rarely acknowledges let alone examines ideological orientations, operating from a place of epistemic supremacy

The first limitation found when synthesizing the results is that settler colonial knowledges simply have not stood the test of time (Chiblow, 2021; Mills, 2019; Deranger, 2021). Whereas Anishinaabe governance systems consider seven generations when taking decisions that impact Water, for example, colonial research systems offer moving targets and ignore the ecological imperatives and limitations of the so-called natural world: “It was noted that Western science does not stand the test of time, as principles, norms and findings changing over the years; for example, chemicals in the Great Lakes were deemed safe decades ago and now these same chemicals are found to be dangerous. TEK stands the test of time. There is value in science to support decision making at the community level, but should never replace, marginalize, or dominate TEK” (McGregor et al., 2023). In settler colonial science, it is acceptable to determine after 90 days of exposure to mice whether a compound is “toxic” or not in accordance with Guideline 83-2; EPA, 1984 (NRC, 1993). Such time scales are clearly not adequate to detect first-order harms, let alone second- and third-order harms.

The second limitation involves Canada’s false origin story, the Doctrine of Discovery. In the late 20th century, Canada relied on the Doctrine of Discovery for “modern consideration of Indigenous rights to explain how colonizing European countries supposedly gained the underlying title to Indigenous lands” (McIvor, 2021, p. 16). As Aaron Mills (2022) aptly illustrated, the settler colonial origin story is simply not that compelling a story. First Peoples Law co-founder Bruce McIvor speaks plainly on the illegitimate and racist Doctrine of Discovery as a primordial lie upon which Canada falsely asserts jurisdictions on Indigenous lands. Coupled with this lie is the Canadian Government’s stated priority for “reconciliation.” For many Indigenous scholars, reconciliation, conceptually, is “a national conversation based on the racist and dehumanizing Doctrine of Discovery” (McIvor, 2021, p. 17).

Colonialism is a violent relationship defined by the principle of white supremacy. For Turner and Spalding (2018), “reconciliation demands a much higher standard than concluding land and economic

deals or improving overall relations... Reconciliation involves acknowledgment of the past and ensuring that First Nations have a seat at the planning table to navigate the future” (Turner & Spalding, 2018, p. 284). McIvor and Gunn (2021) agreed that Indigenous peoples should not be forced to fight for a place at the table, noting that “real reconciliation requires recognition of Indigenous peoples’ inherent law-making authority and its place within Canada’s constitutional order” (McIvor, 2021, p. 125, with Kate Gunn).

For Anishinaabe legal scholar Dr. Aaron Mills, “the crisis of indigenous-settler relationships—the reason why we’re in need of reconciliation—is colonialism, a violent relationship defined by the principle of settler supremacy. The transformative task... is to discern a non-violent ground from which to grow indigenous-settler relationships” (Mills, 2019, p. 6). That non-violent ground is predicated on ending the epistemic violence present in the subjugation and depoliticization of Indigenous knowledges within colonial knowledge frameworks.

The third limitation of settler colonial knowledge systems is the invention of the concept “economic Man.” To change colonial economic systems, Trosper suggested the conceptualization of “economic Man” who acts on his own narrow self-interests must itself be changed. An underlying narrative within colonial knowledge systems is adoption of the Adam thesis in a secular context of liberal economic orders like Canada’s economic order (Trosper, 2021). A commodity view of life was identified when coding data as a major limitation shaping the colonial narrative. When considering a concept like “ecological economics,” one must contend with the notion that settler ecologies are entropic systems “characterized by a destabilizing lack of reciprocal relations with the environment and the hoarding of ecological wealth by settler nations at the expense of Indigenous peoples” through which “lands and peoples are reduced to objects and exhausted, viewed as material resources for the sake of profit” (Avalos, 2023, p. 616). The current story of settler colonialism is one of transaction:

Settler colonialism has produced a de-sacralized world; one devoid of any coherent morality, where only material life and its consumption matters. The civilizing projects imposed on Native peoples, forced education and missionization, aggressively disrupted their relationships to sacred world and their attendant ontologies. Knowledge is produced but it is often compartmentalized and de-sacralized, failing to recognize the intersubjective relationships between all phenomena. Deloria interprets the loss of this sacred reality as existential estrangement. (Avalos, 2023, p. 627)

This kind of de-sacralized world, this reduction to object and transaction is central to the commodification at the heart of what Mi’kmaq woman from L’sitkuk (water cuts through high rocks) known as Bear River First Nation, Nova Scotia and law professor Dr. Sherry Pictou calls neoliberal colonial capitalism (Pictou, 2019). “Economic Man” as a concept cannot exist in a sacralized world. Colonial knowledge systems lack a “container” for placing sacred knowledge. Entire realms of spiritual knowledges are inseparable from the data points settler scholars interpret as ‘Indigenous knowledges.’ As shown earlier in this study, such knowledge has no framework for inclusion within Settler scholarship.

I characterize three distinct causes of this exclusion. First, colonial knowledge systems are not based on any parallel concepts and therefore require a level of humility and openness to not knowing what is to be known and accepting that not all knowledge is accessible within limits of a positivist framework. Secondly, colonial knowledge systems lack a foundational conceptual framework capable of internalizing or processing spiritual knowledge as ‘scientific.’ Third, sacred knowledge is excluded from efforts to work cross-culturally. This exclusion is not only through settler scholarship lacking frameworks for sacred knowledge, but also through Indigenous peoples exercising knowledge sovereignty, no longer willing to share sacred knowledge with settler scholars who’ve been proven untrustworthy with it.

The fourth limitation of colonial knowledge systems identified in the case study is the invisibility of colonial knowledge systems to those operating within them (Moreton-Robinson, 2018). Colonial knowledge is reduced to what is observed, and what is observed is often culturally coded: “Elder Harry Bone explains why settler society often misreads the normativity of Indigenous legal traditions, reducing them to mere fact... it’s indiscernible from the position of observer. One must actively take part in the experience to share in its normative content” (Mills, 2019, p. 132). Positivist commitments to ‘objectivity’ without any effort to examine the ideological dimensions of various assumptions including one’s theory of change maintains the epistemic violence discussed earlier in this study. When operating from the assumption that one’s own way of knowing is objective and all other ways of knowing outside of that framework are subjective, one is operating from a place of epistemic supremacy. This lack of self-awareness is what drives concerns over settler adoption of Indigenous concepts as expressed by Indigenous scholars and conference participants alike.

5.4.2 Shared futures

This study highlights opportunities for transformation within colonial knowledge systems that provide foundations for new settler colonial narratives. These opportunities for transformation have been identified by other scholars over time. Previous generations of scholars within the colonial knowledge system sought, as I and other contemporaries seek, to both make colonial knowledge systems visible, and to address the role the epistemological confines of settler colonial knowledge systems play that continue to obscure Indigenous knowledge systems or coopt them. Scholars working on environmental assessments, including Armitage et al. (2009) and Berkes and Davidson-Hunt (2006), played a role in shifting from a positivist, prescriptive, postage-stamp, resource-function view of the ecosystems upon which Canada’s economy depends towards complex, and at times contested perspectives on what is necessary and sufficient. This study’s over-simplifications into a binary of settler colonial knowledge and Indigenous knowledge allow for an examination of underlying assumptions at the level of worldview.

Conversations within Canadian universities about what is just, let alone what is true, from Indigenous knowledge systems standpoints were sparse until recent decades. Recall the *Indian Act* (1876) plays a major role in the absence of these conversations within settler colonial institutions. For nearly a century, Indigenous peoples under the *Indian Act* faced losing their Nationhood and being “naturalized” as Canadians if they attended universities, studied or practiced law, and were forbidden from hiring legal representation. This barrier does not mean these conversations weren’t happening, nor does it mean that Indigenous scholars and community leaders were not impactful. Being heard and effective takes place across many spaces of intersection between colonial power and people power including courts, front lines, investor activism, and publicity campaigns.

The first wave of sustainability scholars naming “the sacred” in their research drew attention to the limits of colonial knowledge systems for coping with the scope, scale, and enormity of the destruction its own logics have ensured (Berkes, 1999). Settler scholars continue to open spaces within academia for scholars whose experiences exist outside the white-assigned, European-descended, male, able-bodied ‘norm’ that has dominated much of academia’s history within settler colonial Canada.

Shifts include CANSEE’s efforts to engage with greater integrity as scholars within settler colonial knowledge systems required organizers to come to terms, continually and ongoing, with the fundamental flaws within an “ecological economics” world view that uphold and defends settler colonial governance as valid. The organizers now have institutional knowledge on ways scholars within CKS are called to uphold Indigenous Knowledge and Indigenous knowledge holders materially and will require

commitment and mentorship for this knowledge to affect a cultural change. Across disciplines, efforts to re-imagine a paradigm that displaces binary colonial narratives also include the new materialists, whose scholarship Tallbear pointed towards, “re-animating the lifeworld for those constrained by colonial and liberal democratic frameworks” (Tallbear, 2021):

Speculative new materialists take up the affective potency of material existence, inherent to Indigenous concepts such as *mnidoo*, as rich resources for innumerable eco and social justice applications. Kim Tallbear discusses this field of study in her talk at CANSEE 2021 and the effort new materialists are making to animate what is within colonial knowledge systems, historically characterized as the inanimate (Tallbear, keynote, CANSEE 2021).

Dealing with the dissolution of binaries at the heart of colonial knowledge systems like the distinction between animate and inanimate states is a challenge compounded by the lack of a “container” within colonial knowledge systems for engaging knowledge generation that engages “ceremony,” “dreaming,” “storying,” and other containers for knowledge derived outside the positivist standard, an observation made clear by Smith (1999), Berkes (1999), Bell (2013), Borrows (2019), and others. Their early works shed light on limitations of colonial knowledge systems named and un-named in this study. These reflections are made possible through these early efforts by geographers, sustainability studies scientists, and environment faculty members to struggle with the arc towards positivism, quantification, and reductive design that had swept the academy in the mid 20th century and toward the beginning of the 21st century (Kagrham et al., 2010).

Yet the progress beyond what Dr. Kyle Whyte called the politics of Indigenous recognition (Whyte, 2011) has been predictably slow. The colonial mind’s capacity for cognitive dissonance astounds. The ability to sit with separation of the spiritual-material divide, says Dr. Tallbear, inherent in colonial knowledge systems allows those working within CKS to work at cross purposes with their own stated values. Tallbear gives the example of settler allies taking the time to meet protocols of land acknowledgements and welcoming addresses without ever addressing the underlying issues raised in the land acknowledgements they craft. Such small steps serve to uphold and reinforce the structural violence maintaining the *Indian Act* and the assimilation policies of Canada’s governments. As Dr. Kim Tallbear noted at the closing of the CANSEE 2021 conference:

If settlers can persist in their spirit material worldview, they can also (persist in) the culture nature divide, right? They can then just allow us to smudge or dance or put on beads and dance around in public and do a traditional opening to a conference, but they don’t actually have to give anything back . . . it’s actually kind of important to give land back and governance authorities back and things like that. It’s just not simply enough to allow people to say a prayer and open the day in a good way. And that spirit / material divide perpetuates a refusal to give anything material back. Yeah, it’s very, very self-serving of them. (Tallbear, CANSEE 2021, 41:17)

Thoughts on “integrating Indigenous knowledges”

The integrative literature review and the review of transcripts from CANSEE, ICA, and select talks from Elders identified that any effort to “integrate” or “adopt” or “borrow” led by anyone other than Anishinaabemowin speakers runs the risk of mischaracterization: “Some aspects of Anishinaabe ontology cannot be written in English, because these thought systems are incompatible in that the one subjugates the other” (Manning, 2017, p. 10). Manning spoke of “the redeployment of Indigenous philosophies as universalized research framing devices intended to illuminate other divergent knowledge systems for the consumption of Euro-western academia” (Manning, 2017, p. 18), which I am aware is a critique that

could apply to this study. Lertzmann reminded the reader that while each way of knowing “has its own philosophical foundations, communities of respected experts, and methods of validation,” scholars working in solidarity with Indigenous communities reject attempts to “integrate” TEK into scientific management because “standard research methods often run contrary to TEK protocols,” concluding that “even with good intentions such efforts recreate colonial relationships” (Cruikshank 1998; Nadasdy 1999)” (Lertzman, 2010, p. 112).

Jewell (2018) described efforts to ‘integrate’ knowledges within settler colonial scholarship as ‘settler-moves-to-innocence,’ bypassing the political ecology of Canada-Indigenous Relations and heading straight for the Indigenous joy of braiding, weaving, reconnecting, and indigenizing knowledges. For the scholars and Indigenous knowledge holders whose published works were engaged in this case study, the very notion of “integration” of IK and CK ignores the glaring incommensurabilities between these systems (Mills, 2019; Manning, 2017; Jewell, 2017). And yet, as Mills acknowledged, no one is going anywhere, and we must find a way to imagine shared futures.

A key component to this discussion of appropriating concepts within sustainability scholarship is the concept of indigenous data sovereignty. During ICA’s 2021 “Indigenous Economics: Reclaiming the Sacred” conference, Yellow Cloud Woman (Carriane Agawa) and Kim Vander Woerd led a “Data Sovereignty” panel. Yellow Cloud Woman discussed the need for data sovereignty: “We can no longer let people do things for us or to do things in a bad way, our spirit needs to be woken up so we have strength and humility within ourselves to see our teachings are valued and we have something to offer for solutions – one solution is not enough”. A key insight into how we relate to the idea of “Data” is that eliciting change and disruption in ways that are not relational can be quite harmful. The workshop presenters encouraged participants to think of data as a Being. Wayfinding and sense making is process focused rather than outcome oriented, and thus the approach to “data” is not going to reflect the approach of those who set out to “collect” it. Data is not a static thing, data is alive, data is beings. Important to decolonize *before* data is in the basket. We cannot “decolonize” data itself – it is a whole process approach. Attendees were reminded that we “Can’t scrape colonialism off data”. The panel highlighted a need for a deeper conversation on reconciling economies. In certain cultures, truth can only exist with other truths – truth itself is interrelated. Doing things with equity in mind and within community and with attention to relationality is a value.

To address limitations of settler colonial knowledge systems, settler scholars can begin by abandoning the false narratives upon which settler colonialism justifies itself. Unless there is material support for measures that abandon such narratives, then efforts to engage IK in policy frameworks along with gestures towards reconciliation, indigenizing efforts, and land acknowledgements are meaningless acts aimed at relieving settler colonial subjects of full accountability for the untenable status quo that is current Canada-Indigenous relations. Such a paradigm shift will of necessity be Indigenous led:

First Nations have called for paradigm shifts that respect the knowledge brought forth by Elders, TK holders/practitioners on their own terms . . . It will be First Nations’ Women Water Commissions, First Nations’ Environmental Review Tribunals, Elders’ Councils, First Nations’ Energy Boards, First Nations’ Youth Ambassadors that will ensure Indigenous spiritual knowledge is afforded the place it deserves. (McGregor et al., 2019, p. 15)

As calls are increasingly made to ‘include’ Indigenous knowledges in Canada’s efforts to mitigate climate breakdown and biodiversity loss, Indigenous peoples are increasingly alarmed by Canadian policies that directly accelerate climate breakdown and biodiversity loss across Indigenous territories.

5.5 Conclusion

This study identified some key learnings from a snapshot in time and is not meant to be prescriptive, nor is the synthesis of these results in section 5.4 the only way one could organize or approach this question of appropriation of Indigenous Knowledges. The literature review and the case study offered insights arising from the first research question regarding Indigenous knowledge holders' views of colonial knowledge systems scholars repackaging Indigenous concepts, the results of which were summarized in section 5.3. When reflecting on the results of my analysis, three insights emerged: 1) foundational limitations in colonial knowledge systems frameworks make Indigenous knowledges inaccessible to settler scholars; 2) necessity of adopting concepts from Indigenous peoples in the language of the people sharing the concept and as explained by language speakers, prioritizing language reclamation; and 3) settler scholars must avoid depoliticizing Indigenous knowledges.

The first insight is that there are limitations or deficits in the liberal democratic worldview that make what is being shared from Indigenous knowledge systems simply inaccessible to what Lee Maracle referred to as 'the colonized mind' (Maracle, 1996). Dr. McGregor shared the example of Anishinaabek *kendaasowinmin*, which arises within a complete, elegant worldview and which colonial knowledges lack sophistication to understand. Dr. Kim Tallbear reminded us it is only in the past century of Einsteinian physics in which models for the universe are no longer linear, reductionist, or mechanistic. Over decades, several scholars, from Dr. Shiv Chopra (who is no more) to Dr. Vandana Shiva to Fishy Philosopher Dr. Zoe Todd, have pointed out in presentations, conversations, and social media communications that Einstein's conceptions of physics renders settler colonial Newtonian constructs for 'how things work' obsolete. And yet our policy frameworks are built on the type of cause-and-effect logics that arise from outdated applications of Newtonian physics and the impositions of a reductionist, positivist approach to the "scientific method" on the biological world. Indigenous scholars argue that Einstein's explanations bring Eurocentric narratives into conversation with Indigenous sciences regarding the nature of the universe and the interconnectedness of beings within constructs of space and time that are not limited to the visible, measurable, materialized universe that reductionist, Newtonian settler colonial scholarship insists is 'the real world.'

The second insight concerns the request for scholars to adopt Indigenous concepts in the names and languages from which the concepts derive. Interpretations of those concepts must be articulated by language speakers in the languages in which this knowledge is codified, shared, and understood through lived experience are crucial for retaining and implementing indigenous knowledge systems.

This leads to the third insight: Knowledge reclamation and regeneration ought to be a priority of every university in every settler colonial context within so-called Canada. Education institutions robbed generations of their languages and education institutions are positioned to address the 100-year war on Indigenous knowledges by materially supporting Indigenous-led language programs and working with the remaining language speakers to regenerate and document languages whenever and wherever Elders gather and want to be documented.

The final and pertinent insight for my overarching inquiry is the "neutering" of Anishinaabe philosophy by non-Indigenous scholarship including my own. Simply put, colonial knowledge systems scholarship has a tendency to de-politicize Indigenous knowledges and struggles, glossing over settler colonial violence and academia's role in upholding and maintaining that violence. To be aware of the ways in which this colonial knowledge system in which I work is "unaware of the extent of its own embedded anthropocentric imperialism" is to raise an obligation to address this unawareness (Manning,

2017, p. 18-19). In the least, this constitutes a responsibility for settler colonial scholars to challenge practices that erase the ongoing presence of colonialism and colonial policies and structures. Recognition justice fails, as Anishinaabe scholar and philosopher Dr. Kyle P. Whyte reminded us, to address material causes of injustice and struggle amongst the Anishinaabek Nation, which is land dispossession and disruption of language transfer, which is itself a disruption of generational knowledge translation and generation.

To take this notion one step further, Elder Harry Bone shared that terminology obfuscates meaning, depoliticizing the actions of settler colonial governments who are exacting or permitting violence upon their hosts. A simple form of resistance in which settler scholars can engage is to speak in plain language. Imagining shared food futures, as is the overarching goal of the study this manuscript informs, requires settler sustainability scholars to fill gaps in their own disciplines literature by engaging with and learning from Indigenous understandings of Canada-Indigenous relations and how the truth of Canada's origin story impacts the scholarship over the past century upon which their disciplines are based. Putting these three insights into practice will require settler scholars to abandon settler colonial narratives that do not hold up to scrutiny.

Chapter 6: Conclusion

Collectively, the three manuscripts identify limitations of settler colonial knowledge frameworks when imagining shared food futures. Unexamined colonial narratives obscure 500 years of Indigenous existence, resistance, and resurgence in which contemporary discussions and expressions of Indigenous foodways live. Indigenous scholars have offered their guidance while calling on sustainability scholars to step up to transform settler colonial narratives and end epistemic violence. Chapter 6 summarizes key learnings for letting go of settler colonial narratives that simply do not hold up under scrutiny.

Over the past few decades, settler colonial institutions with increasing urgency are turning to Indigenous Knowledge to offer ways out of what settler academics term a climate crisis. This case study reflects on lessons learned while organizing conferences with Canadian Society for Ecological Economics and Indigenous Climate Action. I examine the appropriation of Indigenous knowledge in sustainability research in order to reflect broadly on the inadequacies of colonial knowledge systems for engaging with IKS with integrity. Specifically, this study centres Indigenist frameworks for examining ways sustainability research borrows from and appropriates Anishnaabe *kendaasowin* regarding forest and food systems in a climate change context. This case study draws attention to some limitations colonial knowledge systems present for engaging Indigenous knowledge systems.

This dissertation set out to accomplish the following four goals:

1. Contribute to radical food geographies scholarship by characterizing cumulative impacts of forestry policies on Indigenous foodways
2. Name limitations of settler colonial knowledge systems that, unchecked, reproduce extractive, appropriative, transactional approaches to engaging with Indigenous knowledge systems
3. Contribute towards an emerging theory of food democracy
4. Make significant and original contributions to community

The first goal was achieved through the study in Chapter 4, which has been submitted to *Settler Colonial Studies* for consideration. This scholarship has informed the TEK Elders' preparations for their coming court challenge to bring an end to plantation conversion and glyphosate use.

For the second goal, the manuscripts in Chapters 3, 4, and 5 approached this question of limitations or deficits in settler colonial knowledge systems from different points of view. These discussions centered the various case studies and an integrative literature review to reflect on these limitations.

The third goal was contributing toward an emerging theory of food democracy. In the five years of inquiry, I wrote three manuscripts that question the value of applying Eurocentric concepts and frameworks in a decolonial context. Democratizing a food system that is wholly in the hands of global capital remains a radical vision. And yet this dissertation reveals that, in a settler colonial context, notions of democracy that centre the liberty of the individual are poorly suited to address Canada's "development" impacts on collective interests within the Anishinaabek Nation, including the protection and expansion of Anishinaabek foodways. Even the notion of 'democracy' itself has been universalized in a way that excludes Indigenous governance. For my contribution to scholarship on food democracy in Canada, I have focused on the settler obligation to (re)articulate a new narrative, which is discussed in

section 6.2. First, I offer a short discussion on key limitations of settler colonial knowledge systems for engaging indigenous knowledges with integrity identified in Chapters 3, 4, and 5.

From my standpoint, the most important of the goals was the fourth: contributing to the communities with whom I engaged during this study. For decades, settler scholarship has been extractive, excluding the communities from whom scholars gather data from the analysis and providing little to no benefit to those whose knowledge has been extracted. A dissertation requires what Professor De Loe called a SOCK: a significant and original contribution to knowledge. For me, any scholarship involving Indigenous peoples or their stories ought to require a SOCC for the other foot: a significant and original contribution to community. To that end, I worked and continue to work alongside TEK Elders on their campaign to halt glyphosate use by using my skills to uplift their actions, taking direction from the Elders. This included building and maintaining a website, writing briefing documents, networking with film makers and campaigners across Canada, and coordinating meetings and events on the TEK Elders' behalf. I am editing together a podcast series based on the TEK Elders recordings I was given access to for this study.

Collectively, the three manuscripts identify limitations of settler colonial knowledge frameworks for imagining shared food futures. Unexamined colonial narratives obscure 500 years of Indigenous existence, resistance, and resurgence in which contemporary discussions and expressions of Indigenous foodways live. Indigenous scholars have offered guidance that included calls for sustainability scholars to transform disproven settler colonial narratives. Chapter 6 synthesizes key learnings for letting go of settler colonial narratives that simply do not hold up under such scrutiny and reiterates Indigenous scholars' guidance from the literature and from fieldwork for creating new narratives. New narratives begin with normative shifts or shifts in framing. Adopting language that overcomes the tendency of terminology to obfuscate was shown through this study to be essential to building new narratives.

Recognizing that food is more than a commodity, I set out to re-imagine how, in a settler colonial context, we might govern ourselves to ensure our foodways are sustaining. In this dissertation, I question the impact Ontario's 'resource management' regime has on the Crown's 1850 treaty obligations to protect Anishinaabek foodways (which include food governance, practices, knowledges, traditions, and cultures). To examine this question, I engaged in three separate but connected inquiries, which I offer as three manuscripts detailing the results.

First, in Chapter 3, I offer a manuscript published in *Canadian Food Studies*. This co-authored paper examines opportunities for and the limitations of the European concepts of Food Commons and multi-governance frameworks for guiding Settler policy in the context of promotion of Indigenous foodways and 'country food' networks. The study highlighted the need for food movements to become more active in land back movements to support regenerative foodways efforts and the 500 years of colonial resistance that has kept such cultural knowledge alive. We also suggest Canadian policymakers adopt a multidimensionality framework for food, particularly when governments engage responses to Indigenous food insecurity, rather than impose a limited commodity view of food. Accepting non-economic dimensions of food values includes accepting the value of the land base necessary for Anishinaabek and other First Nations to express their foodways within their territories. Based on these results, I sought to understand how land management policies in Canada affect the practice of Indigenous foodways.

In Chapter 4, I partnered with Traditional Ecological Knowledge Elders to write a manuscript for submission to *Settler Colonial Studies* characterizing the cumulative impacts of Ontario's resource management regime on Anishinaabek foodways. Specifically, we ask what changes that were made in

2020 to Crown forestry policies reveal about the intersection of settler colonial ‘resource management’ regimes and Anishinaabek governance and laws and discuss how these changes impact Ontario’s capacity to meet Treaty obligations as understood by the Anishinaabek Nation. The Anishinaabek Nation views forests through a lens of intergenerational obligation, kinship relations, and clan responsibilities applying Anishinaabek governance frameworks built on reciprocity, respect, relationship, and renewal. The various levels of government within Canada view forests as “renewable resources” managed for “timber value.” Focusing on aerial spraying of glyphosate as a case study, we found that Ontario’s forestry legislation rejects even the settler colonial knowledge about the harms of contemporary forestry practices, let alone Anishinaabek knowledge, undermining Canada’s various treaty obligations to protect Anishinaabek foodways. Our study contributes to the characterization of cumulative effects of settler mismanagement on Anishinaabek foodways. In that process, we also characterized limitations of settler colonial knowledge narratives for addressing concerns raised by TEK Elders and scholars.

To better understand these limitations, I turn to Indigenous sustainability scholars in Chapter 5. In the third and final study in Chapter 5, I begin by asking what Indigenous Knowledge keepers and language speakers have to say about researchers within colonial knowledge systems repackaging Indigenous environmental concepts. Next, I ask how these reflections on sustainability studies’ appropriations of Indigenous knowledges could transform settler colonial knowledge systems-based theory and practice away from such epistemic violence. Specifically, I ask what limitations must be overcome to imagine shared food futures in a settler colonial context. Results show broad resistance within the Indigenous scholarship and amongst grass roots leadership to extractive approaches for “bringing” Indigenous knowledge “into” settler colonial frameworks. The need to categorize, separate, and define concepts is a core feature of knowledge generation within settler colonial knowledge systems. This kind of transactional approach to knowledge interferes with “welcoming and meeting in systems of relationship and reciprocity and kinship” (Deranger, 2021). Indigenous speakers called attention to settler colonial scholars coopting Indigenous knowledges while remaining “unaware of the extent” of settler colonial scholarship’s “own embedded anthropocentric imperialism” (Manning, 2017, p. 18). In the process of cooptation, the source knowledge is often de-politicized and de-contextualized from its cultural, temporal and spatial contexts.

This study was deeply personal in nature. Several frameworks and avenues that felt promising and dare I say clever in the first two years quickly became less so as my understanding of the limitations of frameworks devised within the epistemological confines of settler colonial thinking expanded. Several versions of this work almost made the light of day, only to be re-considered upon my deepening experience of listening to the Elders with whom I’ve worked for seven years, as well as listening to and growing alongside mentors and accomplices Dr. Sue Bell Chiblow and Caroline Recollet. The frustrations with the processes against which the TEK Elders struggle in their efforts to stop the conversion of food forests into pine plantations bereft of diverse life upon which Anishinaabek foodways depend did not ease throughout this process. Elders remind me that this work is intergenerational and ongoing.

While describing the beginning, middle, and end of processes for the purpose of delineating case studies from which to draw observations and lessons, the relationships cultivated throughout this project and at the centre of the work will continue and our shared work to halt the assaults on Anishinaabek foodways and on the very bodies of water and forests so many depend upon for our well-being. As Dr. Sue Chiblow indicates these efforts to engage cross cultural study and to work across generations are about relationship maintenance, not simply extracting useful data for an academic exercise. I am a welcome visitor, and I intend to continue this work in whatever ways the TEK Elders determine is useful for their efforts.

Insights shared through these manuscripts suggest that to imagine shared food futures, settler society must first come to understand the truth of Canada's occupation of Indigenous lands and the impacts Canadian economies have on Indigenous foodways and by extension, on settler food systems. Throughout the now six years of this study, I was present when Indigenous scholars, community leaders, and knowledge holders called for those working within settler colonial institutions and industry to listen to and prioritize Indigenous Knowledges and knowledge holders. Settler colonial institutions have recently turned their attention towards "including" or "recognizing" the very Indigenous knowledge these same institutions spent centuries invalidating and actively undermining. Inclusion in this sense positions settler colonial knowledge, falsely, as a neutral arbiter and umbrella under which Indigenous knowledges are considered or consulted.

This study reflects on limitations of or deficits in colonial knowledge systems that create barriers for settler colonial scholars to engage with Indigenous knowledge systems with integrity. Operating from a place of so-called 'western' or settler colonial science as a neutral arbiter of facts, settler scholars risk further obscuring limitations of settler colonial ways of knowing for engaging with Indigenous knowledges with integrity. Such a lack of self-awareness on the part of settler colonial scholarship results in both mis-interpreting Indigenous knowledges and in missing entire components of knowledge generation because there is no settler colonial analogue.

6.1 Limitations of settler colonial knowledge systems

Limitations or deficits in colonial knowledge systems impede the capacity of settlers to comprehend Indigenous knowledges. In the colonized mind, Indigenous forms of governance, science, and spirituality are seen as inherently inferior to Eurocentric forms of governance, science, and spirituality when they are seen at all. In the late 20th century, Canada relied on the Doctrine of Discovery for "modern consideration of Indigenous rights to explain how colonizing European countries supposedly gained the underlying title to Indigenous lands" (McIvor, 2021, p. 16). As Aaron Mills (2022) aptly illustrated, the settler colonial origin story is simply not that compelling a story. Anishinaabek interpretations of the 1850 Treaty and the historical record reflect an intention to share the lands with newcomers while respecting and upholding Anishinaabek sovereignty and governance. Yet the Crown and her agents Canada and the Province of Ontario following Confederation remain attached to untenable stories built first on the faulty and racist Doctrine of Discovery.

Chapter 5 articulated four limitations within colonial knowledge systems emerging from the case study:

1. Settler colonial knowledges have not stood the test of time.
2. Settler colonial narratives are based on the racist Doctrine of Discovery.
3. "Economic Man" as an archetype within the settler colonial narrative offers a commodity view of life.
4. Settler colonial scholarship rarely acknowledges let alone examines its own ideological orientations, operating from a place of epistemic supremacy.

These four limitations, discussed in some detail in 5.4.1, are by no means an exhaustive discussion on the topic, as the reader may easily consider the data over the three manuscripts and arrive at additional limitations present in the results. The four this dissertation centres have a common thread: the Settler colonial origin story, the narrative upon which Canada bases its "right" to exist, is a flawed narrative that

does not hold up to scrutiny. Settler colonial frameworks have been proven over time to be false. The racist Doctrine of Discovery is a false narrative in and of itself, laying the foundation for the false narrative Canada has adopted. The false story of “Economic Man” commodifies life and renders relationship invisible. And failing to acknowledge ideological orientations within settler colonial frameworks produces false narratives.

These limitations are limitations connected to origin story. Incommensurability of knowledge systems arises from the incommensurability at the level of legal or constitutional order, or how a society governs itself in relation to itself and others, based on shared narratives about how the world works and what purpose a society holds. Anishinaabe legal scholar Aaron Mills articulated the inherent incommensurability of settler colonial and Indigenous, or what he calls liberal and rooted constitutional orders. He is clear to pin this incommensurability on the underlying ontological roots of each constitutional order, crediting French philosopher Bruno Latour for articulating the “assessment that where the divide between communities is ontological, the gods are at war” (Mills, 2019, p. 200). For Mills, these are not the gods Latour imagines: “There’s a cosmological war to be fought (or avoided) long before the matter of dueling fundamentalisms arises. It’s between the incompatible creation-reproducing and human-engineering constitutional orientations which follow from incommensurable earth-relativity theses” (Mills, 2019, p. 200). When we come to appreciate the fact of foundational incommensurability beneath the roots of each constitutional order, we do not “enter a constitutional dialogue with the intention of winning the other side over by the force of its superior proposals.” Instead, having grasped the necessity of non-combination, we seek “transformation (whether of itself or of the other side) so that a shared earth-relativity thesis ‘takes root’” (Mills, 2019, p. 200).

According to Anishinaabek, each Being is vested with a gift and given an injunction to share that gift with the rest of creation, creating a kind of harmony in which most of us most of the time sustain a state of wellness (Owl, 2018; Mills, 2022). Mills shared that within this “earth community” view, each depends on all others, in an ongoing circulation, in which our wellbeing is inextricably connected to the well-being of all others. Mills reminded us that a “fundamental Law of this view of creation is Sharing or as an academic would call Mutual Aid” (Mills, 2022). This narrative is in striking contrast to the settler colonial narrative that “assumes a natural condition of disorder, mirroring the wildness of undeveloped nature, that we escape by creating human-nature and public-private divides and imposing rules on ourselves” (Campeau, 2019, p. 24). In the colonial mind, “Nature” is external to Man and hostile.

This colonial narrative cannot hold if we are to survive ourselves and recreate the necessary biodiversity to sustain human life on Mother Earth. To re-imagine shared food futures, Canada must adopt new narratives. Settler scholars have an enormous role to play in this task. Settler colonial scholarship treats Indigenous knowledges not as robust, elegant, sophisticated systems for understanding the world and how to live in a sustaining way but merely as ‘additive’ to the objective, technical, data-driven ‘science’ done according to settler colonial research methods. Re-framing Indigenous knowledges as sophisticated, place-based, intergenerational knowledge systems that do not require ‘validation’ with so-called western or settler colonial science is a necessary normative shift. Normative shifts require new narratives.

6.2 Adopting new narratives

Settler scholars, from my standpoint, have an obligation to confront these limitations and build new narratives that reject limitations of settler colonial world views in order to receive insights generated within Indigenous knowledge systems. Canada’s origin story claims Indigenous peoples accepted the

Crown as their sovereign and ceded lands and waters. Anishnaabe Elders tell me their Anishinaabek ancestors would never have subjugated themselves to the Crown. Aaron Mills verified this understanding of Treaty by tracing the words of Sir William Johnson in his letters to the Lords of Trade in 1763 at the time the Treaty of Niagara, less than three months after Treaty of Niagara had been negotiated. Writing to General Gage at the end of October, Sir William Johnson said: “I must beg leave to observe, that the Six Nations, Western Indians [Anishinaabeg], etc, having never been conquered, either by the English or French, nor subject to the Laws, consider themselves as a free people” (Mills, 2019, p. 231).

Anishinaabek are not a conquered people. Yet the liberal narrative conceives of Indigenous peoples as having given up their lands to Canada. Liberalism in a philosophical and epistemological sense unites “Canadians” as “Canadians” and informs the values and assumptions through which Canadians recognize the validity of the authority of the Crown (Mills, 2019). This origin story that centres individual liberty and speaks little of our responsibilities is told in the repatriated Constitution and the Charter of Rights and Freedoms. This narrative is transactional in nature, rendering invisible the relationships upon which our collective liberty depends. Such a standpoint produces and is itself the product of colonial knowledge systems. As McIvor states plainly in several works, this narrative does not stand up under scrutiny.

The colonial narrative captured in the Charter of Rights and Freedoms (1982) involves a dynamic of distributing rights and obligations that is zero sum, where one side gains and the other side incurs loss, which Mills described as “an adversarial model of contract” that “predictably often leads to conflict” (Mills, 2022). Canada’s origin story if Canadian Treaty interpretation is taken at face value is that the Anishinaabek just voluntarily gave up all of their territory to the Crown for nothing in return. This is obviously not a very compelling story. Even if one imagines the hardship of encroachment on Anishinaabek ancestors, “it is hard to tell the story with a straight face if the bargain was Indigenous land and jurisdiction for what seems now as a trifle” (Mills, 2022). Mills invited us to “acknowledge the faults of that story and inquire what a better one might be. We could say some form of colonial reduction was sufficient to secure such an agreement... that choice would have to be freely made to be genuine, but none of them say that” (Mills, 2022). Indeed, Bohaker (2024) referred to the letters and documents from negotiators at the time of the Treaty of Niagara (1764) and the Robinson Huron Treaty (1850), who communicated clearly to their superiors that any interpretation the Anishinaabek were ceding land was untrustworthy (Bohaker, 2024).

Settler scholars have an opportunity to let go of false narratives like the Doctrine of Discovery that no longer serve. In his important 2019 dissertation on Anishinaabek law, Aaron Mills articulated the value of settlers accepting Taiaiake Alfred’s “humility thesis.” The humility thesis proposes that each element of Creation has been bestowed both needs and a gift. Each element of Creation is also bestowed the corresponding responsibility to share gifts and needs. The logic of the humility thesis requires us to provide aid to others when we can and to openly claim our needs trusting our kin will meet those needs through their gifts (Mills, 2019). Mills quoted from Taiaiake Alfred’s articulation of the humility thesis, which Mills considered “an important one because it foregrounds the role of human agency in Indigenous constitutionalism: Unlike the earth, social and political institutions were created by men and women.” Mills expanded, explaining that humans have a responsibility to amend these man-made systems when they are not life-serving (Mills, 2019, p. 197-198). Settler scholars can begin the process of adopting new narratives by engaging with Alfred and Mills’ challenge to adopt the humility thesis.

One further and place-specific strategy Settlers living in the Great Lakes Basin could adopt to replace the unconvincing origin story would be to join the Dish with One Spoon Covenant: “Rooted

Indigenous logic systems and the Haudenosaunee-Anishinaabe “Dish with One Spoon” covenant may offer guidance on how to restructure this human-nature relationship” (Campeau, 2019, p. 11). Anishinaabe scholar Dominic Beaudry taught that the Dish with One Spoon Treaty between Indigenous Nations prior to European contact is about how to share the garden. Imagining shared food futures could begin with re-commitments to these governance principles.

Moving forward, we must let go of Canada’s limited, legalistic, and transactional take on the “treaty” story and come to terms with what it really means to be Treaty People. For Mills, Heidi Stark’s characterization of “the older treaties with creation” as offering “ways of relating to one another” suggests Creation is a way in which nations might constitute interaction amongst themselves, perhaps even ways of mutual aid: “Stark unequivocally grounded treaties Anishinaabeg have with Canadians and with Americans in Creation, arguing that what Anishinaabeg have done with these settler nations is a reproduction of what Creation has already done with us. Moreover, this reproduction serves to ground settler nations, too, in Creation. The result is a move away from a rights discourse that precludes us from focusing on treaties as relationships, into relationships that must be nurtured and renewed” (Mills, 2019, p. 229).

6.3 Addressing epistemic violence in settler scholarship

While epistemic violence at the level of settler colonial institutions has been shown in this study to be systemic, individual settler scholars have the capacity and response-*ability* to address epistemic violence within their scholarship. Scholars operating within settler colonial or western academic traditions have responsibilities to Indigenous peoples inside and outside the academy. These responsibilities begin, as mentioned in the previous section, with the relevant Calls to Action found in the Truth and Reconciliation Commission report (2015) and codified in ethics processes like First Nations Information Governance Centre’s OCAP framework (2007).

Resisting the settler urge to re-invent, settler scholarship ought focus less on analyzing and synthesizing and seeking to present solutions when there is still much listening, learning, and perhaps most importantly unlearning to be done. Appropriation and cooptation are the result of the epistemic violence associated with extractive research practices. Historically, settler researchers have exhibited a lack of humility in the face of new-to-settler-awareness-concepts, building careers on repurposed concepts that are poorly articulated. As we learned in Chapters 4 and 5, settler colonial knowledge systems lack the sophistication to convey a concept out of its cultural context and out of the language of the knowledge holders expressing the concept. More simply put, settler scholars seek to pull from Indigenous knowledges bits and pieces to incorporate into settler frameworks—like “ecological economics,” which borrows concepts from Indigenous or what Aaron Mills called rooted frameworks. Settler scholars have a responsibility to learn about and then to respect Indigenous data sovereignty, which includes respecting concepts and teachings that arise from Indigenous or rooted knowledge systems that are best explained by Indigenous peoples.

Underlying assumptions within and institutional structures created by settler colonial knowledge systems may render key teachings from Indigenous knowledge keepers and from within Indigenous knowledge systems invisible. Data sovereignty is disrespected at times because settler scholars are not aware they are interacting with data that belongs to specific peoples. In the process, such research may inadvertently reproduce the epistemic violence present in colonial logics that lead to both Indigenous erasure and ecosystems devastation.

Even the use of the term “sovereignty” carries with it the capacity for epistemic violence. I spent undue months grappling with the use of the term “sovereignty,” particularly after engaging the work of Anishinaabe legal scholar Aaron Mills. I felt hesitance before I read Mills’ thoughts on this term, sovereignty, observing myself anticipating having another hard-earned understanding I thought I had achieved skewered and laid bare for its lack of rigour, and I am aware again what it is to be a life-long learner:

No one wants to be caught in, to use Gordon Christie’s language once more, the liberal snare. Much of this sensitivity has been demonstrated through identification that terms like ‘sovereignty’ have a western origin and that if we’re to use them for our own ends, we shall have to stipulate novel uses of them. I confess that at the outset of my PhD, there are some words so closely associated with liberalism—‘autonomy’, chief among them—that I could only hear them in a liberal frame”, owing newfound broadening of his perspective in part due to Tully and to Stark. (Mills, 2019, p. 222)

Mills cautioned against getting caught up in what he described as “anti-colonial language games.” I raise this example in the conclusion in recognition of the ever and ongoing inadequacy of English to provide language for concepts outside the liberal constitutional order Mills so aptly characterized in his works. May we as scholars across knowledge systems remain open to letting go of terms that served a moment when those terms are shown to be inadequate to the task, without becoming caught up in endlessly chasing terminology. Like Mills, can we gain awareness of the ways a “liberal frame” enters into our listening.

One shortcoming of this study has been an observable lack of adoption of terms in the Indigenous language in which the term originates in place of settler scholarship’s reinvented terms. As I engaged with Anishinaabek Elders, Anishinaabemowin terms have been centred in the work of the TEK Elders, and in the education I am receiving in the work we do together. Such a project would have required a fourth manuscript to engage in a remotely respectful manner. In the end, I decided such a project must of necessity be Anishinaabek-led. I plan to continue to work alongside Anishinaabek scholars over the next number of years to accomplish this necessary work. A project is currently underway to support Anishinaabemowin speakers to identify a series of terms and concepts settler scholars have coopted from Anishinaabek knowledge holders and characterize those terms according to Anishinaabe *g’kendaasowin*. This work started recently with the TEK Elders working with Robinson Huron Waawiindeaagewin and the Anishinaabek Nation language commissioner and will continue over the next number of years. Canadian Society of Ecological Economics scholars could work with knowledge holders in other geographies and in the languages of those places to develop similar research projects. Something as simple as referring to Anishinaabe *g’kendaasowin* rather than the generic and inadequate term Indigenous knowledge is a way of reclaiming meaning and preventing epistemic violence from replicating. Imagining shared food futures first requires settler scholars to listen and unlearn.

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Appendix 1: Truth: The Indian Act (1876)

The Indian Act had profound impacts on governance, on transmission of foodways, on cumulative impacts to rights, on language and cultural knowledge transmission, and on the health and well-being of entire nations. Indigenist scholars are unequivocal on naming the Indian Act's genocidal intent. The Indian Act sought to fulfill the government's goals of assimilating Indigenous peoples and annexing territories, imposing Indian Agent governance and enacting apartheid on Indigenous peoples that included restrictions on education, work, movement, marriage, and spiritual practices (Palmater, 2014; King and Pasternak, 2018; TRC, 2015). Children were forcibly removed from their homes to be assimilated into European languages and cultural norms through what are euphemistically called Residential Schools but are more properly considered child internment camps. The Indian Act actively suppressed transmission and expansion of the languages in which Indigenous knowledges are encoded and embodied as dynamic repositories of thousands of years of direct knowledge. Children were violently punished for speaking their home languages and parents and grand parents were fearful to speak the language to their children lest they be unable to function and survive in the colonizer's world (Pine, 2018; TRC, 2015).

The Indian Act was revised in 1951 to remove some of its provisions that if left would have Canada operating in contravention to the then brand new United Nations Declaration on Human Rights. The 1951 changes lifted bans on ceremonies like the potlatch and pipe ceremonies, and allowed Indigenous peoples to bring land claims and hire lawyers. Changes were made in 1960 to remove an enfranchisement clause preventing Indigenous peoples to vote unless they give up their Indigenous status. The Indian Act was again changed in 1985 to finally remove all enfranchisement clauses. In 2014, the Indian Act Amendment and Replacement Act amends the Indian Act to require band councils to publish their by-laws and repeals various outdated provisions of the Act (Indian Act Amendment and Replacement Act, SC 2014, c. 38), and further changes in 2017 and 2019 to address some aspects of the inherent sexism within the Indian Act were made (Indigenous Services Canada, 2022).

The Truth and Reconciliation Commission grew out of a class action suit and broader efforts to hold Canada and Canada's churches accountable for the scope and scale of these atrocities (TRC, 2015). Duncan Campbell Scott, one of three Canadian commissioners tapped to persuade Ojibwa and Cree Nations to sign Treaty 9 (Abley, 2013), told a parliamentary committee discussing the residential school regime that "our object is to continue until there is not a single Indian in Canada that has not been absorbed into the body politic" (Truth and Reconciliation Commission, 2015, p. 3). Changes in policies under the Indian Act following the so-called Second World War were brought about by Canada's need to clean up its own image at the UN (United Nations) to sign the UN Declaration on Human Rights. Changes included ending prohibitions on hiring lawyers for Indigenous peoples. It wasn't until the second half of the 20th century that Indigenous people could go to law school without giving up their nationhood (.).

The child internment era was followed by the so-called Sixties Scoop, which saw children apprehended from Indigenous mothers under deeply racist assumptions and given or sold to white families to assimilate as Canadians or Americans, continuing the genocide. The Indian Act imposed the current "reservation system" model of apartheid, forcing Indigenous peoples to either give up their claims to nationhood or stay confined within reserve boundaries where life was made untenable to discourage resistance and force assimilation (Palmater, 2014). Band Councils and Chiefs were imposed through the

Indian Act to displace Indigenous governance systems and models and to fulfil the role of the dreaded Indian Agent in carrying out the federal government's fiduciary duties and treaty obligations to Indigenous peoples (Diabo, 2017). Indigenous knowledges, languages and governance reclamations, resurgences, and renewals are generational gifts of past and current generations who protect, keep, and forward ceremony, science, language, stories, and relationships across time. The Indian Act while in place for 150 years has not extinguished 500 years of Indigenous resistance to colonization (King and Pasternak, 2018; Palmater, 2014; Diabo, 2017).

Currently, the desire to be rid of the Indian Act (1876) is complicated by the Treaties that predate the assertion of Canada as a nation state whose origin story relies on assertion of Crown title (Venne, 2017). The Canadian government is engaging in a modern treaty process that Mohawk political analyst Russ Diabo calls "Termination tables" and which critics of these federal and other Crown-Indigenous relations policies say is resulting in 4th level municipal band governance under Canada's legal structures and a disruption in Indigenous claims to the territories recognized by the Crown through the Treaty of Niagara (Diabo, 2018; Mills, 2022; Kelly, 2021; McIvor, 2021). The residual policy context the Indian Act leaves for contemporary Indigenous leadership and settler colonial governments is far from ideal. In such a context, the federal government has expressed reconciliation as a priority.