

“Eating Our Culture”:
Intersections of Culturally Grounded Values-Based Frameworks and Indigenous Food Systems
Restoration in Secwepemcúlecw

by

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B.A., University of Guelph, 2012

A Thesis Submitted in Partial Fulfillment
of the Requirements for the Degree of

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We acknowledge with respect the Lekwungen peoples on whose traditional territory the university stands and the Songhees, Esquimalt and W̱SÁNEĆ peoples whose historical relationships with the land continue to this day.

Supervisory Committee

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Abstract

Indigenous values, epistemologies, and indicators have always been ways of teaching and learning about change, and planning for the future. Indigenous food systems are central capacities supporting social-ecological resilience and resistance. Settler-colonialism and environmental degradation are two drivers of rapid and cumulative change over the past century that are at the root of health challenges experienced by Indigenous people and impacts to Indigenous food systems. Indigenous food sovereignty is a framework many Indigenous communities have been working within to support the restoration of Indigenous food systems, knowledges, and relationships to land in this time of resurgence. Recent scholarship highlights the importance of biocultural and culturally grounded values frameworks, aligning with Indigenous epistemologies, for measuring social-ecological resilience and resistance. Indigenous scholars and communities are also calling for more respectful and meaningful research practices in alignment with Indigenous priorities and worldviews.

The Neskonlith Band's Switzmalph community near Salmon Arm, British Columbia, has been working towards restoring Secwépemc plants and food systems through land-based education projects and collaboration in multi-scalar partnerships. This study highlights two cultural concepts or values related to Secwépemc food systems restoration and land based education in Switzmalph and Secwépemc territory more broadly, and their role in guiding future pathways and multi-scalar relationships supporting Secwépemc food systems restoration. This study also highlights the role of storytelling as a method and context for teaching and learning about cultural concepts and values in land-based settings. This study discusses the importance of process-oriented approaches to research for demonstrating how Indigenous ways of knowing can guide ongoing and embodied applications of ethical frameworks. The results of this work highlight the importance of culturally-grounded values in measuring, guiding, and reflecting on change, as well as the vital importance of Indigenous ways of knowing in guiding ethical research processes, and participatory and community-led research throughout all stages of research design.

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Glossary of Key Terms¹

<i>Secwepemcúlecw</i>	Traditional territory of the Secwépemc Nation. Pre-contact there were 32 campfires (communities), however due to impacts of colonialism (e.g., forced relocations, epidemics) they are organized today in 17 bands who look after their caretaker areas of <i>Secwepemcúlecw</i> ² .
<i>Secwepemctsín</i>	The language of the Secwépemc people
<i>Stsptékwle</i>	(Eastern spelling) Oral traditions that teach values, morals, lessons, culture, and laws. Western <i>Secwepemctsín</i> spelling is <i>Stsptekwll</i> .
<i>Slexlexé'ye</i>	Personal stories of events that took place.
<i>Knucwetwécw</i>	Working together, cooperating, helping one another.
<i>Yecwemínte</i>	Looking after or taking care of. <i>Yecwemínte r tmicw</i> is looking after the land (<i>r</i> : the; or <i>re</i> : me, mine).
<i>Yecwemenul'ecwu</i>	Caretakers of the land (referring to the role and responsibility of Secwépemc people as caretakers).
<i>Kweltknéws</i>	Interrelatedness (family unit).
<i>Tmicw</i>	Land
<i>Tellqelmúcw</i>	The people yet to come; future generations
<i>Knucwestsút</i>	Personal responsibility/taking care of yourself
<i>Metwécw</i>	Sharing food
Aboriginal title	A subset of Aboriginal rights in the Canadian legal system by the Supreme Court of Canada that acknowledge inherent Aboriginal property rights over lands.
Aboriginal rights	Inherent rights protected in the Canadian legal system under Section 35 (1) of the <i>Constitution Act</i> , which can include fishing, hunting rights. Can also be Treaty rights.

¹ *Secwepemctsín* glossary language translations by Chief Atahm *Secwepemctsín* language teacher Lucy William.

² See Leonard et al. (2018), also see this reference for a map of *Secwepemcúlecw*.

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Dedication

To Louis Thomas, the Thomas family, and the past, present, and future Knowledge Keepers in Switzmalph and Secwepemcú'ecw.

Statement on Intellectual Property and Cultural Heritage Rights

I respectfully acknowledge the inherent Indigenous rights and responsibilities of Secwépemc peoples to their cultural knowledges and oral histories. The rights to any and all elements of Secwépemc cultural knowledges and oral histories that are part of this thesis, including Indigenous intellectual property and cultural heritage rights, reside collectively with the Secwépemc people from the seventeen communities of the Secwépemc Nation. Any and all rights to oral histories and cultural knowledges of other Indigenous Nations in this thesis similarly reside with those respective Nations.³

³ Bannister and Thomas (2016, 359) also describe earlier precedents for acknowledging Secwépemc ownership, rights, and responsibilities to collective heritage. Ignace and Ignace (2017) and Ignace et al. (2016) are two additional publications setting precedents for acknowledgement of Secwépemc rights and responsibilities to their cultural heritage, which were referenced for this statement.

Chapter 1: Introduction

Secwepemcúlecw

This study is situated in Secwepemcúlecw, the traditional, ancestral, and unceded territory of the Secwépemc Nation. Secwepemcúlecw spreads over 180 000 square kilometers in the Interior Plateau of British Columbia⁴, ranging from the “Columbia River valley along the Rocky Mountains, west to the Fraser River, and south to the Arrow Lakes” (Tk’emlúps te Secwépemc 2018). In many parts of British Columbia, and with some exceptions in the remainder of Canada⁵, Aboriginal title was never extinguished or ceded through constitutionally recognized treaty agreements or other means (McNeil 1997, 134 as cited in Thom 2001a). Secwepemcúlecw covers nine biogeoclimatic zones, which are further characterized by diverse microclimates and plant communities influenced by drainage, topography, elevation, soil types and climate (Turner et al. 2016, 4-7; Ignace and Ignace, with contributions from Nancy Turner, 2017, 146-148). The Secwépemc Nation historically was made up of 32 communities, speaking four different dialects, united by common language, culture, and laws (Tk’emlups te Secwépemc 2018). Today, due to impacts from colonization such as epidemics and forced removals, there are 17 bands in different groupings with three of the four original dialects (Tk’emlups te Secwépemc 2018). These 17 campfires, or communities, uphold the responsibilities of caretaking for *tmicw* (the land) and all of Secwepemcúlecw. This study is situated primarily in the Neskonlith Band’s Switzmalph community, with engagement from Knowledge Holders and land-based educators from Splatsín and Secwépemc territory more broadly. Neskonlith is one of the 17 communities of the

⁴ Friedland et al. (2018). Also, see map of Secwepemcúlecw at Secwépemc Nation (2004) and Turner et al. (2016, 6).

⁵ E.g., some parts of Quebec and the Northwest Territories (Thom 2001b, 27).

Secwépemc Nation, with three communities: IR#1⁶ and IR#2 located near Chase, British Columbia; and the Switzmalph IR#3 located near Salmon Arm, British Columbia.

Context

Indigenous land management practices have been shown to be crucial in the maintenance of biological diversity (Pretty et al. 2009; Toledo 2001, 451 in Morrison 2011, 104; Argumedo 2008; Pacific Northwest context, see Ignace and Ignace 2017, 145-219; Ignace et al. 2016; Anderson 2005). Growing bodies of literature in historical ecology, and its synthesis of data from diverse fields such as environmental studies, archaeology, anthropology, ethnobotany, and other fields acknowledge the positive influence of Indigenous cultivation and management systems on the diversity, quality, and quantities of culturally significant biological resources and ecosystem structures across temporal scales⁷. In a Secwépemc context, *yecwmenúlecwem* (“plant resource stewardship”) practices⁸, developed over thousands of years of observing, experiencing, shaping, and monitoring change, have supported with the maintenance of ecological mosaics that enhance biodiversity and habitat availability for culturally significant plants (Ignace and Ignace, with contributions from Nancy Turner 2017, 188-193). These

⁶ “An Indian Reserve is a tract of land set aside under the Indian Act and treaty agreements for the exclusive use of an Indian band” (First Nations Studies Program 2009).

⁷ Historical ecology is a field that combines knowledge from the social, physical and biological sciences, and inquires into systems of social and ecological relationships that iteratively shape one another and the landscapes they are embedded in. *See* Anderson (2005); Lepofsky et al. (2017); Ignace and Ignace (2017); Ignace et al. (2016a); Kimmerer (2013); Castle (2006); Armstrong et al. (2018); Garibaldi (2003); Turner and Kuhnlein (1982); Turner et al. (2003); Turner (2014); Turner (1999); Turner and Turner (2007); Turner (2001); Turner (2016); Turner and Cocksedge (2001); Turner et al. (2011); Turner et al. (2000); Turner et al. (2013); Turner and Jones (2000); Loewen (2001); Peacock (1998).

⁸ Western spelling from Ignace and Ignace (2016). These adaptive plant cultivation practices in the Interior Plateau include: controlled burning (Turner 1999; Ignace and Ignace 2016, 2017, 2020); plant propagation (e.g., propagating or re-planting at least 35 geophyte species, including re-planting bulb-like appendages of *Erythronium grandiflorum*, see Peacock and Turner 2000 and Loewen et al. 2016); pruning and coppicing, and more focused practices for trees and herbs (Peacock et al. 2016, 182, 198). Secwépemc scholar Dawn Morrison also describes how “resource” language does not accurately capture the nature and scope of relationships and responsibilities between people and nonhuman beings, or recognize them as relatives.

cultivation practices are practiced at the population-level, habitat level, and landscape level⁹, and are guided by, and interrelated with, localized knowledge, protocols, spirituality, human and social governance institutions, roles and responsibilities, value systems and laws, and *stsptékwle* (Ignace and Ignace 2017, 209; Friedland et al. 2018, 160). Late Neskonalith Elder Dr. Mary Thomas described these cultivation practices for enhancing culturally significant plant populations and ecosystems, selective diversity, and maintaining successional stages as being “just like a garden” (Ignace and Ignace, with contributions from Nancy Turner, 2017, 194; Peacock and Turner 2000, 133).

Main dilemma

Indigenous foodways and livelihoods are nested within diverse ecological systems across grasslands, mountains, the great lakes, wetlands, rivers and oceans¹⁰, as well as within critical and ongoing contexts that affect present-day health of social and ecological systems. Secwépemc food systems, ecologies, and education systems, have experienced rapid change since colonization began, as noted by many Secwépemc Elders growing up in the early to mid 19th Century in the Interior Plateau region (Ignace and Ignace, with contributions from Nancy Turner 2017, 188, 219). Cumulative impacts to Secwépemc food systems have resulted in Secwépemc Knowledge Holders observing decreases in quality and quantity of culturally significant plants, such as Avalanche Lily (*scwicw*, *Erythronium grandiflorum*) and Spring Beauty (*skwekwíne*, *Claytonia lanceolata*) (Thomas et al. 2016, Ignace and Ignace, with contributions from Nancy Turner 2017,

⁹ E.g., cultivation of culturally significant plants at the individual or population level, for example through weeding, tilling; habit level for example through managing for successional stage and diversity in particular habitats; and at the landscape level through broader social and political institutions of plant management throughout Secwépemc territory, including social sanctions and access protocols to support long-term plant and ecosystem health (Peacock and Turner 2000; Peacock et al. 2016, 182, 198). Many Elders attest to the importance of Indigenous management practices in the Interior Plateau for enhancing and maintaining growth of root plants (Peacock et al. 2016, 183-188).

¹⁰ Sayers and Peredo (2017, 157); Hoover (2017)

188). Settler-colonialism and environmental degradation are two drivers of rapid and cumulative change over the past century that shape contemporary social and environmental determinants of health, and are at the root of health inequities experienced by Indigenous people today (Eckert et al. 2018; Alfred 2009; Manitowabi and Maar 2018, 1-2; Garibaldi 2003, 14).

Furthermore, given histories of research approaches that have often not benefitted Indigenous communities or respectfully reflected Indigenous worldviews, there are calls from several Indigenous scholars for more accountable research practices respectful of Indigenous worldviews that are in alignment with Indigenous community priorities and outline clear benefits for engaged Indigenous communities (Peltier 2018; Kovach 2010; Canadian Institutes of Health Research 2018; Absolon 2011).

Research questions

In response to cumulative impacts to Indigenous food systems and biocultural heritage¹¹, there is a growing network of Indigenous-led projects working to revitalize Indigenous food systems across Turtle Island¹² and globally. Indigenous food sovereignty is a framework many Indigenous communities have been working within to support the restoration of Indigenous food systems, knowledges, and relationships to land in this time of resurgence. Indigenous epistemologies, values, and moral codes of conduct have always been ways of planning for, reflecting on, and revisioning change in Indigenous frameworks (Tuck 2009a; Sterling et al. 2017), and recent scholarship highlights ways in

¹¹ Biocultural heritage is defined as: “Knowledge, innovations and practices of indigenous and local communities that are collectively held and are inextricably linked to: traditional resources and territories, local economies, the diversity of genes, species and ecosystems, cultural and spiritual values, and customary laws shaped within the socio-ecological context of communities. (International Institute for Environment and Development 2005).

¹² Turtle Island refers geographically to the continent of North America, and is connected to Creation Stories of many Algonquian and Iroquoian-speaking peoples in eastern North America (see Robinson 2018). Neskonalith Knowledge Holder Louis Thomas uses the word *Qelmucwúlecw* to refer to the Indigenous people and lands in North America.

which Indigenous communities are designing frameworks grounded in biocultural and culturally-grounded values for measuring and enhancing adaptive¹³ capacity and social-ecological resilience (Sterling et al. 2017).

Community members from the Neskonlith Band's Switzmalph community, near Salmon Arm, British Columbia, have been working towards restoring Secwépemc plants and food systems through land-based education, restoration of Secwépemc culture, land-based pedagogies and knowledges, as well as through collaboration in multi-scalar partnerships. This study discusses the significance of place and culturally grounded values and methods of teaching for informing current land based education and food systems restoration projects in Switzmalph, and Secwépemc territory more broadly. Furthermore, this study discusses the potential role of cultural values and epistemologies as culturally-grounded indicators for measuring, informing, and monitoring transformative pathways out of social-ecological traps (see Figure 1 in Chapter 3).

With the overall objective of contributing to ongoing work in Switzmalph to restore access to culturally significant plants, as well as to respond to calls for more respectful research practices in alignment with Indigenous community priorities and worldviews, this study poses the following questions:

1. *How do values, principles, and relationships to food in Switzmalph, and Secwépemc territory more broadly, inform the processes of existing and emerging land-based education initiatives, and future pathways towards Secwépemc food systems restoration?*

Key Finding: In this study, Secwépemc Knowledge Holders describe two values, *knucwetwécw* (helping one another, cooperating) and *yecwemenulécwu* (looking after land), as being connected to land-based learning and the restoration of culturally significant plants. Furthermore, they describe the role of *stsptékwle* (oral histories) and

¹³ In the context of this research, adaptive refers to agency and deliberate innovation to proactively shape, create, and plan for the future by drawing on culturally grounded tools and capacities developed over thousands of years of monitoring, adjusting, and planning through social and environmental change. This does not imply biological adaptation, but instead refers to the ways in which Indigenous legal systems, place-based knowledges, and biocultural heritage can enhance both resilience and resistance (see Chapter 3).

slexexé'ye (personal stories) as two forms of storytelling used by Secwépemc Knowledge Holders to facilitate learning and teaching these values in *tmicw* (land)-based learning contexts. I learned that these methodologies, contexts, and concepts are interrelated with cultural resurgence and way of life, and continue to guide future pathways towards Secwépemc food systems restoration. These moral codes, concepts, and contexts for teaching and learning are generated from thousands of years of Secwépemc place-based knowledge, and teach lessons about surviving, planning, and flourishing in periods of immense change. They may also be expansive and culturally-grounded guides for planning transformative pathways for Secwépemc food systems restoration, and futures outside of social-ecological traps.

2. *How can a process-oriented approach that foreground Indigenous relationships, ethics, and epistemologies, give insight into how place and Indigenous ways of knowing can guide the development of Indigenous food systems restoration projects and monitoring tools?*

Key Finding: I learned that storywork principles (Archibald 2008), in conjunction with local protocols and values, can teach about ongoing and relational applications of ethical frameworks. This framework foregrounds Indigenous ethics and epistemologies, situates my own process of learning, and guided the process of creating land-based monitoring tools such as the Secwépemc Plant Knowledge Cards, the *Knucwetwécw* community garden, and action-oriented stages such as a land-based workshop and Secwépemc feast collaboration with the Neskonlith Education Center and the Salmon Arm Art Gallery. Relationships and direction from community members was vital to my understanding of my responsibilities and reciprocity as a researcher.

Overview

Chapter 1 of this thesis includes an overview of my research questions and key findings, main theoretical themes, methodological approach, and relevant background to

this study.

Chapter 2 provides insight into food systems transitions and cumulative impacts resulting from policy, legislation and land tenure landscapes in the Interior of what is currently known as British Columbia. Furthermore, it introduces Indigenous food sovereignty as a framework many Indigenous communities are working within as part of a cultural resurgence movement to restore Indigenous food systems. This section provides examples of how this movement is lived and practiced on the ground in diverse contexts, and key questions that arise with intersections of rights-based and responsibility-based frameworks.

Theoretical themes

Chapter 3 introduces the two primary bodies of theory that both inform and situate this study. The first section introduces critical place inquiry, and relevant land and place-based theory. The second section describes the intersections of Indigenous food sovereignty frameworks and social-ecological resilience theory: specifically, collective continuance¹⁴; social-ecological traps¹⁵; Indigenous frameworks for measuring social-ecological resilience¹⁶; Indigenous criticisms of social-ecological resilience theory¹⁷, and relational networks across multiple scales of sovereignty¹⁸. This chapter draws on existing research to characterize a social-ecological trap, and proposes these values can potentially also work as indicators for transformative pathways out of social-ecological traps. This is introduced in Figure 1 in Chapter 3, which proposes the potential role of these values as indicators in adaptive management frameworks in Switzmalph.

¹⁴ Whyte (2016; 2017)

¹⁵ Eckert (2017); Garibaldi (2003).

¹⁶ Sterling et al. (2017); Tuck and Penehira et al. (2014).

¹⁷ Penehira et al. (2014).

¹⁸ Wittman et al. (2017) and Iles and Montenegro (2015)

This chapter closes with a discussion of how these theories and frameworks, along with Indigenous research methodologies, situate this study and furthermore how this study contributes to this literature base.

Methodological approach

This study is informed by critical and Indigenous methodologies¹⁹, and applies collaborative and critical ethnography and storywork across the following methods:

- Semi-structured and conversational interviews with 18 community consultants (5 youth and 13 Knowledge Holders and Elders) from Neskonlith's Switzmalph community, their family members in Splantsín, and land-based educators and collaborators in Secwépemc territory more broadly.
- 5 youth workshops;
- 1 land-based workshop; and
- 2 Secwépemc plant knowledge card workshops.

Chapter 4 discusses these critical and Indigenous methodological approaches in detail, along with study design, methods, background and rationale for applying these methodologies in this research, my process of applying a collaborative data analysis framework, and limitations of each approach.

Key findings

Chapter 5 outlines the key findings of my first research question. This chapter

¹⁹ Collaborative and critical ethnography, *see* Tuck and McKenzie (2015a); Campbell and Lassiter (2010); Hallett et al. (2017). For storywork, *see* Archibald (2008); Christian (2019); Young (2015); and Indigenous research methodologies in Absolon (2011); Kovach (2009); Wilson (2008); and Peltier (2018).

outlines two concepts²⁰ that emerged from interviews, *knucwetwécw*²¹ and *yecwemenúlecwu*, and describes the role of *slexlexéy'e* and *stsptékwle*²² as methods for teaching and learning about Secwépemc values in *tmicw*-based contexts. These values are continue to guide relationships to food, community, and future pathways towards Secwépemc food systems restoration in Switzmalph and Secwepemcúlecw more broadly²³. They forefront culturally grounded ways of teaching about Secwépemc plants and kincentric²⁴ ecologies, and highlight the important role of Secwépemc plants in facilitating the enactment of cultural values, language, social, legal and governance institutions, potentially contributing to increased adaptive capacity and social-ecological systems resilience.

Although some sections in this study discuss Secwépemc foodways more generally, a primary focus of this study is on culturally significant plants. In the year prior to starting the School of Environmental Studies Ethnobotany program at the University of Victoria, I was living in Salmon Arm (in the traditional and unceded territory of the Secwépemc people) in the interior of British Columbia. I met and spent

²⁰ Note that there are different spellings for these words between the eastern and western *Secwepemctsín*, as well as spelling variations within the eastern dialect. For this thesis, I have used spellings from the Chief Atahm school dictionary, the Neskonlith Comprehensive Community Plan, as well as plant spellings verified by Chief Atahm language teacher Lucy William.

²¹ In this thesis I've used the spelling *knucwetwécw* following Chief Atahm School (2017a) and Neskonlith Indian Band (2018). All translations and spellings referenced in this sentence are also reviewed by Chief Atahm *Secwepemctsín* language teacher Lucy William.

²² In this thesis I've used the eastern *Secwepemctsín* dialect spelling *stsptékwle* following Chief Atahm School (2017b); Billy (2015); and Michel (2012). The western *Secwepemctsín* spelling *stsptekwll* is used when referencing work by Kukpi7 Ron Ignace and Marianne Ignace from Skeetchestn Band.

²³ Secwepemcúlecw is the name for Secwépemc traditional territory

²⁴ Kincentric refers to the ways in which non-human or more-than-human relations (plants, animals, fish, land forms) are understood as relatives, and beings with agency, in many Indigenous worldviews. Reo (2019, 66) describes how kincentricity teaches about relational accountability in research, in the respect that researchers are not only accountable to relationships with community collaborators, but also with their larger ecologies and community networks of non-human relations. Bhattacharyya and Slocombe (2017, 1, 3) describe how kincentricity (i.e., kincentric ecologies), or interdependent kinship relations in social-ecological systems, also encourage different approaches to wildlife and land “management” than are conventional in western (i.e., Euro-colonial) approaches.

time with Councillor Louis Thomas from the Neskonlith Band and Kenthen Thomas²⁵ during my time here, who both supported me in understanding potential research topics that could support and build on ongoing work in the community. Councillor Louis Thomas was working on several projects focused on the restoration of culturally significant Secwépemc plants, continuing work that his mother the late Dr. Mary Thomas had done throughout her life, and that many members of their family continue to do today. Following Councillor Louis Thomas' direction, this project aimed to support current restoration initiatives in Neskonlith's Switzmalph community, and to support with increasing access to cultural land-based education tools at the Neskonlith Education Center. In writing this, I also recognize that plants are interrelated with many other parts of Secwépemc foodways, and I was reminded in this work that in order to learn about the plants, I also needed to learn about their regenerative interrelationships with culture, language, place, pollinators, and other nonhuman relatives (e.g., fish, animals, birds).

Key findings for my second research question are outlined in further detail in Chapter 6, which outlines my process of engaging with storywork principles²⁶, and the guiding Secwépemc values, concepts, and contexts outlined in Chapter 5, as a methodological framework for this research. Furthermore, this chapter discusses the importance of process-oriented research for situating my own process of learning, and providing practical lessons for community-engaged researchers by demonstrating how Indigenous ways of knowing can guide ongoing and embodied applications of ethical frameworks. A key finding in this chapter is the role of process-oriented approaches for highlighting how Indigenous ways of knowing, when directed by local communities, can guide ethical frameworks for community-based research. Effective research partnerships are dependent on trust, accountability, and respect for multiple knowledge systems that prioritize community concerns and direction, with a high degree of community

²⁵ Kenthen Thomas is an educator and storyteller from Neskonlith who at the time of this research worked for the Neskonlith Education Center.

²⁶ Archibald (2008).

engagement and participation (Thompson 2018, iii). The results of this work highlight the vital importance of participatory and community-led research throughout all stages of research, and describe ethical frameworks that center relational accountability.

Chapter 7 concludes this study by revisiting the key discussion points from each chapter and how they contribute to understanding the importance of community-led frameworks grounded in Indigenous values and epistemologies for values-led management and food systems restoration.

Chapter 2: Background

1. Secwépemc food systems transitions: critical geographies of place

1.1 Policy and land tenure landscapes in the Interior Plateau

To understand the current state of Indigenous food systems in the Interior Plateau of British Columbia, it is important to understand the effects of over a century of repressive policy and legislation, and the philosophies that inform them, on contemporary land tenure landscapes (Daschuk 2013 and Harris 2001, 1009 as cited in Satterfield et al. 2017; Matties 2016). A series of policies and legislation enacted in the Interior Plateau of British Columbia, beginning in the mid to late 1800s, contributed to rapid social-ecological change and dispossession of Secwépemc people from their food systems, education systems, governance and cultivation practices, and movement (Ignace and Ignace 2020, 133). These include but are not limited to the operation of residential schools²⁷; establishment of the reserve system (1880s); Land grants and pre-emption claims under the 1865 *Land Act*²⁸ following the collapse of the Gold Rush; and Joseph Trutch's significant land policy changes and reduction in reserve sizes (1864-1869) and legal boundaries to limit Indigenous acquisition of land²⁹. Cumulative impacts and emotional and psychological trauma from residential schooling, potlatch bans and

²⁷ The Kamloops Indian Residential school operated between 1874 and 1996, and attendance at residential schools became mandatory in 1920 with an *Indian Act* amendment- tightened further with an additional amendment in 1927 to include fines and imprisonment for non-compliance. The foster care system and Sixty's Scoop further impacted this continuity and ability for Indigenous youth to grow up with their families, communities, knowledge systems and foodways; and this continues today. In 2011, almost half (48%) of children in foster care were Indigenous, despite accounting for only 7% of the population of children in Canada (Turner 2016).

²⁸ This permitted the pre-emption of land that was previously part of reserves, inclusive of water rights (Matsui 2005, 82).

²⁹ See Harris (2008, 30); Matsui (2005, 79); Ignace and Ignace (2017). Joseph Trutch assumed the role as the new commissioner of Lands and Works from 1864 to 1869 and enacted this through the 1866 colonial land ordinance.

environmental degradation resulted in dual impacts to Indigenous foodways, plant cultivation, harvesting, and access to culturally significant foods and ecosystems, as well as to Indigenous health and well-being (Turner and Lepofsky 2013).

Cumulative change in land tenure, policy, and legislative landscapes in the interior of British Columbia also create a context for what is often referred to as the nutrition transition³⁰. The nutrition transition is a term used to describe cumulative health impacts of rapid transitions from nutrient-dense Indigenous foods and lifeways, to less nutrient-dense, lower cost and processed Western market foods and drinks such as refined sugar and white flour (Merz and Steinberg 2014; Turner and Turner 2007; Elliott et al. 2012; Mihesuah 2016). Furthermore, land, water, culture, food, and health are well-documented as interconnected with Indigenous health and well-being (Gaudet 2017). Indigenous foodways are not only important for dietary health, but are deeply interrelated with mental, spiritual, and emotional well-being, Indigenous pedagogies and ways of knowing and being, and relational Indigenous lifeways.

Residential schools and food policies played a particularly important role in processes that have been called “culinary acculturation”³¹ or “culinary colonialism”³², separating children and youth from families and communities, cultural knowledge of food procurement, processing and preservation, as well as from access to traditional foods higher in nutrients and with less fat, sodium and carbohydrates than market foods³³. As Turner (2007, as cited in Bagelman et al. 2016) describes, low-nutrient dense foods

³⁰ Turner and Turner (2007) identify eleven major contributing factors driving the nutrition transition: “Loss of territory through land alienation; Loss of ability to manage traditional resources and habitats; Population changes; Loss of access to resources; Replacement of traditional foods by introduced foods; Land and Water degradation and ecosystem transformation; Barriers and impediments to intergenerational transmission of knowledge about traditional food; Laws and policies against Indigenous cultural practices; Domination of the globalization food system; Wage economy; and Colonial Pressures Restricting the Access and Control of First Peoples over their Food Systems”.

³¹ Turner (2014, as cited in Bagelman et al. 2016).

³² Grey and Newman (2018).

³³ See also Elliott et al. (2012).

served in residential schools³⁴ were a rapid change from traditional diets, leading to many long-term health outcomes such as Type II Diabetes, heart disease and dietary illnesses. The Truth and Reconciliation Commission report (2015) discusses high instances of malnutrition and starvation as a result of food policies that both denied traditional foods, and limited access to insufficient amounts of Western foods, resulting in the deaths of thousands of children from severe malnutrition (Bagelman et al. 2016). Disconnection from traditional foods, combined with the introduction of new foods of insufficient nutritional value and many times in insufficient quantities in residential schools, is a contributing factor in the development of long term dietary illnesses such as heart disease and Type II diabetes (Turner 2007 in Bagelman et al. 2016). Furthermore, land tenure, policy, and legislative contexts have created many barriers to the practice of Indigenous land-based education systems and inter-generational learning spanning several generations³⁵, though younger generations are now engaging in processes of reclaiming knowledge of how to hunt, harvest bulbs and berries, preserve foods, and learning the cultural stories that connect these.

Furthermore, the 1876 *Indian Act*³⁶ and British North America Act³⁷; Department of Indian Affairs (DIA) policies to enforce “peasant farming” on reserves; pre-emption of water rights and the 1906 and 1914 Provincial *Water Acts*³⁸; the *Forest Act* in 1912³⁹; and

³⁴ The first residential school was established in 1861, and began a legacy lasting over 100 years in British Columbia of separating Indigenous children from family, community, connection to cultural values, and knowledge of land-based education, customary laws, and hereditary systems that were integral for passing on knowledge about responsibilities, caretaking, and resource management (de Leeuw et al. 2012).

³⁵ Morrison (2011) and Lutz (2009).

³⁶ Further prevented Indigenous people from pre-empting land beyond allocated reserves, see Gauvreau et al. (2017); Lutz (2009, 15-30).

³⁷ Lutz (2009, 239) describes the British North America Act as marking the “end of the nation-to-nation relationship, set the stage for the Indian Act of 1876, which in turn, ushered in the era of colonization and enforced cultural assimilation”.

³⁸ Matshi (2005).

³⁹ See Hagerman et al. (2010): Establishment of the Provincial Forest Branch begins turning ideas of European sovereignty into profit; leasing Crown land to private companies to return revenue to the Province.

increased land privatization and pre-emptions⁴⁰ resulted in sweeping changes to Indigenous food systems, and decreased access to traditional food sources. As Harris (2008, 4) documents, the Indian Reserve system and the food fishery were the “two principal instruments of state power and colonial control in British Columbia” by 1812, despite most Indigenous territories in British Columbia remaining unceded.

Harris (2008) gives a detailed account of the relationship between fisheries legislation and reserves in British Columbia, describing how land policy and Indian Reserve commissions initially created nearly half of more than 1,500 allotted reserves based on access to fisheries. However, this emphasis on fisheries led to disregarding the remainder of Indigenous territories and the importance of other foods. Furthermore, these exclusive fishing rights were later targeted and dissolved by the Crown, citing the lack of authority of the Department of Indian Affairs (DIA) to allocate exclusive fisheries, due to the English common law “public right to fish” (Harris 2006, 6, 27, 187). This resulted in the pattern of small, disjointed Indian Reserves visible in British Columbia today (Harris 2008, 6, 27, 187). This pattern of land policies was unique to British Columbia, and differs from Indigenous land policy patterns in the United States or in other parts of Canada (Harris 2008). Harris’s (2008) work provides a framework to understand how the pattern of small reserves in British Columbia was initiated. Furthermore, as the reserves themselves were too small to support viable agricultural economies that were at the time being pushed through DIA policies, it is important to note that Indigenous communities would also have depended on continued access to traditional food systems and economies generated from their lands and waters outside of the reserves. However, land tenure and policy contexts in British Columbia gradually eroded Indigenous harvesting rights and economies as lands were increasingly pre-empted for agricultural and ranching use, with customary laws and Aboriginal title continually ignored by the Crown (Lutz 2009, 258; Harris 2008, 84, 90). To further aggravate access to land, from 1907-1953 a provincial

⁴⁰ 1860s-1890s, see Ignace (2008).

amendment to the *Land Act* prohibited sales of Crown land to Indigenous peoples (Harris 2008, 63, 155; UBCIC n.d.); and in 1927 an amendment to the *Indian Act* prohibited the raising of funds by Indigenous people to pursue Aboriginal title or land claims (Tennant 1982, 16; Harris 2008, 185). The result is a steady alienation of Indigenous communities from land bases, governance, and foodways, for the purpose of making space for settler agriculturalists.

Nickel (2019, 33) describes the unique context of settler colonialism in British Columbia that involved limited cases of treaty negotiations compared to other parts of Canada; an approach that largely involved ignoring Indigenous rights and title and Indigenous legal and governance systems. As Nickel (2019, 33) describes, this set the grounds for pan-Indigenous mobilization in British Columbia. The late Arthur Manuel (Secwépemc, Neskonlith) and Grand Chief Ronald M. Derrickson (2015, 10, 66-75) describe the significance of direct action movements in the 1980s that mobilized and succeeded in including recognition of Aboriginal rights in the Canadian Constitution. The late Arthur Manuel did significant work for recognition of Aboriginal rights and title and decision-making authority, fighting previous extinguishment policies that were initially part of the BC Treaty Process, and outlining rights to self-determination (Manuel and Derrickson 2017, 17-19, 275-279).

It is important to recognize that policy and legislative landscapes in British Columbia were constructed under a premise of assumed Crown sovereignty over Indigenous lands. Outside of the 14 treaties negotiated by Douglas between 1850 and 1854 on Vancouver Island, reserve allocations and land pre-emptions in the rest of the province were instated without treaties (Nickel 2019, 33-34).

Colonial agriculture philosophies were key tools driving Indigenous land dispossession, and were foundational to many policy and legislative changes in the 19th and 20th Centuries. For example, land pre-emptions and Crown sovereignty were rooted in common law legal orders that were justified by the 18th and 19th Century John Locke philosophy, who argued that individual private property ownership is attained through “labour”, defined as converting land to agricultural use from a “state of nature” (Lutz

2009, 34). This was echoed in Secwépemc territory, through Indian agent J.W. MacKay's disregard towards Secwépemc systems of resource stewardship and cultivation, equating non-agricultural use of land to a state of nature or wilderness, and the nonexistence of Aboriginal title:

Some of the old Indians still maintain that the lands over which they formerly roamed and hunted are theirs by right. I have to meet this claim by stating that as they have not fulfilled the divine command 'to subdue the earth' their pretensions to ownership, in this respect, are untenable (Canada, Department of Indian Affairs 1864-1990, "Kamloops Agency," in *Annual Report*, 1885, 92, as cited in Ignace and Ignace 2017, 194)

In this way, philosophical ideas of nature and wilderness were used strategically to erase pre-existing Indigenous management, legal, and governance systems, as well as Aboriginal rights and title. This resulted in the strategic displacement of Indigenous foodways, economies, governance systems to make space for incoming settlers (Lutz 2009, 6-8; Matties 2016). Until recently, Indigenous plant and landscape cultivation were often excluded from anthropological narratives characterizing Indigenous people of the coast and interior of British Columbia as hunter-gatherers (Turner et al. 2013, 107).

This thesis engages these political philosophies in some ways on their own terms as well, in order to illustrate how common law conceptualizations of private property and ownership through "labour" and "improvement" give rise to ownership relationships under common law principles, not to maintain Indigenous legal orders. These common law conceptualizations of ownership also continue to figure into traditional use studies and land use and occupancy mapping⁴¹ used in land claims negotiation processes (McIlwraith and Cormier 2015). Through these processes, Indigenous communities are forced to act and engage with pre-determined settler colonial conceptualizations of property and state mapping processes that delineate rigid territorial borders, in order to

⁴¹ Traditional use studies, also referred to as land use and occupancy studies, focus on documenting use and occupancy of lands and resources by an Indigenous community and are commonly used in land claims and consultation processes. For more information, see McIlwraith and Cormier (2015).

fight for their rights within this socio-political land tenure system (Nichols 2020b; McIlwraith and Cormier 2015, 43). This process largely negates the breadth of Indigenous relationships and responsibilities to land, resources, and other people, as well as the ways these are governed through Indigenous legal orders, kinship relations, and rules of access (Thom 2009, 180 as cited in McIlwraith and Cormier 2015, 35). Nichols (2020a, 33) describes how this process conceptualizes possession narrowly within colonial structures, where there is an acknowledgement of Indigenous rights only when bounded by colonial definitions that is “*only fully realized in its negation*” through alienation. While beyond the scope of this thesis, Nichols (2020a) observes this process as recursively creating feedback loops that both create private property at the same time as transferring it to the Crown in three stages: “*transformation* (making), *transference* (taking), and *retroactive attribution* (belated ascribing) (Nichols 2020a, 34; Nichols 2020b). Through these processes, Indigenous relationships to land are largely erased and conceptualized only narrowly within prescribed settler-colonial boxes and conceptualizations of ownership. Ignace and Ignace (2016, 46-47) contrast these private property frameworks with Secwépemc land tenure, caretaker areas, and socio-political aspects of collective land and resource planning and governance. As Dr. Mary Thomas describes,

We travelled a lot. There was no such thing as private property. All the Secwépemc dialect people shared the whole territory of the Secwépemc Nation. Nothing was private property: we always shared (In: Thomas 2001, *The Wisdom of Dr. Mary Thomas*). (as cited in Ignace and Ignace 2016, 49)

Ignace and Ignace (2020, 134) further describe the significance of caretaker areas and the role and responsibility to steward parts of Secwepemcúlcw, and further describe collective use and access:

According to our Secwépemc laws and protocols of land tenure and stewardship within Secwepemcúlcw, although the traditional concept of Secwépemc land tenure is one of collective use and access to the entire territory of the nation, the Stkemplúsemc te Secwépemc Nation, comprised of the people of Skeetchestn and

Tk'emlúps, acts as the caretaker and steward of the part of Secwepemcúlecw that includes Pípsell and the land surrounding it.

Thom and Morales (2020, 121) observe in the context of the Island Hul'qumi'num peoples' legal traditions, including those related to land tenure, that one critical view on state denigration of Indigenous legal systems was because of the ways in which they conflicted with the exercise of colonial power:

one might argue there was a misunderstanding by the colonizers about the nature of Island Hul'qumi'num peoples' laws – that they were nothing more than a protocol or tradition. However, a more critical view suggests that Hul'qumi'num legal traditions were denigrated because they conflicted with the exercise of colonial power.

Similar critical perspectives might be taken to describe the denigration of Secwépemc legal orders, including those related to land tenure, to open space for incoming settlers with interests in land and resource rights. The 1858 Gold Rush marked the start of much rapid change in terms of social relationships between settlers and Secwépemc people. As Wickwire (1998) describes, the *Seme7uwi* (real whites) who arrived prior to the Gold Rush were considered guests who built relationships with Indigenous Nations in the Interior Plateau based on trust and respect for Indigenous rights, including land rights (title). Following the 1858 Gold Rush, the “other” *Seme7* (whites) arrived to pre-empt land and restrict Indigenous land, water, and resource rights. At this time, miners begin occupying Secwépemc fishing sites, often attached to hereditary rights, along the river. This occupation is part of a trend during this period towards settler land dispossession taking precedence over Indigenous customary law (Hoogeveen 2018, 82, 90; Harris 2004, 169).

Through the mid-1860s many gold prospectors remained in the area to farm and ranch, and Crown land was distributed to settlers either through sale or pre-emption without any treaty or acknowledgement of underlying Aboriginal title (Furniss 1995; Harris 2008 35, 36). Pre-emptions also began to apply private property regimes to the landscape, displacing traditional use patterns, hereditary resource sites, and land

management practices (Harris 2008, 19). Secwépemc families quickly became displaced from hunting, trapping and fishing grounds as trails became major highways for incoming gold miners, followed by settlers (Furniss 1995, 238).

The cattle industry boomed alongside the gold rush, with about 22,000 head of cattle entering BC between 1858 and 1868 along the Cariboo Cattle Trail (Bawtree and Zabek 2011, 46). This quickly resulted in overgrazing of meadows in the Interior Plateau, and newly installed irrigation systems impacted water availability for Indigenous agriculture projects, as well as disrupted ecologies of traditional harvesting areas and fishing streams through land compaction and water diversion (Bawtree and Zabek 2011, 46, 47). The Wilfred Laurier Memorial (1910) remains one of the most important historical documents from the early 20th Century describing the perspectives of the Secwépemc, Nlaka'pamux and Syilx Nations on land and resource issues in the Interior Plateau (Fraser Basin Council 2013; Wickwire 1998, 215, 229, 232-235). Kukpi7 Ronald Ignace (2016, xii) describes the importance of the Wilfred Laurier Memorial in representing the importance of plants in Interior Indigenous economies, and impacts to Secwépemc livelihoods following the gold rush. For example, water diversions for irrigation and placer mining began reducing river flows and damaging trout fisheries, while hereditary fishing sites were sometimes pre-empted and blocked, with Indigenous harvesters now liable for trespassing and damage charges (Harris 2008, 43-46). Askew (2010) further describes the impacts of early irrigation systems on Secwépemc foodways:

Early irrigation systems, in combination with other development projects undertaken by settlers, had a devastating impact on First Nations' traditional food-gathering practices. The erection of fences by settlers, in combination with the diversion of water sources, disrupted the regular migration routes of large animals in the region, leading to a dramatic reduction in their number; the spawning grounds of the salmon were destroyed or made difficult to access because of dams; and finally, many of the edible roots and other plants diminished in availability or disappeared altogether as a result of cattle grazing, residential development and other projects.

Since the initial pre-emptions through the 1860s to early 1900s, subsequent decades brought an increase in barriers to accessing Secwépemc foods, many times in the

form of fences and “No Trespassing” signs (Ignace 2008, 158). Land privatization for agricultural and ranching activities such as livestock grazing not only continues to rupture the ability of Secwépemc people to access traditional harvesting areas, but has also heavily impacted grassland habitats in the southern interior of British Columbia, introducing invasive species such as couch grass and reed canary grass to disturbed areas (Thomas et al. 2016)⁴². Thomas et al. (2016) illustrate the major agents of ecological and cultural change in Secwépemc territory⁴³ that have impacted Secwépemc land-based education systems, economies, and access to land and cultural harvesting knowledge. As Neskonlith Elder Dr. Mary Thomas describes,

I look around in the areas I was raised and born, the bluebirds that used to be aplenty. I don't see one bluebird anymore. We used to go down to the mouth of the river with all the plants that our grandparents dug in the spring to feed on. There's not one plant left down there. Let alone a cattail where the birds used to sing beautiful music. You don't hear that anymore ... (Mary Thomas, interview with AG, 1998, as cited in Thomas et al. 2016, 368)

Prior to agricultural development in the southern Interior, Tisdale (1947, as cited in Palmer 1975) estimates grasslands extended to 3,200,000 acres. As Noss and Cooperrider (1994, as cited in Thomas et al. 2016) write, “grazing is the most severe and

⁴² Biophysical impacts of agriculture and ranching noted by Thomas et al. (2016) include a loss of natural habitats (Turner and Lepofsky 2013) in valley bottoms; invasive species; overgrazing; loss of estuarine and river habitat; and habitat fragmentation. In addition, cultural impacts include the depletion and loss of many culturally and economically valued species (Thomas et al. 2016).

⁴³ E.g., agriculture and ranching; railway and highway construction; urbanization and population growth; flood control, irrigation and other water diversions; industrial forestry practices; poor fisheries and wildlife management and control; mining; tourist development; parks and protected areas establishment; fire suppression and prohibition of traditional management practices; invasive species; and socio-cultural impacts (e.g., residential schooling, the reserve system, and the foster care system) (Thomas et al. 2016). Also, cattle and the decline in *yecwminem* (looking after) and cultivating root plants as Secwépemc people had done in previous generations (Ignace and Ignace, with contributions from Nancy Turner 2017, 188)

insidious of the impacts on rangelands.”⁴⁴ Loewen et al. (2016)⁴⁵ surmise that the compounding effects of decreased or absent cultivation practices from years of assimilative policies, invasive species, the absence of other micro-disturbances from grizzly bears, and increases in ground compaction from cattle, may result in the declines in root size of both Avalanche Lily (*E. grandiflorum*) and Spring Beauty (*Claytonia lanceolata*):

In other low-elevation areas, such as Neskonlith Meadows in BC, the apparent current lack of human, grizzly bear and small mammal digging is a possible problem now compounded by increased litter from introduced grasses, the absence of landscape burning (see below), and the presence of cattle. These factors could have reduced the size of yellow glacier lily bulbs, as observed by Aboriginal elders (Part 2), and may hinder seedling establishment relative to subalpine habitats (Loewen 1998; Loewen et al. 2001).

Indigenous food systems and economies began incorporating new plants and foods such as potatoes, rice, flour and apples had begun in the early 1800s, with Secwépemc people starting to grow potatoes (*Solanum tuberosum*) by the 1830s (Turner et al. 2016, 16; Ignace and Ignace 2017, 431). At this time, garden potatoes were being grown “at *Ck'emqenétkwe*, at Neskonlith, in the Adams Lake area, and probably in other locations, selling significant quantities to the [Hudson’s Bay] company” (Ignace and Ignace 2017, 431). Garden root vegetables, rice and flour, and increasingly replaced Secwépemc root plants by the early 1900s (Ignace and Ignace, with contributions from Nancy Turner, 2017, 180).

The Secwepemctsín word *k'wén'łlqem* (“to try out plants or crops”) describes the deep history of Secwépemc experimentation with plants in different habitats and

⁴⁴ Although some “root” plant populations may recover if ecosystem impacts such as livestock grazing or urban development are removed, it is also unknown for many plants how long they can be grazed or cut continuously without senescing and storing reserve energy for the dormant season before they eventually die out (Noss and Cooperrider 1994, 221, 232 as cited in Thomas et al. 2016; Traditional Systems of Land and Resource Management lecture notes, University of Victoria, February 2020).

⁴⁵ See also Thomas et al. (2016); Ignace and Ignace, with contributions from Nancy Turner (2017, 188).

biogeoclimatic zones (Ignace and Ignace 2016, 49). As Ignace and Ignace (2016, 49) describe, this word also gives context for local Secwépemc adaptations to rapidly changing economies and food systems at the turn of the century, applying pre-existing cultivation skills and experimentation to agricultural contexts. Given restrictive policy and legislative contexts resulting in decreased access to traditional food economies, Secwépemc people adapted plant cultivation knowledge and skills within agricultural settings and adopted several introduced foods into food systems and economies (Ignace and Ignace 2017, 461).

However, more than 20 years after the gold rush, agricultural lands and water rights had largely been pre-empted by settler ranchers and farmers in the Interior, intensifying water conflicts in the Interior Plateau in the early 20th Century⁴⁶. While pre-emption of most agricultural land and irrigation rights further limited Indigenous participation in agricultural economies in some areas, additional restrictive policies to reduce competition with settler farmers and limit participation of Indigenous farmers in the agricultural industry smothered on-reserve production in other areas (Martens 2015). Lutz (2009) describes the challenges many Indigenous people faced in entering, or continuing, in agricultural ventures due to reserve allotments (most land on reserves was not suitable), the frequent denial of irrigation rights, and provincial control over pre-emptions (as described previously, at the time land could not be pre-empted or leased to Indigenous peoples) (Lutz 2009, 238). Secwépemc water rights recorded with the establishment of reserves in the 1870s to 1880s became strongly contested by 1912. Many of the water rights promised to Secwépemc communities were granted to settler ranchers around 1923 (Ignace and Ignace 2017, 461).

In spite of deliberate policies by the Department of Indian Affairs to limit

⁴⁶ Harris (2008, 63); Lutz (2009, 238); Matsui (2005, 82). Notably a water dispute between Tk'emlúps and the Western Canadian Ranching Company was brought before the courts for the first time in 1906. As Matsui (2005) describes, water rights were part of a late 19th century federal movement from the Department of Indian Affairs to push Indigenous communities in British Columbia, the prairies, Ontario, and other regions in Canada into agriculture. However, the result of a 1921 court case determined that Indian reserve commissioners did not have the authority to grant water rights; fueling water rights conflicts in the Interior.

Indigenous competition in the agricultural market, and ongoing water rights conflicts, Secwépemc people were successful and competitive farmers in the mid 1870s⁴⁷, creating innovative and adaptive economies. Between 1910 and 1926 the agriculture sector provided the largest source of income to First Nation communities in British Columbia than any other sector (Lutz 2009, 210, 211; Thomson 1985). Matsui (2005, 89) describes agriculture as an indispensable part of Secwépemc livelihoods at the turn of the century, and also illustrates the challenges water rights posed to these commercial ventures in the early 20th Century:

Secwépemc farmers in the Kamloops agency quickly rose as one of the biggest Native agricultural producers in the province at the turn of the century. However, the Secwépemc farmers faced hard times in the first two decades of the twentieth century largely because of increasing competition for water rights. In 1913, for example, the Secwépemc harvest of wheat fell to 2,950 bushels from 5,060 bushels in 1897. Other crops and fodder struggled to grow.

The structural and systemic impacts of assimilative policies designed to create space for incoming settlers over several generations have lasting impacts that continue to shape Indigenous food systems and relationships to place today. Arthur Manuel (2017, 25) described the impact of loss of land on Indigenous lifeways, health and wellbeing, and economies as a result of land dispossession:

It is the loss of our land that has been the precise cause of our impoverishment. Indigenous lands today account for only 0.36 percent of British Colombian territory. The settler share is the remaining 99.64 per cent. In Canada overall the percentage is even worse, with Indigenous peoples controlling only 0.2 per cent of the land and the settlers 99.8 per cent.

Arthur Manuel's father, George Manuel, used the term "the fourth world" to describe being "the legitimate owners of our Indigenous territories while our lands are being occupied and controlled by settler societies... and the remedy against colonial oppression is self-determination" (Manuel and Derrickson 2017, 163); or in other words,

⁴⁷ See Matsui (2005).

“we have inherited our land from our ancestors and we have the responsibility to govern our territories” (Manuel and Derrickson 2017, 267).

As Martens (2015, 22) describes on the prairies, “Deterrents to on-reserve farming continue today. Reserve lands cannot be leveraged for operating loans from banks and many of the farming subsidy programs are not available to Indigenous farmers”. As a result, these policies and discourses provide very real barriers to the realization of self-determination for many Indigenous communities (Matties 2016). In Neskonlith, increases in urban development and migration away from the reserve combined with continuing water conflicts led to unsuccessful agricultural revitalization efforts, and the irrigation ditches from the 1920s and 1930s fell into disuse (Matsui 2005, 92). However, in the late 1900s some Secwépemc people continued planting a variety of agricultural crops (Turner et al. 2016, 16). Despite barriers, small-scale community gardens and food projects continue in Neskonlith today, applying Secwépemc cultivation skills to community-led food systems restoration projects, within local community values and frameworks.

As described, colonial policies and legislation have impacted the practice of Indigenous legal and governance systems, and resulted in forced relocations, decreased access to and ability to cultivate traditional foods. Secwépemc scholar and Indigenous food sovereignty scholar and organizer Dawn Morrison (2011, as cited in Robidoux and Mason 2017, 3) describes this further:

...environmental degradation, neo-liberal approaches to trade, loss of access to traditional lands, the collapse of tribal political structures, and socio-economic marginalization have all greatly impacted the ability of Indigenous communities to respond to their needs for healthy and culturally relevant Indigenous food and food systems.

Not only did these policies separate Nations from traditional foodways, education systems, and economies, but it also opened space for federal and provincial governments to begin profiting, controlling and exploiting natural resources (Sayers and Peredo 2017, 157). As Pasternak and King (2019, 10) describe, “Land alienation is linked to the

broader political economy of Canada that relies to a significant extent on its natural resource sector to secure jobs and investment. Thus, land alienation is a major economic driver of the Canadian economy.” The systematic exclusion of Indigenous peoples from traditional foodways, agricultural economies, and governance through decades of policy and legislation reinforces colonial agendas of assimilation, restricted resource rights, and cycles of dispossession (Sayers and Peredo 2017, 157).

This background on land tenure and policy landscapes illustrates the ways in which Secwépemc foodways, laws and education systems are affected by a series of assimilative policies, legislation, and land tenure structures exercised systemically for over a century. Colonial policy and legislation continue to impact Indigenous foodways, as well as the ability of Secwépemc people to exercise their own legal systems and participate effectively in decision-making processes in their territory today (Friedland et al. 2018, 159). This also lays a foundation for thinking about how settler-colonial conceptualizations of private property and ownership constrain Indigenous relationships, responsibilities, and the practice of Indigenous governance systems and legal orders. Furthermore, this background sets a context for situating the ways in which Secwépemc Knowledge Holders in this study describe how, despite ongoing systems of dispossession, relationship, responsibility, caretaking, and story are continuing to inform the restoration of Secwépemc law and governance systems.

1.2 Nutrition transition and Indigenous education

The effects of the nutrition transition and rapid change in social and ecological geographies are lasting. Today, Indigenous people both on and off reserve are among the most food insecure groups in Canada (Elliott et al. 2012; Martens 2015). The First Nations Food, Nutrition and Environment Study describe 41% of First Nations households on-reserve in British Columbia as experiencing food insecurity in 2008/2009, with higher rates of food insecurity experienced by households with children (45%) than those without children (33%) (Chan et al. 2011). The 2006 Canada-wide study authored

by the BC Ministry of Health also describes health disparities in incidences of heart disease at rates 1.5 times higher, and Type 2 diabetes at rates three to five times higher than the general population (Smith 2018). Globally, health disparities are experienced at disproportionately higher rates in Indigenous communities as compared to non-Indigenous communities, and primary social determinants of health⁴⁸ include, but are not limited to, socio-economic status and access to land, water, housing, food security, and barriers to traditional food acquisition (Smith 2018; Martens 2015; FNHC 2018, 4; Merz and Steinberg 2014).

Despite policies causing rapid social-ecological change and changes in diet, as well as ongoing barriers such as access and time given wage labour economies, many Indigenous families and communities still access traditional foods and pass on knowledge about these foods for youth and future generations (Elliott et al. 2012). As late Neskonalith Elder Dr. Mary Thomas describes, some families refused to stop land-based harvesting and continued sharing these education practices intergenerationally (Thomas et al. 2016, 374):

We were fortunate when we were little, we used to be able to go with [my grandmother], and I have such really happy memories of her, going out and collecting a lot of these traditional plants I consider myself really fortunate to be able to remember a lot of this.

Dr. Mary Thomas' recollection illustrates the dilemma of living during a period of rapid social and ecological change, with cumulative pressure from policy and legislative landscapes on land-based education and economic systems, as well as the restorative experience of harvesting with her grandmother. Many members of Dr. Mary Thomas'

⁴⁸ Social determinants of health take a wholistic perspective of health and well-being that consider the interconnectedness of “social, cultural, political, economic, and environmental factors” and systemic health inequities (FNHC 2017, 4). Social determinants of health are defined by the First Nations Health Council [FNHC] (2018, 2) as “the conditions in which people are born, grow, work, live, and age, and the wider set of forces shaping the conditions of daily life.” This includes: Culture and language; social support networks; income and social status, employment and working conditions, physical environment (housing, land, water, food security), personal health practices and coping skills, early childhood experience, access to health services, genetics and gender, and social exclusion (FNHA 2018, 4).

family continue to be actively involved in building relationships and educating on the importance of Secwépemc plant and ecosystems.

Kuhnlein et al. (2013) and Pukonen (2008) describe resurgence not only as addressing health impacts from the nutrition transition, but also physical, spiritual, emotional, and mental health through reconnecting with land. Relationships to land and foodways are an integral component of Secwépemc education systems. Not only do foodways ground place-based experiential learning and cultivation through seasonal rounds⁴⁹ across diverse biogeoclimatic zones, but they also teach respect for the foods and systems they are part of, and weave together relationships between families and communities across generations. Indigenous land-based education is grounded in deep ecological knowledge of landscape patterns and changes over time, and food harvesting and processing knowledge and skills vital to nutrition and diet. Localized, place-based education ensured that social-ecological systems are adaptive, persistent, and connected by deep and reciprocal relationships, evidenced by the sustainability of harvesting grounds and “edible roots” over generations (Turner et al. 2000).

Food literacy education that critically challenges food accessibility and impacts of colonialism on Indigenous foodways is vital for acknowledging the structural and systemic histories that construct realities of dispossession today. Grey and Newman (2018) assert that the boundaries of “food systems literacy” proposed by Widener and Karides (2014) must be pushed to be “rooted in Indigenous rights and colonial history, as well as solidarity strategies suited to decolonizing cuisine in particular”, and a recognition of land and water as the central pillars of Indigenous foodways. With the Truth and Reconciliation commission and commitments to reconciliation and implementation of the *United Nations Declaration on the Rights of Indigenous Peoples*

⁴⁹ As Ignace and Ignace, with contributions from Nancy Turner (2017, 195), describe, a seasonal round involved “... five seasons, called *nek’lłmicw* (“recurring changes of the land”), divided into thirteen lunar months. The five seasons included early spring (snow melting), mid- to late spring (root gathering), summer (berry and high-elevation root and medicinal plant gathering), late summer to early fall (salmon season), and mid- to late fall (hunting season).”

(2007) in federal and provincial legislation, it is vital that liberal multicultural narratives do not erase the role of Indigenous land rights and ecosystems in Indigenous social, political, and legal systems as well as their interrelatedness with culture, health and well-being.

This context situates this thesis project, which emerged from the direction and work of Dr. Mary Thomas' son, Knowledge Holder and Councillor Louis Thomas. In partnership with the Neskonlith Education Center, this project focused on understanding central biocultural values that drive Secwépemc food systems restoration in Switzmalph, and Secwépemc territory more broadly, and collaboratively developing tools informed by community priorities to support inter-generational knowledge sharing in land-based settings.

1.3 Food security, biodiversity, and social-ecological traps

Indigenous peoples around the world are looking to revitalize traditional food systems to address food insecurity, health and well-being, decreasing biodiversity and habitat fragmentation, and connection to language, way of life, and land (Turner and Lepofsky 2013). Indigenous peoples have developed collective capacities to adapt to a variety of metascale forces over thousands of years (Whyte 2017; Garibaldi 2003). However, cumulative changes over the past century, for example from global climate change and settler colonialism, have rapidly increased in magnitude, challenging the capacity of adaptive mechanisms to maintain balance in core collective values such as social-ecological integrity, health, food systems, and ethnobotanical and cultural knowledge (Whyte 2017; Garibaldi 2003). As Whyte (2017, 9) describes, climate change, ecological degradation and habitat loss, and food security pose looming challenges.

Climate change continues to shape Indigenous food systems and key food species at an increasingly rapid pace (Satterfield et al. 2017). While movement towards restoration of traditional diets remains a central value and priority within many Indigenous communities, environmental change leaves many of these aspirations met

with declining populations of culturally significant foods as a result of cumulative development and climate change (Satterfield et al. 2017). The five primary threats to biodiversity listed in a 2013 report by former BC auditor general John Doyle include: “habitat loss, invasive species, overexploitation of natural resources, pollution and disease, and human-induced climate change” (Office of the Auditor General of British Columbia 2013, as cited in Cox 2020). In the British Columbia First Nations Food, Nutrition and Environment Study in 2011, 75% of study participants noted significant impacts of climate change in their territories, with almost half of respondents connecting decreased availability of traditional foods in their households with impacts from climate change. These changes were noted in traditional food accessibility and predictability, changing growth patterns for plants which affect animal migration patterns, and mating cycles (Chan et al. 2011).

In the Columbia Basin Trust Region, in the eastern part of Secwépemc territory, winter precipitation that occurs as snow is expected to decrease in climate models for the upper 60% of five hydrologic regions across the Basin (Carver 2017, 25), potentially impacting important Secwépemc food species and ecosystems. For example, Dunne et al. (2003) discusses decreases in abundance and/or flower production among *Erythronium grandiflorum*, a spring ephemeral and key ‘root’ plant in Secwépemc diets, with lower levels of winter snowpack and earlier snowmelts. Similarly, Bennett (1971) describes increased vulnerability to freezing among *Claytonia virginica*, another spring ephemeral closely related to the Secwépemc potato *Claytonia lanceolata* (Spring Beauty), in the absence of snow cover. Although both *E. grandiflorum* and *C. lanceolata* are yellow-listed species in British Columbia, Secwépemc Elders have noted the noticeable difference in the size, quality, quantity, and productivity of root plants from the first decades of the 20th Century to present day (Ignace and Ignace, with contributions from Nancy Turner 2017, 188).

Although climate change impacts differ by region, exposure, vulnerability, and adaptive responses of ecosystems and populations (Satterfield et al. 2017), social determinants of health such as health disparities, and socioeconomic status also increase

vulnerability to climate related impacts (Gamble et al. 2016). Structural, institutional, and systemic racism are significant social determinants of health that affect socio-economic and health outcomes, as well as access to health and social services among Indigenous and racialized communities (Canadian Public Health Association 2018). Disproportionate experiences of environmental toxicity are also located and experienced by Black⁵⁰, Indigenous⁵¹, and communities of colour. Indigenous peoples are disproportionately impacted by climate change both because of these social determinants of health as well as because of the centrality of relationships with land and culturally significant species to ways of life, cultural continuity, and livelihoods (Gamble et al. 2016; Baird 2008; Vinyeta et al. 2014; Canadian Public Health Association 2018; Paperson 2014). Changes in species distribution and ecosystem composition as a result of historical and external drivers in some cases may not meet the needs and values of contemporary Indigenous food sovereignty movements, and the interconnected social and cultural systems that are embedded in them (Satterfield et al. 2017; Thomas et al. 2016).

Wittman et al. (2017) describe two of the most urgent challenges facing the world today as food security and biodiversity conservation (Wittman et al. 2017; also supported by FAO 2019; Secretariat of the Convention on Biological Diversity 2008; Barthel et al. 2013a). On a global scale, production-oriented agricultural models aimed at addressing food security will do little to nothing to solve either, without equity and social justice lenses, access to food and distribution networks will continue to be an issue (Wittman et al. 2017). Conventional agriculture also continues to be a major driver contributing to Indigenous food systems degradation⁵² and biodiversity loss⁵³, including in Secwépemc territory and the interior of British Columbia. Wittman et al. (2017) describe how

⁵⁰ See Tuck et al. (2014a).

⁵¹ See Tuck et al. (2014a). *Also, recognizing these categories are not mutually exclusive, and include Afro-Indigenous people as well.

⁵² Thomas et al. (2016).

⁵³ Wittman et al. (2017); FAO (2019); SCBD (2008); Barthel et al. (2013a).

supporting Indigenous food systems and bio-cultural refugia can have a protective function for the maintenance of regional agro-biodiversity.

Policy and political environments have strong effects on Indigenous food sovereignty and food security capacities, through regulation and restrictions on Indigenous rights and treaty rights, as well as access to land, capital, labour, equipment, and other hard resources required to actualize viable economies and maintenance of Indigenous food systems (Satterfield et al. 2017). Policy and political environments control the very ability for Indigenous communities to practice responsibilities and renew relationships to food and land (Satterfield et al. 2017; Whyte 2017). For example, Satterfield et al. (2017) describe how spaces and possibilities for Indigenous food sovereignty remain over-determined within the colonial structures and *Indian Act* legislation in Canada.

Policy supportive of Indigenous food systems revitalization can also contribute to maintaining regional biodiversity, and agricultural policies also have the potential to support more sustainable cultivation practices, and encourage agroecological practices, which contribute to biodiversity as well as improve food security outcomes (Wittman et al. 2017). As Wittman (2011) describes, agricultural and environmental policy are inseparable, and Indigenous food sovereignty can lead important policy discussions around sustainable agriculture that protects and enhances biodiversity and conservation goals. This internal and multi-scalar work has transformative potential despite the existence of external and historical (and ongoing) drivers and feedback loops.

2. Indigenous food sovereignty

Indigenous cultures, ecosystems, and social structures vital to maintaining land and food systems have undergone rapid change since colonization began (Alfred 2009). Connection to land, language, culture, culturally significant foods, and governance are important contributors to health and well-being and for Indigenous peoples (Elliott et al. 2012, 7; Chandler and Lalonde 1998; Snowshoe 2015; Gaudet 2017). As Gaudet (2017,

142) writes,

when working with Indigenous peoples, we cannot rely on compartmentalized approaches to understanding individual and community well-being. The link between land, culture, food, women, and health in Indigenous communities is evident and well documented (Adelson 2000; Anderson 2011; Field 2008; Flannery 1995; Palmer 2005; Wilson 2003).

Food sovereignty is a framework many Indigenous communities have been working within to support the restoration of Indigenous food systems, and discussing the intersections between culture, food systems, colonialism, self-determination, and policy (Claeys 2013; Rudolph and McLachlan 2013; Kamal et al. 2015; Morrison 2011).

In recent years, the history, movement, and objectives of Indigenous food sovereignty frameworks have been discussed at length⁵⁴. Whereas food security focuses on increasing access to nutritionally dense food, the process-oriented nature of Indigenous food sovereignty works within a restorative and anti-colonial framework to facilitate the restoration of health, relationships, culture, and governance through the reclamation and restoration of Indigenous foodways, land, and culture⁵⁵ (Morrison 2011; WGIFS n.d.; Kamal et al. 2015). Indigenous food sovereignty processes are part of a longer-term anti-colonial struggle for self-determination within locally-defined food systems, policies, and institutions, grounded in the cultural frameworks of Indigenous communities (Hoover 2017; Grey and Patel 2015; Morrison 2011; Martens 2015; Willow 2013). This cannot be realized without addressing the question of land, and critically considering contexts of displacement and colonial realities that these restoration and reclamation projects are embedded in and strategically organize against. Localized examples of Indigenous-led projects are embedded within this larger political context,

⁵⁴ See Morrison (2011); Claeys (2013); Matties (2016); Nyéléni Forum for Food Sovereignty (2007); Kneen (2011); Kneen (2012); Rudolph and McLachlan (2013); Mihesuah and Hoover (2019); Martens et al. (2016); Elliott et al. (2012); LeBlanc and Burnett (2017); Iles and Montenegro (2015); Desmarais and Wittman (2014); Coté (2016).

⁵⁵ Martens (2015) highlights several of the primary differences between food security, food sovereignty, and Indigenous food sovereignty.

and as Tuck et al. (2014a) describe, it is important to recognize how broader ideologies and historical contexts shape the local.

Indigenous food sovereignty is a broad term that has been adapted within many localized contexts, which can be precisely one of its strengths. The adaptability of Indigenous food sovereignty as a concept is important for creating localized frameworks and solutions that respect local contexts and issues, governance, values, and the diversity of social and ecological systems it is applied within (Morrison 2011; Martens 2015; Rudolph and McLachlan 2013; Atleo 2012 as cited in Satterfield et al. 2017, 401). This flexibility also creates space for acknowledging geographically-specific histories of colonial dispossession and localized impacts to Indigenous food systems that continue to create barriers for Indigenous food systems restoration (Grey and Patel 2015 as cited in Satterfield et al. 2017, 401). As a framework, Indigenous food sovereignty recognizes the interconnection of language, culture, land education, and governance in the maintenance of Indigenous food systems, and the importance of place-based contexts in creating community-specific spaces for resurgence that are rooted in Indigenous ways of knowing (Mundel and Chapman 2010).

In an Indigenous context on Turtle Island, many Indigenous food sovereignty movements take a specific role in challenging ongoing settler-colonialism and its role in displacing Indigenous peoples and food systems, as well as highlighting the differing nature of settler food sovereignty ideologies from Indigenous ones (Desmarais and Wittman 2014). The Working Group on Indigenous Food Sovereignty is an Indigenous-led organization that has been mobilizing the Indigenous food sovereignty movement in British Columbia since 2006 (WGIFS n.d.). Indigenous food sovereignty re-centers the voices of Indigenous communities, and critically engages politics of food access, restoration of culturally significant foods, and colonialism. The importance of Indigenous perspectives and ways of knowing in food sovereignty discourse and action is critical in order to create culturally safe models for food systems restoration (Elliott et al. 2012). Indigenous frameworks are important for considering the people in food systems, and for critiquing the ways that power and privilege operate as social determinants of health to

create intersectional barriers in food systems recovery and restoration (Martens 2015; Rudolph and McLachlan, 2013). As Grey and Newman (2018, 727) describe,

... cuisine is simultaneously a symbol, a practice, and, especially for subaltern groups, a mode of both traditional knowledge transmission and decolonization. It is one of the many complex, historically grounded, and interlocking ways in which people understand and assert their relationship to place through food.

For many Indigenous people, traditional diets are inherently connected to constitutionally and internationally⁵⁶ protected Indigenous rights to teach youth about bio-cultural heritage and food knowledge; accessing and caretaking for healthy harvesting places and ecologies; harvesting healthy and sustainable culturally significant foods; and exercising the political and cultural aspects of food activities, including food production and distribution (Satterfield et al. 2017, 402; Desmarais & Wittman, 2014 in Smith 2018; Young 2015). In this respect, Indigenous food sovereignty works within a multidimensional rights-based political framework⁵⁷ that is inclusive of ways of knowing and teaching about foods, including in educational programming and institutional programming, and can build coalitions internationally to bring local perspectives to a global stage (Young 2015; Smith 2018; Kamal et al. 2015).

This overview of how Indigenous food sovereignty emerged as a framework, and is being practiced on the ground, situates the Secwépemc food systems restoration work taking place at Neskonlith within a broader movement of Indigenous food systems restoration and self-determination. This sheds light on the diverse ways in which Indigenous peoples are working in strategic, holistic, and seasonal ways, creating networks of mutual aid and knowledge sharing while grounding projects in hyper-local ways across bioregions and grounded in Indigenous pedagogical approaches.

⁵⁶ See the United Nations (2007).

⁵⁷ See Morrison (2011).

2.1 How is Indigenous food sovereignty being lived and practiced on the ground?

There is a growing network of Indigenous-led projects working to revitalize Indigenous food systems in both grassroots and band/tribal government-led contexts as well as through partnerships with researchers, academics, and organizations (Kamal et al. 2015; Rudolph and McLachlan 2013; Corntassel 2008; Mihesuah 2016; Reinhardt 2015; Mihesuah and Hoover 2017; Satterfield et al. 2017; Pukonen 2008). As Turner and Lepofsky (2013) describe, “Indigenous peoples around the world are looking to their traditional foods to address issues that include health, food policy, biodiversity, and connection to place”. Examples of the diverse array of voices that make up the Indigenous food sovereignty movement on Turtle Island include: food champions working within grassroots movements or band/tribal community-led food programs to increase access to culturally significant foods, trade networks, and economies⁵⁸; Indigenous-led research collaborations⁵⁹ such as the Decolonizing Diet Project⁶⁰;

⁵⁸ E.g., the Indigenous Food and Freedom School started by Secwépemc scholar and activist Dawn Morrison at Neskonlith; White Earth Land Recovery Project (WELRP)’s Mino Mijim (“good food program”), (see Corntassel 2008, WELRP website); the O-Pipon-Na-Piwin Cree Nation and Nisichawayasihk Cree Nation country food programs (see Kamal et al. 2015); Hoover’s (2017) research with 39 community-based Indigenous food sovereignty projects throughout the United States; and Martens’ (2015) research with 24 community-based projects in Western Canada.

⁵⁹ E.g., work led by the ʔNamgis First Nation. Satterfield et al. (2017) re-constructed Canada food guide advisories around traditional diets by strategically focusing on culturally significant foods central to potlatching, and analyzing macronutrient content, fuel, transportation, storage and processing needs for acquiring these foods. This study constructed an adaptive model of what Indigenous food sovereignty might theoretically look like in contemporary contexts considering impacts from climate change, ecological degradation, and settler colonialism on key food species; political and physical barriers to accessing these foods; and local food economy needs (Satterfield et al. 2017).

⁶⁰ A year-long study by Dr. Martin Reinhardt (Anishinaabe) on health effects of re-introducing traditional foods from the Great Lakes Region and insights on the complex biological, cultural, and legal/political relationships between people and Indigenous foods (Mihesuah 2016; Reinhardt 2015).

ethnobotanical gardens⁶¹; Indigenous food cooperatives⁶²; and eco-cultural restoration projects such as the λ'aayaŋas Project in the Ahousaht Atleo River Estuary⁶³. Culture camps, guardianship monitoring programs, Indigenous Protected and Conserved Areas and food preparation and preservation programming⁶⁴; community harvests and feasts, youth hunting, berry picking and food harvesting programs (Kamal et al. 2015) are other examples of Indigenous-led food sovereignty projects and strategies. There are also several urban examples of Indigenous food sovereignty projects aiming to build community around traditional food preparation, cultivation, and connecting with larger Indigenous food networks outside of urban areas⁶⁵. Indigenous-owned native plant nurseries, such as the Saulteau First Nations and West Moberly First Nations' Twin Sisters Native Plant Nursery in northeastern British Columbia have also focused on building knowledge to support the propagation and restoration of culturally significant native plants to meet growing demands for native plants in reclamation and restoration⁶⁶.

⁶¹ See Turner and Lepofsky 2013; Pukonen 2008; Joseph 2012; Rahm 2018. Ethnobotanical gardens focus on cultivating culturally significant Indigenous trees, shrubs, and plants for education, habitat creation, and for plant species protection and documentation in the context of rapid environmental change (Rahm 2018; Turner and Lepofsky 2013). They can help to center awareness on the importance of plants in social and ecological systems (Turner and Lepofsky 2013), and create accessible spaces for urban youth (Rahm 2018) and people with limited mobility. Importantly, ethnobotanical gardens can create spaces where relationships can be enacted and lived between generations; keeping interests, relationships, and practices living through dynamically shaping gardens and shared interactions instead of confined and detached in books (Turner and Lepofsky 2013).

⁶² E.g., Muskoday First Nation food cooperative, *see* Rudolph and McLachlan (2013)

⁶³ A community-based participatory action research project aimed engaging Nuu-chah-nulth youth and community members in Clayoquot Sound to revitalize knowledge, skills and practices around stewarding traditional root gardens. λ'aayaŋas involved youth and community members of all ages in the revitalization of ŋaŋ iic'uqmapt (Springbank clover, *Trifolium wormskioldii*), tlicy'upmapt (Pacific silverweed, *Argentina egedii* spp. *egedii*) and kuuxwapiihmapt (northern rice root *Fritillaria camschatcensis*) (*see* Pukonen 2008). For other examples of ethnobotanical gardens, *see* also Pendl (2006); and critiques of Western scientific narratives in botanical gardens in Rahm (2018).

⁶⁴ See Turner and Lepofsky 2013. Other examples of reconnecting with Indigenous foods in educational settings include Indigenous plant curricula, films, books (Smith 2018; Thompson 2004); biology studies and science camps (Turner and Turner 2008), those these are not necessarily always community-led.

⁶⁵ See Cidro and Martens (2015); Elliott et al. (2012).

⁶⁶ See Keefer et al. (2013).

Youth are central in Indigenous food sovereignty movements, and land-based education programming is situated as a vital area of resurgence, decolonization, and reconnection with Indigenous pedagogies and lands (Martens 2015; Hoover 2017; Turner and Turner 2008). Connecting with culturally significant foods in educational settings and sciences is also vital given rapid environmental change, and the ways this will continue to shape Indigenous food systems, “the land and the lives that the land supports, including those of both Indigenous and non-Indigenous peoples” (Bang et al. 2014). Education will need to be transformational and responsive to Indigenous pedagogies, in order to support the generation of Indigenous futurities in this rapidly changing context (Bang et al. 2014).

These Indigenous-led projects have been described as important sites of cultural resurgence, eco-cultural restoration, and multi-generational knowledge transfer, as well as pathways towards sustainable self-determination (Corntassel 2008; Corntassel and Bryce 2012). Generally, lessons from these projects point to the embeddedness of these local contexts in a larger socio-political system that shapes Indigenous food systems in a multiplicity of ways (Rudolph and McLachlan 2013; Kamal et al. 2015). These examples consistently recognize the interconnection of language, culture, land, education, and governance to Indigenous food sovereignty, and the generative nature of land in community-specific processes of resurgence that are rooted in Indigenous ways of knowing (Mundel and Chapman 2010). While some Indigenous communities remain critical of agriculture-centric food sovereignty discourses and view agriculture as a tool of colonial dispossession⁶⁷, other Indigenous Nations with strong histories of plant cultivation and horticulture adapted these knowledge systems within their own cultural frameworks and teachings to fit agricultural contexts⁶⁸.

Lessons gained from Indigenous community gardens specifically acknowledge

⁶⁷ Hoover (2017).

⁶⁸ Ignace and Ignace (2016, 49).

the limitations of gardens as responses to food insecurity (Rudolph and McLachlan 2013, 1089; Robidoux 2017, 80) and highlight the continued importance of building local food capacity with diverse approaches along several pathways (Robidoux 2017, 80). However, community gardens can also be important sites for multi-generational knowledge exchange⁶⁹, food sharing and renewing bonds between community, health, land and cultural practices⁷⁰, cultural resurgence and pride, social and political mobilization⁷¹, and “community control over locally grown food and the larger multi-faceted food system” (Rudolph and McLachlan 2013, 1089). They can also support connection to cultural values and understandings of food, which are not reducible to “consumable commodities”, but are embedded in, as well as maintain relationships, stories, and memories (Kamal et al. 2015).

Shelley Crack from the Masset-Haida Gwaii Farm to School Salad Bar Program (BC) also speaks about the changing nature of Indigenous food sovereignty alongside ecosystem changes through time, for example with introduced species like deer and new greenhouse and garden programming. As she describes, these changes are embraced because of the ways in which they “continue to connect food and people.” (Martens 2015, 67). As Martens (2015) describes, “While Indigenous food sovereignty is dynamic and should reflect the needs and priorities of a community, all participants did agree that traditional foods and the traditional teachings around food and the land must be emphasized in this journey”.

Kyle Powys Whyte (2016, 361) further describes Indigenous food sovereignty as a response to the impact of settler colonialism and ecological degradation on Indigenous food systems and collective continuance:

In the face of settler colonialism, one of the primary issues Indigenous peoples face concerns how to design, plan, and implement ecologies that can create

⁶⁹ See Pukonen (2008).

⁷⁰ See Kamal et al. (2015).

⁷¹ See Mundel and Chapman (2010).

physical, cultural, and social well-being in our societies. Food sovereignty represents a particular strategy for how to live under this structure of oppression that prioritizes certain foods for renewal.

Place-based cultural resurgence projects are instrumental in rebuilding Indigenous food systems using bottom-up and grassroots approaches. Indigenous food sovereignty frameworks situate these grassroots or localized examples within a larger Indigenous food sovereignty movement and growing networks between communities and regions (Kamal et al. 2015; Rudolph and McLachlan 2013).

2.2 Relationships and networks

Indigenous food sovereignty is grounded in revitalizing relationships to land and culturally significant foods and ecosystems as well as between Indigenous communities and Nations (Hoover 2017). While many tribal/band and grassroots projects, programs, and movements have focused on building restorative frameworks for local Indigenous food systems revitalization, a key part of this process is the entwined nature of these projects within larger networks of Indigenous resurgence. These networks across Indigenous food sovereignty projects can build and strengthen solidarity economies and network capacity, sharing knowledges grounded in multiple social-ecological contexts and bio-regions across Indigenous territories in Turtle Island and internationally. These networks also work to support broad-scale food systems restoration guided by Indigenous protocols in inter-disciplinary and multi-scalar ways. For example, between grassroots Indigenous organizers, within Indigenous governments, community organizations, Indigenous health agencies, regional Health Authorities, universities and educational institutions, and Indigenous chefs and harvesters (Bagelman et al. 2016). Research partnerships can also draw on both Indigenous Knowledge and western science to build knowledge on nutritional value of Indigenous plants using different cultivation, processing and harvesting methods (Kuhnlein et al. 2016). Furthermore, they can inform best practices for native plant propagation and ecosystem based restoration to enhance Indigenous food sovereignty (Turner and Lepofsky 2013; Keefer et al. 2013; Mellott et

al. 2014).

Indigenous food systems networks and partnerships have the potential to create alternative pathways for addressing structural inequities and Indigenous food systems restoration, and systems level transitions towards Indigenous food systems restoration. While multi-scalar collaboration can support Indigenous food systems restoration through accountable relationships, it is important that the source and grounding of thought and actions that guide this movement are centrally Indigenous, grounded in and lead by Indigenous people, pedagogies, and relationships with land.

2.3 The intersections of “sovereignty”, self-determination, rights-based and responsibility-based frameworks

While Indigenous food sovereignty is widely used and accepted, some Indigenous scholars question the use of the term “sovereignty”⁷² for describing Indigenous processes due to its roots in state sovereignty principles of imperialism, private property, and power⁷³. As Winona LaDuke describes from an Anishinaabeg context,

What is food sovereignty? You know I’m going to be honest with you, I actually have problems with the word sovereignty, because sovereignty is a definition that comes from a European governance system based on monarchy and empire. And I’m really not interested in monarchy and empire. They have no resilience, they have really nothing to do with who we are. (as cited in Hoover 2017, 37)

Kanien’kehá:ka scholar Taiaiake Alfred (2005) and Mishuana Goeman (Seneca) (2008) caution that working within discourses of “sovereignty” from state sovereignty frameworks can re-produce the same power relations, and frame Indigenous rights only as contingent rights to Canadian law instead of grounding discourses in the unique political, cultural and relational foundations of each Indigenous Nation. Alfred (2005) points to a post-“sovereign” future guided by the cultural values of each Indigenous

⁷² See Alfred (2005); Hoover (2017).

⁷³ See Alfred (2005); Harris (2008, 9); Iles and Montenegro de Wit (2017); Kamal et al. (2015).

Nation as a necessary movement, rather than having Indigenous processes guided by settler-colonial words with their own inherent power structures, contexts and meanings.

Similarly to “sovereignty”, many Indigenous scholars describe the problematic nature of using rights-based frameworks to frame Indigenous concepts of resurgence and Indigenous food sovereignty (Coté 2016; Corntassel and Bryce 2012). For example, Corntassel (2008) and Thom (2009) describe how rights-based frameworks can center Euro-colonial discourses, and are limited in their capacity to center Indigenous concepts of relationality and responsibilities to land, and between Nations. These critiques highlight the limitations of rights-based frameworks for framing the everyday practices and processes of Indigenous resurgence and decolonization, and the Indigenous epistemologies and lands that give them life (Corntassel and Bryce 2012; Goeman 2015; Starblanket 2018). As Goeman (2015) describes, while rights-based discourses can be deployed strategically by Indigenous peoples within Western legal systems, the delineation of fixed borders and the focus on accumulations of history to justify use and occupancy also constructs land as static and passing between ownerships. Starblanket (2018) and Goeman (2015) caution that this can reproduce the same configurations of power and Western epistemology onto Indigenous stories and landscapes, constraining the space for the resurgence of Indigenous relationships, responsibilities, and conceptualizations of land and place. Goeman (2015, as cited in Anderson 2019) pushes discourse to move beyond viewing space as bounded by colonial legal philosophies of private property, into one that is grounded in Indigenous relationships, and re-created and given meaning through the continuous act of storytelling and living. As Goeman (2015, 24) writes:

Indigenous conceptions of land are literally and figuratively the placeholder that moves through time and situates Indigenous knowledges. Conceiving of space as a node, rather than linear time construct marked by supposed shifting ownerships, is a powerful mechanism in resisting imperial geographies that order time and space in hierarchies that erase and bury Indigenous connections to place and anesthetizes settler-colonial histories... land claims argue from a place of precedence and must “prove” or legitimate the length of our occupation on the land, rather than the importance of land to us.

Raymond Cormier describes this further from his work in the Splatsín title and rights office in 2008,

Our perspectives, which unite our understanding of the land with our social and community activities, differ fundamentally from the compartmentalized views of knowledge that come out of Western science and that inform planning processes. For example, in the assessment reports we prepare for them, government agencies and their development partners expect us to separate information about our local biology from information about our cultural practices. More to the point, I find that traditional use studies identify the locations of activities and minimize the importance of our places, our activities on our lands, and the complexities of our family-based connections to these places. (McIlwraith and Cormier 2015, 39)

Due to the many ways some scholars describe “sovereignty” as contrasting with Indigenous frameworks of kincentricity, relationality and responsibility, some scholars have suggested other terms such as self-determination may be more appropriate and address these incommensurabilities (e.g., Grey and Patel 2015).

However, “sovereignty” has been described by others as a useful term in Indigenous contexts and across Indigenous food movements when acknowledged as a process and goal, a dynamic concept that is informed by and realized through the unique nationhood, epistemologies, and practices of each Indigenous Nation (Stark as cited in Hoover 2017; Sayers and Peredo 2017). Other Indigenous scholars also argue that the term “sovereignty” as a concept has always existed in Indigenous frameworks prior to contact, and English-language concepts of inherent sovereignty, self-determination, and treaty rights are demonstrated in culturally-specific ways through hereditary harvesting rights, shared territories, and treaties between Indigenous Nations (Whyte 2017; Morrison 2011; Nickel 2019). For example, Secwépemc scholar Sarah Nickel (2019, 146) refers to Secwépemc leader and Union of British Columbia Indian Chiefs president George Manuel’s 1980 address at an Indigenous land sovereignty workshop in Canim Lake, BC to describe the “contrast to settler colonial legal understandings of Indigenous rights and title within the Canadian state [with Manuel’s] philosophical notion of Indigenous rights as stemming from the inherent pre-colonial sovereignty and nationhood of Indigenous

peoples”. Nickel (2019, 148) describes the problematic nature of false pre-contact/post-contact dichotomies that construct “sovereignty” as a post-contact “colonial” issue, instead pointing to oral histories, historical and archaeological evidence of Indigenous governance and socio-political organization and autonomy. Indigenous governance and legal systems have maintained land, socio-political relations between Nations, and resources both prior to and after contact, and Indigenous sovereignty is rooted within these autonomous systems and processes practiced by each Indigenous Nation (Nickel 2019, 148). Furthermore, sovereignty is a broad concept that is “a historically and culturally specific phenomenon that is multiple, negotiated, contested, and highly adaptable” to changing values, socio-political contexts, and gender dynamics (Nickel 2019, 167). Nickel (2019, 149) describes the culturally-specific articulations of sovereignty within *stsptékwle*, and Sk’elép [Coyote]’s role in protecting Secwépemc sovereignty in contemporary contexts:

Although Indigenous expressions of sovereignty changed over time, they remained rooted in Indigenous knowledge of the past. Indigenous peoples also upheld their own political structures after contact and sought to affirm sovereignty by resisting colonization. Stseptekwle reveal that, after contact, Sk’elép continued to protect Secwépemc sovereignty rights in multiple ways, including meeting with the queen of England to assert Secwépemc sovereignty over their lands. Oral traditions ground contemporary politics as well. As the first ancestor of the Syilx, Coyote is a central trickster figure in Okanagan oral history, and, although these oral histories are located in the myth age or early contact times, political actors such as Upper Nicola Chief George Saddleman look to these stories to make sense of their current political world... these stories remain deeply ingrained in Indigenous peoples’ lives and can be adapted according to the political needs of any given time... According to Splantsín te Secwépemc Chief Wayne Christian, interactions with the state prompted Indigenous communities to modify existing vocabularies of sovereignty to present their political practices in terms the state would understand. In doing this, Indigenous peoples were not adopting settler concepts of sovereignty based on Western Enlightenment ideas of land ownership; rather they were simply trying to explain notions of sovereignty that they already knew and practised. We see evidence of this in the early twentieth century, when Indigenous peoples used petitions and delegations to affirm their sovereignty. Secwépemc, Nlaka’pamux, and Syilx chiefs asserted their unequivocal sovereignty over the lands and

resources of their territories in the 1910 Laurier Memorial, a letter they presented to the prime minister as he made his way through their territories.

Similarly, Kamal et al. (2015, 570-571) further describe how Indigenous food sovereignty was conceptualized within community frameworks for the O-Pipon-Na-Piwin Cree Nation's [OPCN] *Ithinto Mechisowin* ("food from the land") food program:

The way in which OPCN's food champions use the term food sovereignty, neither 'food' nor 'sovereignty' retains their classical meanings. OPCN contested the predominant understanding of 'food'—understood as 'consumable commodities'—and struggled to restore its cultural meaning as the bond between people, health and land ... becoming more food sovereign through the process of Elders and food champions sharing stories and teachings with youth, and through the process of sharing wild foods with those in need... *Sovereignty is redefined by OPCN as a re-establishment of relationships with the land and wechihituwin of their area. OPCN does not perceive sovereignty as control over land, water, or wildlife, but a relationship with these entities that allows for the mutual benefit of all parties.* The community does not perceive sovereignty as an ability to take from others or the environment, but to support the community through engagement and sharing of *wechihituwin*⁷⁴. [emphasis added]

In these descriptions, the meaning of the word sovereignty is what becomes actualized on the ground, and given meaning through local processes, values, gender dynamics, and contexts⁷⁵. Indigenous Nations continue to assert, protect and exercise their harvesting and land rights within and on their own terms, and terms such as "sovereignty" can be useful to describe diverse Indigenous conceptualizations of what this looks like in practice (Whyte 2017). In this respect, the concept of Indigenous food sovereignty more broadly in Turtle Island has been described as one part of a larger nationhood-building movement involving the actualization of self-determination on a broader scale (Hoover 2017). For example, Dr. Heidi Kiiwetinepinesiik Stark (Turtle

⁷⁴ "Wechihituwin refers to any means of livelihood that is shared and used to help another person, family, or the community" (Kamal et al. 2015, 565-566).

⁷⁵ Hoover (2019, 62-84) describes its embeddedness in health, culture, relationships, independence, economies, access and sharing, choice, control, seeds, and education.

Mountain Ojibwe) highlights the dynamic and process-oriented nature of sovereignty and how it is generatively and continuously conceptualized through local cultural epistemologies, practices, and contexts (as cited in Hoover 2019, 86). Amanda Cobb (in Hoover 2019, 87) describes this further:

By casting sovereignty not only in terms of process, but more particularly in narrative terms, sovereignty becomes the ongoing story of ourselves—our own continuance. Sovereignty is both the story or journey itself and what we journey towards, which is our own flourishing as self-determining peoples.

In other words, sovereignty could refer to the ability to live and express ancestral responsibilities, story landscapes, and to live well within cultural frameworks. As Hoover (2017) describes, although Winona LaDuke has voiced criticisms about the word sovereignty, she has also often stated that “you can’t say you’re sovereign if you can’t feed yourself”. In this respect, Winona LaDuke’s latter statement could also describe the importance of active and tangible process in cultural definitions of sovereignty related to practicing cultural responsibilities in relationship to food and land. This centralizes the act of knowing how to grow and caretake for plants as central to cultural continuance, governance, and culturally specific definitions of sovereignty. In this respect, the practice of Indigenous food cultivation, knowledge, and sustenance is positioned as a central part of sovereignty and nation-building processes (Hoover 2017).

2.4 Gaps and further research

While challenges and opportunities for Indigenous food sovereignty movements have been written about in Indigenous food sovereignty literature (Smith 2018), Kamal et al. (2015) and Pukonen (2008) are two of a very limited number of studies that examine what Indigenous food sovereignty and cultural resurgence projects look like as they are developed in practice (Kamal et al. 2015; Hoover 2015; Martens 2015; Desmarais and Wittman 2014; Smith 2018). As Winona LaDuke describes, within the movement there is

an important balance moving forward between “the documentation of history and the creation of policy versus the on-the-ground work and needs of [I]ndigenous communities” (Mihesuah and Hoover 2019, xiv). Along with Hoover (2017), this study also aims to address this gap by providing a process-oriented focus on the ways in which values inform Secwépemc food systems restoration, both in existing projects as well as in the future.

Martens (2015) also highlights an important intersection between Indigenous food sovereignty, and Indigenous laws and decision making structures. New legislative practices making space for the practice of Indigenous law and legal pluralism will be an important area to continue focusing on in Indigenous food sovereignty literature. Rebuilding Indigenous legal systems and decision-making structures will have direct implications for applying legislation, policy, and decision-making from an Indigenous lens related to harvesting, natural resource and environmental management. Furthermore, increasing focus on the development of novel policies supporting Indigenous cultivation, food systems restoration, and marketing (Grey and Newman 2018) can provide insight into future directions and responses to Indigenous food sovereignty.

Chapter 3: Theoretical Framework

This theoretical framework explores the theoretical intersections of critical place inquiry and social-ecological resilience theory, and how they inform my methodological approach and theoretical model (see Figure 1 at the end of this chapter). This chapter discusses the interrelatedness of land, story, language, and law; the relationships between Indigenous food systems and social-ecological resilience theory; and how these theories work to situate this study.

1. Place, land, and ways of knowing and being⁷⁶

1.1 Indigenous knowledge

Indigenous knowledge systems are informed by ecological, cultural, and spiritual relationships with place, as well as land-based monitoring, observation, and experiences with change generated over millennia of close interactions with place, across diverse ecologies and bioregions (Thompson 2018; Bhattacharyya and Slocombe 2016, 14; Ignace et al. 2016b). Indigenous peoples have our own diverse pedagogical frameworks, unique to each Indigenous Nation, for generating, framing, and contextualizing knowledge (Thompson 2018). Furthermore, Indigenous peoples have always been monitoring, governing, and building social memory and knowledge about ecosystem processes from times of uncertainty and changes to ancestral lands over time (Olsson et al. 2014). Friedland (2018, 31)⁷⁷ describes the continuous process of continuity and innovation that is part of Indigenous knowledges, embedded in storytelling, that are part of their “enduring usefulness and applicability as an intellectual concept” for thinking and

⁷⁶ I use “knowing and being” here to refer to the ways in which Indigenous ways of knowing are also embodied and practiced in active ways.

⁷⁷ Friedland (2018) writes about the Cree and Anishinabek responses to violence through *Wetiko* or *Wiindigok* stories.

theorizing in changing contexts.

1.2 Connection between stories, land, language and law

“...when we fail to consider place as products of human decisions, we accept their existence as noncontroversial or inevitable, like the falling of rain or the fact of the sunrise”. (Gruenewald 2003, 627, as cited in Bang et al. 2014)

Place is central to the process of knowledge generation and action, and is iteratively constructed and shaped by the agency of human communities and nonhuman relatives through generations of interactions with land and each other (Tuck and McKenzie 2015a, 5). Massey (2005, as cited in Tuck and McKenzie 2015a, 165) describes the dynamic process of inter-relationality through which humans and non-humans become agents of materialization, co-constructing and iteratively shaping, and being shaped by, place. A commonality between all people is our dependence on land for survival, and the generation of legal and social systems to collectively manage our relations with each other, and with land (Friedland et al. 2018, 155). It is how these systems are managed and enacted and the relational pedagogies they are guided by that differ between societies (Friedland et al. 2018).

Tuck and McKenzie (2015a, b) and Goeman (2008, 24) write about the importance of place, or land, for situating Indigenous stories, histories, values, knowledges and futures. Armstrong (1998, as cited in Grey and Patel 2015) describes how Syilx (Okanagan) Elders understand language as anchored to place, giving voice to understandings shaped through relationships and interactions between land, humans, and nonhuman relatives:

Okanagan Elders understand that language is place-specific because it is given to the people by the land. Since the knowledge housed in each territory is unique, a shift in location catalyzes new vocabularies to voice new understandings

Rasmussen and Akulukjuk (2009, as cited in Tuck et al. 2014a, 12) pose the

question, “*what language does the environment speak?*” to describe how language is not a “dislocated phenomenon”, but develops from thousands of years of relationship and interaction between humans, plants, animals, water, and land.

Each Indigenous Nation has their own unique stories they receive from their lands and environments informed by thousands of years of processes and engagement with place. From work led by several senior Indigenous women recording oral narratives in the Yukon, Cruikshank (1998; 2012) describes how stories communicate deep histories of knowledge, as well as embody a means for conveying broader contexts and meanings across shifting temporal, political, and social contexts. In this setting, Cruikshank (2012, 248) describes the significance of their stories in creating a context for recognizing agency in sentient landscapes, and the capacities that are engaged through thinking with story about relationships between people and place. She poses the question “are glaciers good to think with?” to highlight the context storytelling creates for thinking with landscapes, and eliciting networks of relationship and capacities to act, which are otherwise lost when reduced to data or Traditional Ecological Knowledge (“TEK”)⁷⁸.

Armstrong (2009, 90) describes the multiple layers of Syilx *cap̓tikʷl* (stories),

⁷⁸ Within this thesis I intentionally use TEK as an acronym to demonstrate the ways in which the concept of Traditional Ecological Knowledge is a western one used often in the literature, that separates Indigenous ecological knowledges from their processes and contexts. Rather than perpetuating its use, I am trying to highlight the role of TEK in enabling the separation of Indigenous ecological knowledges from the living contexts, epistemologies, communities, and processes that inform them. Leanne Simpson (2001, 138-139) has an important critique of TEK as a concept defined largely outside Indigenous communities, which involves outside researchers’ interests in specific sets of Indigenous knowledge because of their parallels with western scientific ecological knowledges. As Simpson (2001) describes, this process detaches TEK “data” from the interrelated spiritual, pedagogical, community-based and community-generated contexts that shape Indigenous ways of knowing, ‘a process of “scientizing” our knowledge for use in and the consumption of Euro-Canadian society’ (Simpson 2001, 139).

Within this thesis I also intentionally chose not to use acronyms for concepts such as Indigenous ways of knowing (which are sometimes referred to as “IWOK”). Acronyms can often be an easy way of simplifying, reifying and fixing them as concrete, and separating them from intangible aspects and living processes. When Mi’kmaq Elder Albert Marshall discusses Two-Eyed Seeing, he talks about Indigenous ways of knowing and western scientific ways of knowing as grounded in their own epistemological contexts and processes, each with their own processes and methods of eliciting knowledge (Peltier 2018, 2; Bartlett et al. 2012). This perspective considers the interrelatedness of Indigenous knowledges with their cultural, spiritual, and intangible aspects, processes, and ways of knowing.

which elicits meaning for different audiences and age groups:

The Syilx custom of storytelling is cognizant that *captikʷł* are told with all ages present and information delivered is accessed depending on the level of “knowledge” of the listener to interpret different layers of meaning ... Interpretation and discussion on the meaning of a *captikʷł* takes place only when the application of its information is being solicited for a specific purpose.

Kovach (2009, 94) describes the active and context-laden role of stories shared by a storyteller, which are contextualized by layers of relationship with the world, the past, and future generations:

Stories hold within them knowledges while simultaneously signifying relationships. In oral tradition, stories can never be decontextualized from the teller. They are active agents within a relational world, pivotal in gaining insight into a phenomenon. Oral stories are born of connections within the world, and are thus recounted relationally. They tie us with our past and provide a basis for continuity with future generations.

Each Indigenous Nation has their own unique system of knowledge that is grounded in the stories they receive from the land. Stories can also teach about hereditary and familial rights to land, legal systems, and ecological knowledges and lessons for how to live well (Kovach 2010, 96). Kovach (2010, 95) describes Indigenous stories as usually take two forms: legends or creation stories that teach, and personal stories about the experiences of elders that are passed on (Kovach 2010, 95). Armstrong (2009, 90) categorizes four “genres” of Syilx *captikʷł* (stories), with some stories including several genres within the narrative. In Switzmalph, the two forms of stories described to me were *stsptékwle* (oral tradition, or “legends that teach”⁷⁹) and *slexlexéye* (“personal stories”) (Louis Thomas, fieldnotes, June 2018).

Ignace and Ignace (2017, 210) describe Secwépemc *stsptékwle* as significant for guiding responsibilities in adaptive management and respectful resource stewardship, and

⁷⁹ “Legends that teach” is the definition of *stsptékwle* from Louis Thomas, Neskonlith.

at their base hold a “system of spiritual beliefs and sanctions that underlie the laws of good conduct, access to resources, and trespass of land manifested in *yerí7 re stsqéy’s-kucw* (“our laws”). Secwépemc laws (“*y[e]rí7 re stsqéy’s-kucw*”) come directly from the land through thousands of years of accumulated place-based empirical knowledge, informing the present and future responsibilities of Secwépemc people (Ignace 2008, as cited in Bonneau 2013). As Bonneau (2013, 24) also describes, “*Secwépemc* Coyote stories contain information about how we as *Secwépemc* established our nationhood, our laws of ownership and trespass, and our relations with other nations”. Ignace and Ignace (2017, 57, 59) describe how *stsptékwle* teach about the past social and natural consequences of the actions of Secwépemc ancestors and their nonhuman relatives, and “anchor experience to land”:

The fundamental laws of the Secwépemc immanent in the *stsptekwll* include what we can term the law of sovereignty of each nation – or “supreme authority,” as the Interior chiefs called it in their “Memorial to Sir Wilfred Laurier” (Chiefs of the Shuswap, Okanagan, and Couteau Tribes 1910) – which mandated respect for boundaries between nations.

The *stsptekwll* of Skelép and the deeds of the transformers can be interpreted as laying down three fundamental laws for the Secwépemc: the Secwépemc law of sovereignty within Secwepemcúlecw, the law that defines rights of access and rights to resources, and the law that acts as an impetus to make treaties among nations.

For example, Kukpi7/Dr. Ron Ignace (2016, xi) describes the role of *stsptekwll*⁸⁰ in teaching about Secwépemc plants in as living beings to which Secwépemc people are accountable, and for teaching moral codes of conduct:

Secwepemc engagement with plants harkens back to the beginning of our existence in Secwepemcúl’ecw, when Sk’elép (Coyote), took a tree for a wife, thus showing the interconnection of us as people with trees, creating a relationship of reciprocity between humans, trees, and all other plants as living beings who mutually interact, and have to be accountable to one another.

Moreover, Sk’elép’s deed reminds us that trees themselves nurture and protect the

⁸⁰ Western *Secwepemctsin* spelling

medicinal and food plants beneath them, and nurture the ecosystem. They give us air to breathe and protect our water. Thus, when we say “*xwexwéyt ren kwséseltkten*” or “All My Relations” we refer not only to our human relatives but include the ecological relations with and on the land, and our relationship of reciprocal accountability with the land. Many other foundational *stsptekwll* connect us to the life-world of plants ... Out of these oral histories of human-plant interactions, we can draw out the laws of conduct that sustained Secwepemc society in our connection to the living land and its ecology. Thus, the epic journey of Qweq̓wile, “Hog Fennel” (*Lomatium macrocarpum*) speaks not only to the aphrodisiac powers of the plant, but teaches us to train for strength to overcome adversity, and connects the cultures of the Interior Salish nations by way of connecting the habitat of this once important root plant to the extent of the territories of our peoples.

Janice E. Billy (2015, 41-42) describes storytelling as an active process that engages both storyteller and listener in an active experience that co-constructs meaning. Billy et al. (2017) describe the core elements of *stsptékwle* as: Personification of animal characters; connection to the land; repetition; adaptability of story; and story as entertainment. *Stsptékwle* teach about and reinforce Secwépemc values, societal expectations, as well as teach about history and place-based knowledges⁸¹. Janice E. Billy (2015, 31) also uses the Chief Atahm *Secwepemctsin* language school’s⁸² central values as a framework, demonstrating how *stsptékwle* are an important foundation for learning language, developing curriculum, and teaching about Secwépemc cultural concepts and values at the school. There are several land-based education and *Secwepemctsin* language programs creating models grounded in Secwépemc values and concepts to guide learning for Secwépemc youth (e.g., the Little Fawn Nursery in Tkemlúps, see Arnouse 2019; Sk’elep School of Excellence, see Sk’elep School of Excellence 2020; and Chief Atahm school, see also Billy 2003). There is an ongoing process to revitalize storytelling in

⁸¹ Michel (2012); Billy (2015, 31).

⁸² Chief Atahm School is a *Secwepemctsin* immersion school located on the Adams Lake reserve close to Chase, BC. The core principles or values described by Secwépemc Elders at Chief Atahm school are *kwseltknéws* (we are all related), *knucwetsút.s* (help yourself), *mellélc* (take time for yourself), *slexléxs* (develop wisdom), and *qweqwetsin* (honour the spiritual) (see Chief Atahm 2017d).

Secwepemcúlecw, and the importance of learning protocol to engage respectfully with story:

There is a strong movement in Secwépemc territory to not let the stories die, which I believe is a central component of each generation's pursuit of reclaiming cultural knowledge(s) to re-Indigenize, re-inscribe and re-story our ancestral lands ... in our pursuit of regaining/relearning the keys to knowledge from the stories, we cannot control what we learn from the synergistic engagement with the story. We as learners have to pay attention and allow the story to lead us through whatever teaching is given and we have to learn the protocols of how to engage with them in a respectful manner. (Christian 2017, 160)

The vital role of Indigenous stories as reinstatements of law and teachers of intergenerational responsibilities is only starting to be recognized in Western legal systems, such as through the 1997 Delgamuukw decision (Kovach 2009, 96). While stories have been a tool for cross-cultural learning and engagement by Indigenous storytellers, they have also been one source of revitalizing Indigenous legal orders through the collective interpretation by Knowledge Holders with cultural expertise and authority of societal morals, values, and codes of conduct connected to story. Law is societally-determined and used by every society to govern and manage political, economic, and social life (Lindberg and Asch 2016, 8). As all legal systems are grounded in a constitutional order, which is shaped by underlying epistemologies, ontology, and cosmology, interpretations of other legal systems can be misinterpreted and distorted in the absence of comprehending the underlying constitutional order that shapes them (Mills et al. (2017, 1). Knowledge Holders have important roles as experts and interpreters of stories within a culturally nuanced epistemological context (Kovach 2010, 94). Collaborative story analysis processes are one methodology used by the Indigenous Law Research Unit (ILRU) at the University of Victoria for articulating Indigenous legal systems, wherein Indigenous Knowledge Holders with cultural expertise and authority interpret, research, and articulate principles of law grounded in their stories (ILRU and SNTC 2016). In collaboration with the ILRU, the Shuswap (Secwépemc) Nation Tribal Council (SNTC) outlined general reinstatements of Secwépemc land and resource law in

their 2018 Lands and Resources Law Research Project (ILRU and SNTC 2018; ILRU and SNTC 2016; Friedland et al. 2018, 160), which I will draw upon in Chapter 5 to anchor cultural concepts discussed by Secwépemc Knowledge Holders in this study.

Place names in Secwepemcúlecw can also be mnemonic devices that anchor stories to place, often highlighting relationships, physical features, or activities that took place in the landscape (e.g., plants that grow in certain areas and their place in seasonal rounds) (See Thomas et al. 2016; Ignace and Ignace, with contributions from Nancy Turner, 2017, 192). Tuck and McKenzie (2015a, 32) describe the significance of place names and stories for anchoring Indigenous knowledges to land:

... Kovach (2009) outlines how specific knowledge of and with place is held in storied practice: For example, “This is why name-place stories matter: they are repositories of science, they tell of relationship, they reveal history, and they hold our identity” (pp. 61–62). The interweaving of place and story yields knowledge not only about social life, but of the embedded understandings of other beings and land. Or as Mishuana Goeman (2008) writes, what continues to endure and “reinforce connections” are stories and our “appropriate action or relationship[s]” to each other. Knowledge of where to collect grasses for basket weaving or the best hunting spots continue to be passed on and used for cultural survival, though fences mark private property and the government punishes transgressions.

Secwépemc scholar Kathryn Michel (2017) describes the differences between Euro-colonial place names and Secwépemc place names, highlighting the role of Secwépemc place names in anchoring place-based relationships and knowledges to certain places in the landscape:

Many of these new [Euro-colonial] names were named after individuals, contrasting with Secwépemc place names that highlight physical characteristics of the land and/or the relationship between humans and the earth. Names embody the value of *k'wseltnéws*, or, ‘we are all related.’

Kukpi7/Dr. Ronald Ignace and Dr. Marianne Ignace (2017, 236) describe this further:

Secwépemc place names—as opposed to the general words for landforms—identify specific and unique locations or areas within Secwepemcúlecw and connect these locations with memories of past events that occurred there, as well

as with knowledge of environment, local resources, and landforms. They anchor Secwépemc history to the land in ways that connect people to the history of long go, to the resources of the land, and to the lay of the land. They provide *oral maps* of the land, as past tricksters and transformers like Skelép (Coyote), Qweqwíle, and Tllí7sa and his brothers shaped it and mapped it through stories.

Place names also call attention to environmental degradation and landscape change over time (Thomas et al. 2016; Lutz 2009; Ignace and Ignace 2017). For instance, many place names describe the once prolific populations of culturally significant plant populations cultivated in certain places, which simultaneously contrast with often ecologically degraded sites where the plants and activities they are named for are vastly reduced today (e.g., as a result of conversion into agricultural fields and ranch lands) (Thomas et al. 2016, 376). For example, the place name *Sxwesméllp* (“soopalalie bush”)⁸³, referring to the confluence of the Salmon River and Shuswap Lake, denotes the importance of this area for harvesting area for *sxúse*⁸⁴ and salmon. In the Salmon River delta, *sxwesméllp* bushes are much more rare in present day due to cumulative impacts from agriculture, railway and highway construction, and urban development in Salmon Arm. Ignace (2008, 3) describes stories and oral histories as giving “meaning to our connection to the land and to the ways in which [Secwépemc] people have continued to be attached to our land in the face of the history of white colonization and appropriation.”

1.3 Haunting

Settler place names, and the systems that give them power, can exist alongside, or on top of, Indigenous places and their names, and settler institutions can also control decision-making power and actions that shape place on wider scales. The primacy of

⁸³ *Sxwesméllp* name translation by Louis Thomas (fieldnotes, June 2018), and language translation by *Secwepemctsin* language teacher Lucy William. Switzmalph is now the name for Neskonlith IR#3, located directly to the west of the town of Salmon Arm.

⁸⁴ Soopolallie berries, Eastern *Secwepemctsin* translation by *Secwepemctsin* language teacher Lucy William.

“frontier” myth-making is foundational to settler-colonial geographies in British Columbia (Furniss 1999). Settler myth-making is embedded in land tenure landscapes and policies, such as through the reserve system, which Belcourt (2016, 26) describes as a settler attempt to “quarantin[e]” Indigeneity “outside modern life in order to preserve settler-colonial futurities”⁸⁵. Furthermore, settler myth-making continues through various attempts at de-politicizing land and claiming home through settler moves to innocence⁸⁶ and settler nativism (Tuck and Yang 2012, 13; Maurice-Hammond 2016, 15, 16). Arthur Manuel (2015, 2-3) describes these overlapping, and sometimes incommensurate understandings of place, in Neskonlith from his generation:

Further upstream, where Little Shuswap Lake empties into the river, is the town of Chase. It began to form around the lumber mill built just before the First World War. We have generally had peaceable relations with the people of the town, with only occasional flashes of open conflict ... To a large extent, we live in separate worlds. They live in Chase, British Columbia, Canada. We live in Neskonlith, Secwepemc territory.

Potawatami scholar Kyle Powys Whyte (2016, 360) describes settler-colonial processes of renaming as one aspect of erasing Indigenous ecologies and relationships to land. Furthermore, he characterizes the ways in which “inscribing” settler-colonial geographies on top of Indigenous ones impacts Indigenous cultural landscapes, access to land and culturally significant food systems, and futurities:

Settlement, then, actively erases Indigenous peoples’ collective capacities as a means of inscribing settler ecologies into Indigenous homelands. In this way, settlers actually seek to eliminate themselves *as settlers*. Settlers seek to render the territory *their* homeland in every dimension—cultural, social, economic, political, and so on. Settlers engage in a process, then, that seeks to make their

⁸⁵ Tuck & Gaztambide-Fernández (2013, as cited in Tuck and McKenzie 2015a, 165) describe futurities in terms of the ways practices make possible potential future states.

⁸⁶ Tuck and Yang (2012) refer to “settler moves to innocence” as a series of moves designed to rescue a settler futurity through reconciling white guilt and the discomfort of decolonization. These moves center the desires of white settlers to become native to place through reoccupation, reinhabitation, and inscribing settler futurities into land through attempts to replace and make invisible Indigenous peoples, ecologies, and lives (Tuck and Yang 2012).

ecologies permanent and inevitable... At base, settler erasure challenges the very root of Indigenous touchstones for planning for future generations, because the future embedded within the landscape becomes a settler one (Tuck and Gaztambide-Fernández 2013; Walker et al. 2013) ... (Whyte 2016, 360)

Similarly, Tuck and Ree (2013) inquire into the tensions between Indigenous landscapes and settler-colonial futurities in their *Glossary of Haunting*⁸⁷. As they describe, haunting in American horror films is often premised on an innocent and undeserved hero targeted by a haunting they can't explain, with the hero taking the uncomfortable position of problem solving which demands resolution. Tuck and Ree (2013) equate this as one of a series of settler moves to innocence⁸⁸ in which settlers are the heroes who feel unjustly haunted by settler-colonialism and demand reconciliation without meaningful systemic change and action. Although haunting is a broader field of study, the specific dimension of haunting I am focusing on here is that of the haunting of Indigeneity and “the experience of colonialism” that is buried in settler anxiety (Bodinger de Urarte 2012, 303 as cited in Belcourt 2016, 25). This haunting “emerges as a locus for settler horrors (unfinished business, refusal, the blurring of spatio-temporality)”⁸⁹, and persistently disrupts idylls of settler colonial myth-making, security and futures:

Settler colonialism foregrounds certain mythologies of happiness that are insidiously energized by Indigenous suffering ... we know the happy stories that the settler state tells about itself—stories about multiculturalism, about reconciliation, about nationalism, about gay-friendliness. Settler colonialism might be about preserving happiness—the “happily-ever-after” that its statecraft narrates by flattening the historical and material impasse that indigeneity signifies. (Belcourt 2016, 30)

Haunting pushes critical discussions of place that center the importance of action

⁸⁷ However, as Belcourt (2016, 25) describes, the universalist nature with which haunting is applied to Indigeneity can erase the ways in which “ghostliness is differentially distributed” for queer Indigenous folks. He instead points to the queer Indigenous poltergeist: “Sometimes all we have is the promise of the future. For the queer Indigenous poltergeist, resurrection is its own form of decolonial love” (Belcourt 2016, 26).

⁸⁸ Tuck and Yang (2012).

⁸⁹ Maurice-Hammond (2016, 6).

and reparations for equitable futures and accountability to future generations (Tuck and McKenzie 2015a, 154, 163). As Indigenous food sovereignty cannot be realized without addressing the question of land (who controls land, and who controls food economies), and contesting the philosophies underlying settler-colonial conceptualizations of place that drive settler futurities and the erasure of Indigenous ecologies through land tenure and policy landscapes. Indigenous food systems restoration does not exist in a vacuum, and is shaped by the layers of relationship and cultural and ecological context of each Indigenous Nation. In this respect, to learn about and understand ecosystems and social-ecological change in Secwépemc territory, it is vital to understand their interrelatedness with Secwépemc communities, stories, laws, and social and governance institutions. Worldviews and understandings of place can influence the ways we interact with landscapes, and the stories we privilege. There are large incommensurabilities between single-story settler-colonial representations of place as static and defined in terms of “evolutionary” timelines of shifting ownerships, and Indigenous understandings of the dynamic and layered role of land in situating and generating Indigenous ways of knowing and being in a storied practice (Goeman 2008). In the latter, land is significant as a context and co-generator of connection and interrelatedness between Indigenous food systems, education and legal systems, governance, and futurities (Goeman 2008).

Indigenous relationships, community care, decolonial love, and resurgence of language, stories, and futurities continue to construct geographies that situate Indigenous experiences in relationship to land, despite years of settler colonial renaming, and rapid cumulative landscape change and species declines. Tuck and Gaztambide-Fernández (2013, as cited in Tuck and McKenzie 2015a, 165) describe futurities as the ways in which

... current practices shape and make possible the future (Tuck & Gaztambide-Fernández, 2013). Thus, a relational ethics to future generations would de-center a settler futurity because settler futurities depend on the remaking of land and life into property and because settler futurities foreclose all others. There are other futurities to consider and enact. There are also very present concerns related to the futurities of (drinkable) water, water salination and temperature, soil

contamination and overproduction, shrinking shorelines, and the reduction of important pollinating species (such as honeybees) and species of cultural significance. (Tuck and McKenzie 2015a, 165)

Indigenous scholars call for the resurgence of Indigenous pedagogies and education systems based on the revitalization of relationships to land (Simpson 2014; Young 2015; Wildcat et al. 2014; Cornthassel et al. 2018). Furthermore, Simpson (2014, 22) re-iterates the importance of engaging Indigenous knowledges within Indigenous intellectual processes and contexts instead of only struggling for legitimacy within Euro-Western knowledge frameworks. If colonization is premised in dispossession of land, decolonization is premised in the resurgence of Indigenous relationships and responsibilities to land, and education systems that support the resurgence of land-based knowledges (Wildcat et al. 2014, 1). Indigenous education systems are grounded in transmission of knowledge about governance, ethics, and philosophies generated from thousands of years of learning how to live within seasons and bioregions across Turtle Island (Wildcat et al. 2014). In Secwépemc territory, land has been described as foundational to place-based knowledge systems, and topographical features on the landscape can act as mnemonic devices for language, *stsptékwle*, values, laws, and histories (Ignace and Ignace 2017, 9, 10, 15, 235; Friedland et al. 2018).

Centering Indigenous epistemologies, narratives, histories, and relationships to land within land-based/place-based education projects can contribute to creating shared learning spaces with Indigenous and non-Indigenous people (Wildcat et al. 2014, VI). Furthermore, this can contribute to building stronger relationships of reciprocity between communities and land (Wildcat et al. 2014). Incorporating Indigenous theory, rights, values, and protection of culturally significant plants and ecosystems can also create a bridge between existing place-based education and Indigenous pedagogies (Young 2015).

1.4 Refusal and resistance

Indigenous relationships to place have often been theorized about by white

researchers and anthropologists, privileging narratives by Western academics and marginalizing Indigenous voices, pedagogies, meaning making, and ways of knowing and being in relationship to land (Euale 2019). The experiences of communities are too often framed within scholarly norms instead of recognizing the agency of silence, refusal, and of communities generating their own theories in response to those that have been made about them (Cruikshank 1998; Tuck 2019; Tuck and Yang 2014a, 2014b). In her work with the Słpatsín te Secwépemc Nation, Euale (2019) describes a necessary movement in anthropology, and I would argue in environmental studies as well, to “decolonize knowledge production”. This involves confronting the knowledge hierarchy that often values Western narratives about place, medicine, and Indigenous peoples, viewing Indigenous experiences as “mere objects of research for the consumption and benefit of non-Indigenous researchers” (Ignace et al. 2016, 17 as cited in Euale 2019). Eve Tuck (2019) specifically points to how colonial theories of change assume that it is outsiders and not communities that make change, and “consistently locate power and agency outside of communities and require them to work within their structures for piecemeal gains”. Tuck and McKenzie (2015a, xiv) also highlight the dangerous nature of colonial knowledge production, where often white academics and narratives are given the power and privilege to conceptualize relationships to place in social science research, which then shapes policy and action:

... we write from and into the overlapping contexts of globalization and neoliberalism, settler colonialism, and environmental degradation. We do not see the practices of social science and these overlapping contexts as disconnected. Rather, to use Kim Tallbear’s (2013[, 11]) term, they are *coproduced*, meaning science and society are actively entangled with each other. They are mutually constitutive in that “one loops back in to reinforce, shape, or disrupt the actions of the other, although it should be understood that because power is held unevenly, such multidirectional influences do not happen evenly.”

Tuck (2009b) gives examples of destructive and colonial theories of change, where the pain or oppression of Indigenous communities is leveraged by outsiders for the purpose of gaining funding or support from people in power. These damage-centered

narratives both locate power outside of communities as well as promote one-dimensional and damaging narratives of hopelessness, lack of agency, and powerlessness (Tuck 2009b). Often, these stories do not acknowledge the contexts of resistance and refusal that community stories are constructed from, theorizing back⁹⁰, resisting, and constructing and inspiring Indigenous-led food initiatives for and by communities (Martens 2015). Tuck (2009b) calls for “a moratorium on damage centered research to reformulate the ways research is framed and conducted and to reimagine how findings might be used by, for, and with communities” (Tuck 2009).

Michi Saagiig Nishnaabeg scholar Leanne Betasamosake Simpson (2014) describes the powerful nature of resistance, and “theorizing back” (Tuck 2008) generated from within Indigenous pedagogies and stories, and their role in contributing to envisioning and making possible Indigenous futurities in relation to land. In both refusal⁹¹ and resistance research, the very act of refusal and “theorizing back” (Tuck 2008) against well-established theories and damage-centered narratives about Indigenous people in academia is generative⁹². Refusal can redirect focus to other unquestioned ideas and reflection, and call for a repositioning of power to community-generated theories and futurities while resisting colonial ones:

“... Refusal is a powerful characteristic of Indigenous methods of inquiry, pushing back against the presumed goals of knowledge production, the reach of academe, and the ethical practices that protect institutions instead of individuals and communities. Again, refusal is more than just a no; it is a generative stance situated in a critical understanding of settler colonialism and its regimes of representation (Tuck & Yang, 2014).” (Tuck and McKenzie 2015a, 148)

Tuck and Yang (2013) write about the transformative potential of resistance, and networks of action working within a theory of change that centers and contextualizes

⁹⁰ Tuck (2008).

⁹¹ See Audra Simpson in Tuck and McKenzie (2015a, 146-147); Tuck and Yang (2014a, b); Jones and Jenkins (2014).

⁹² See Guishard and Tuck (2013, 374); Tuck et al. (2014b).

restorative and powerful stories from Indigenous communities, while critically understanding contexts of violence Indigenous peoples continue to live with.

1.5 Indigenous research methodologies

In this time of resurgence and reconciliation, many Indigenous scholars are demanding transformation in research agendas away from damage-centered research practices (Peltier 2018, 2; Tuck 2009b; Tuck and Yang 2014a, 2014b; Martens 2015; Kovach 2010; Smith 2012). This includes calls for research that is fundamentally grounded in Indigenous processes in appropriate and restorative ways⁹³, contributing instead to more “meaningful, respectful research deriving from Indigenous worldviews” (Peltier 2018, 2).

Numerous Indigenous scholars⁹⁴ have written about the importance of Indigenous research methodologies, as well as research methodologies in alignment with Indigenous worldviews⁹⁵, for carving space within academia for ethical research and validity *within* and *on* Indigenous terms (e.g., through Indigenous processes, epistemologies, and frameworks of knowledge generation). Indigenous Research Methodologies do not center the colonial relationship, but instead are rooted in the longstanding and diverse pedagogies of different Indigenous Nations. As Anishinaabe scholar Kathy Absolon

⁹³ McGregor (2018, 819).

⁹⁴ Absolon (2011); Kovach (2010); Wilson (2008); Young (2015); Archibald (2008); Chilisa (2012); Smith (2012); Christian (2017, 2019); Peltier (2018).

⁹⁵ E.g., Critical Theory and Participatory Research methods (Wilson 2008); “Two Eyed Seeing” (Peltier 2018): Mi’kmaw Elder Albert Marshall speaks about the importance of context and process in understanding Mi’kmaq knowledge systems within their own framework. He describes the Mi’kmaq concept of *Etuaptmumk/* “Two-Eyed Seeing”, and describes it as braiding the strengths of Indigenous knowledge systems and Western knowledge systems. In *Etuaptmumk*, each knowledge system is contextualized within their own pedagogies and processes, and brought together distinctly to support a combined approach to environmental and climate issues. The Unama’ki Institute of Natural Resources (UINR) is an example of how these two knowledge systems are braided and engaged in practice; continuing the maintenance and generation of land-based knowledges in Unama’ki through the processes and strengths of both knowledge systems. See Bartlett et al. (2012); Peltier (2018).

(*Minogiizhigokwe*) (2011, 105) describes,

“Our perception of ourselves as re-searchers or searchers or gatherers comes from and is rooted in our traditions. Long before we were in the academy, our ancestors were conducting research and relied on Indigenous methodologies as they sought out knowledge. Today, reclaiming Indigenous methods of searching for knowledge embodies our own learning and healing, and this knowledge is transferable.”

Because Indigenous epistemologies and methodologies are iteratively inspired and shaped by place, they can be important ways of inquiring into context-based relationships between people and land (Tuck and McKenzie 2015a, 95). As story is one Indigenous method of inquiry for learning about land and place, Archibald’s (2008) storywork research protocols can be an important framework in critical place inquiry for outlining respectful engagement with story (Tuck and McKenzie 2015a, 131).

Storywork has been applied within several contexts by Indigenous academics (e.g., Young 2015; Dorothy Christian 2017) as a means of engaging respectfully and responsibly with cultural stories. Storywork as a framework has seven guiding principles for respecting the role of Indigenous stories and storytelling process in teaching and generating knowledge⁹⁶, and responsibly using stories and collective knowledge in research contexts (Tuck and McKenzie 2015a, 131). These guiding principles are respect, responsibility, reciprocity, reverence, holism, interrelatedness, and synergy (Archibald 2008, also see Christian 2017, 2019). Similarly, from an education perspective, Kirkness and Barnhardt (1991) also use the four principles of respect, relevance, reciprocity, and responsibility as a framework for shifting policy and institutional culture and practice for supporting Indigenous students and ways of knowing.

As Kovach (2010, 94) describes, Archibald’s (2008) storywork principles encourage us not necessarily into a more prescriptive process, but require a deeper engagement with the principles as they relate to each context and our own thoughts and

⁹⁶ See Archibald (2008); Tuck and McKenzie (2015a, 131); Kovach (2010, 94)

reactions in relation to story:

Archibald reflects upon how stories capture our attention and tells us that stories ask us ‘to think deeply and to reflect upon our actions and reactions,’ a process that Archibald calls ‘storywork’ (2001: 1)... the inseparable relationship between story and knowing, and the interrelationship between narrative and research within Indigenous frameworks. In considering story as both method and meaning, it is presented as a culturally nuanced way of knowing.

Archibald (2008), Christian (2017, 2019), and Young (2015)’s engagement with storywork principles were foundational to my own learning about Indigenous methodologies for working with story, in conjunction with local protocols, in Switzmalph.

1.6 Critical place inquiry

Critical place inquiry specifically questions the embeddedness of social life within places, and the intersections of social and environmental processes and issues (Tuck and McKenzie 2015a, 5). This approach is significant because it focuses on the centrality of land and place in knowledge generation and Indigenous ways of knowing; is context-dependent and emphasizes the “long view”⁹⁷; recognizes the agency of both Indigenous communities and more-than-human kin (e.g., plants and animals) in shaping place; and is participatory in nature (Tuck and McKenzie 2015a, 95). Importantly, critical place inquiry understands Indigenous processes of meaning-making and futurities⁹⁸ as situated within place, shaped by historical and ongoing processes of dispossession, colonial violence, settler colonialism, neoliberalism and environmental degradation, as well as shaped by Indigenous epistemologies and futurities.

Although they are grounded in different paradigms, Critical theory and

⁹⁷ Tuck and McKenzie (2015a, 95).

⁹⁸ Tuck and McKenzie (2015a, 76).

participatory research methodologies are often complementary to Indigenous methodologies (as they are critical in nature) and can employ similar methods (Wilson 2008). Tuck and McKenzie (2015a, 146-149) outline three primary distinguishing theoretical commitments in *Indigenous* critical place inquiry: Refusal; the non-abstraction of land (e.g., land is not conceptual but material, and methods set a purpose of repatriation of land); and service to Indigenous sovereignty.

As Tuck et al. (2014a) describe, without meaningful and critical inquiry into the “colonial legacies in environmental education including through conceptualizations of place”, place becomes foundational to the displacement of Indigenous rights and relationships with land, and perpetuates settler colonialism and settler futurities. Critical place inquiry highlights both the iterative and generative nature of place, and the historical contexts and power dynamics that influence interactions, access to, experiences with, and theories of place (Tuck and McKenzie 2015a, 165). This is one framework for inquiring into the many ways Indigenous stories, place names, memories, communities, and relationships continue to be generative and situated in place, simultaneously refusing and entangling the settler geographies alongside or on top of them (Thom 2017, 142).

Framing research within historical and critical contexts is important for recognizing how ongoing colonialism shapes the present state and systemic reality of knowledge production in academia (Kovach 2010), and for identifying spaces for transformative change. “Decolonizing” approaches built upon critical theory are useful for evaluating power dynamics and structures, and the role of “both structural change and personal agency in resistance” (Kovach 2010, 80). Storywork and partnerships throughout all stages of research that center Indigenous epistemologies, and shift power and control of research more into Indigenous communities are both examples of what Kovach (2010) and Hallett et al. (2017) describe as “decolonizing” research. As Regan (2010, 189) describes,

“Decolonization is not “integration” or the token inclusion of Indigenous ceremony. Rather, it involves a paradigm shift from a culture of denial to the

making of space for Indigenous political philosophies & knowledge systems as they resurge, thereby shifting cultural perceptions & power relations in real ways”

However, Tuck and Yang (2012, 21) also remind us that “decolonization” is not a metaphor for improving research practices, ways of thinking, or our societies, but literally “requires the repatriation of Indigenous land and life”. I refer to Tuck and Yang (2012) because of the fundamental importance of this paper in highlighting the transformational and systemic change required to disrupt settler colonial violence on Indigenous lands and lives. Inappropriately using concrete processes such as decolonization as a metaphor for social justice or anti-colonial work only contributes to erasing Indigenous struggle for land and life, and the actual repatriation work being done. For example, Pasternak and King (2019) describe several examples of individuals and communities working toward “land back” that are rooted in cultural resurgence, reclamation of Indigenous jurisdiction, and Indigenous-led movements toward equitable futurities and meaningful Indigenous economies (Pasternak and King 2019). This thesis is not “decolonizing” as such, but rather one of my own inquiry into understanding my own implications and entwinement as an participant in these processes, and what my responsibilities are in terms of relational accountability to Secwépemc communities whose homelands I am currently living in, as well as to the network of non-human relations (including the plants we worked with in this study, for example *skwekwíne*, or spring beauty [*Claytonia lanceolata*] and *scwicw*, or avalanche lily [*Erythronium grandiflorum*]) that share this land.

As Tuck and McKenzie (2015a, 100) describe, place is not a static backdrop but is shaped by human and nonhuman relationship, culture, values, legal and governance systems, and action. Considering this iterative process, as researchers it is also important to pay attention to how the process of doing research mobilizes action as we respond to emergent dynamics and calls to action of relationship, reciprocity, and accountability to place and to communities (Tuck and McKenzie 2015a, 165-166). Whether our methodologies are focused on action or inaction, research is an active process that results in motion and ripples of effect that continue to influence the way others relate to and navigate place (Tuck and McKenzie 2015a). Furthermore, how we theorize place, and

“latent assumptions of settler colonialism and encroachment of settler epistemologies on land and Indigenous life in social science research”, can have very real implications for how we determine validity and legitimacy in knowledge and what counts as evidence (Tuck and McKenzie 2015a, 46-47). In this respect, research is also active in the way that conceptualizations of place can have serious implications in legal and policy fields, as well as ethical implications regarding epistemologies, protocols, methodologies, and positionality, as researchers doing this work.

Generative and transformative change in critical ethnography and collaborative ethnography relies on the involvement of people who are directly affected by the issue and research as co-researchers in mobilizing effective social change (Tuck and McKenzie 2015a, 86; Campbell and Lassiter 2010). Participatory action research methodologies that center “reflexivity, expertise, humility, dignity, action, and relationality” can be foundational to accountable work *with* communities and instead of *on* them (Tuck and McKenzie 2015a, 118). As Tuck and McKenzie (2015a, 117) describe,

... critical questions of place—of Indigenous sovereignty, climate change and climate injustice, the spatialization and institutionalization of racism and colonization, urban food access, global neoliberalization, and the localized effects of policy mobility, youth identity, and agency in an era of potential human extinction. Central to research on such questions of Indigenous, social, and environmental justice is *how the research contributes to interventions in such conditions...* deciding what approach to research is in the best interests of a given issue or context *necessitates the input or participation of those potentially affected by the research or the issues it seeks to address.* [emphasis added]

As research is an action that affects place, critical place inquiry interrogates how this action both benefits and involves communities, as well as contributes to meaningful futurities that are accountable both to humans and to ecologies (Tuck and McKenzie 2015a, 22). Research needs to go beyond viewing participation as just including people in research, to actually engaging with and challenging settler colonialism through highlighting our own positionalities, blind spots, and biases as researchers in as much detail (Tuck and McKenzie 2015a, 118). Critical place inquiry demands that we respond

with deep inquiries into our entanglements with place, ancestors⁹⁹, and self-inquisition into our own relationships with the “happy stories”¹⁰⁰ of settler colonial project whose joy, and hauntings, are grounded in place-based violence. I chose to write about through a framework of critical place inquiry as I reflect on my own experiences and entanglement with Secwépemc geographies, ancestors, and stories as an uninvited visitor in Secwépemc territory, and my own process of learning how to be a good relative here.

This background on place, land, and ways of knowing and being describes how Indigenous land-based learning is situated in place, as well as calls for accountability and respect for Indigenous worldviews and priorities in research agendas. Furthermore, this section illustrates the significance of Indigenous theory and processes for generating land-based knowledges, laws, and values, and contextualizes discussing Secwépemc values, principles, and relationships to food and land that emerged from conversations with Secwépemc Knowledge Holders in Chapter 5. I also introduce this discussion of place as a means of interrogating my own relationship and positionality in relation to place in Chapter 4 and Chapter 6.

2. Social-ecological resilience, resistance, and restoration of Indigenous food systems

2.1 Adaptive management and social-ecological resilience theory

In this thesis, I draw upon the word “adaptive”, “resilience”, and related concepts, and here explain the intended meanings and related literatures. In the context of this research, adaptive refers to agency and deliberate innovation to proactively shape, create, and plan for the future; for example through building adaptive capacity and resilience to climate change. The term adaptive has its roots in the Latin word *adaptare*, which refers to the ability to “adjust, or fit to” changing circumstances (Online Etymology Dictionary

⁹⁹ Thom (2017).

¹⁰⁰ Belcourt (2016, 30).

2020). Thus this thesis does not imply biological adaptation, but rather focuses on the ways in which “humans influence and are influenced by environmental change”¹⁰¹, and learning is continual and informs interactions between people, animals, and place.

Many international, national and regional discussions are currently focused on the importance of building adaptive capacity and resilience in local contexts, given current challenges with climate change, food security, and ecological degradation and biodiversity declines (Sterling et al. 2017). Resilience has been described as the ability to mobilize protective resources¹⁰² or strengths to guard against adverse health outcomes (ICIHRP 2004, 1 as cited in Penehira et al. 2014, 98). Social-ecological systems scholars describe resilience as the capacity for a system to absorb or adaptively manage change and disturbance while maintaining its core functions and characteristics, and without shifting to a new regime with a different set of processes and structures (i.e., without transforming into a new system state) (Thompson et al. 2020; Folke 2006; Walker and Salt 2006). Resilience has also been used to describe the ways in which Indigenous communities have responded to compounding challenges from experiences of racism and oppression, and impacts to ways of life as a result of intergenerational and ongoing impacts of settler-colonialism (Penehira et al. 2014, 99).

In addition to absorbing disturbance and shock, an important part of resilience is adaptive capacity, a system’s capacity for innovation, re-organization, and developing new knowledge and learning in response to challenges and disturbances (Bennett et al. 2016). In social-ecological systems literature, successful adaptive approaches for ecosystem management have been described as being flexible, continuously building knowledge and response to local ecosystem dynamics and feedbacks (for example, through environmental monitoring), tailored to specific places, and with protective resources including support from multi-scalar partnerships (Olsson et al. 2004). The term

¹⁰¹ Indigenous Law Research Unit at the University of Victoria and Shuswap Nation Tribal Council (2016, 5).

¹⁰² Hutcheon and Lashewicz (2014, 1).

adaptive has also been used to describe the deep, longstanding, place-based nature of Indigenous knowledge(s), and the ways in which observation and experience are interpreted and mobilized through cultural teachings, place names, codes of conduct, and cultural lenses grounded in place (Bhattacharyya and Slocombe 2017, 10). Indigenous knowledges are transmitted inter-generationally to communicate lessons, ethics, and values that both adjust, and enable resilience to, social and environmental changes through time (Thompson 2018). Cultural change has been described as part of a dynamic process of continuously adapting to internal and external forces, including the ways in which people and other animals and beings they share the land with co-generate culture that is both adapted to, as well as shapes place (Salmón 2012, 153; Bhattacharyya and Slocombe 2017).

Measuring social-ecological resilience is challenging, as biological and socio-cultural systems are interconnected (Olsson et al. 2004 in Sterling et al. 2017). While resilience analyses through social lenses may highlight adaptations independent of ecosystems, these adaptations may be at the expense of ecosystems, and likewise ecosystem lenses exclusive of social decision making reflect narrow and incorrect analysis of all of the interrelated drivers in social-ecological systems (Folke 2006). Much of the current social-ecological resilience literature is informed by environmental sciences, ecology, agriculture, geography, and economics fields. However, emerging frameworks from Indigenous studies and education fields¹⁰³ and Indigenous Environmental Studies and Sciences¹⁰⁴ can bring important insights on the importance of Indigenous epistemologies in community-driven frameworks for guiding participatory action research and building adaptive capacity for living in dynamic social-ecological contexts, as well as critiques of social-ecological resilience theory¹⁰⁵. Sterling et al. (2017) highlight how biocultural approaches and culturally grounded indicators for

¹⁰³ See Tuck (2009); Tuck and Yang (2013).

¹⁰⁴ Whyte (2018, 139).

¹⁰⁵ Penehira et al. (2014).

measuring social-ecological resilience can be important for capturing both social-cultural and biological feedback loops.

There are many examples of adaptive management practiced by Indigenous peoples, and uses of “adaptive” by Indigenous scholars. Snyder et al. (2015) describe how Indigenous peoples have always practiced adaptive management through drawing on skills and tools from within Indigenous intellectual traditions. Kimmerer (2013, 228, 229) does not use the word adaptive to describe Indigenous communities, but says instead that “the plants adapt, the people adopt”, to describe the ways in which people learn from observing adaptations of plants; borrowing solutions and increasing their likelihood for survival. Secwépemc scholar Kukpi7/Dr. Ron Ignace and Dr. Marianne Ignace (2017, 95) have used the word adaptive to specifically describe the ways in which Indigenous communities have adjusted to periods of environmental change over millennia. Ignace et al. (2016b, 432, 456) point to the “cyclical, yet temporal contexts” in which Secwépemc people have generated land-based knowledges through experiential learning and observation, and adaptive and sustainable harvesting regimes (e.g., practicing selective harvesting, pruning, burning, and rotation of harvesting areas) across diverse ecosystems of Secwepemcúlecw (see also Thomas et al. 2016). They describe how social conduct generated from lessons learned over millennia in relationship with land, and through interaction with “sentient beings” who share the land, are embedded in Secwépemc *stsqey’* (law), which are “written *on* the land that in turn sustain humans living *from and with* the land” (Ignace and Ignace 2017, 146). *Stsqey’* continue to guide social conduct in ways that enhance resilience against natural disasters and periods of climate change, and social and spiritual sanctions are interrelated with kincentricity, respect, and reciprocal relationships with all living beings, and are central to way of life and continuing to live sustainably (Ignace and Ignace 2017, 146; Morrison 2020; Bhattacharyya and Slocombe 2017, 3). As Dawn Morrison (2020) describes:

Our reciprocal relationship with the land, water, people, plants, and animals that provide us with our food in subsistence economies is the one of the most sustainable adaptation strategies of humanity. Giving, sharing and trading, and

cooperating in reciprocal relationships is the basis of Indigenous food sovereignty.

Turner, Ignace, and Ignace (2000, 1277) use a spiral to communicate the dynamic, cyclical, and temporal nature of Indigenous knowledges as they are maintained, generated, and transmitted within the diverse pedagogies and places of different Indigenous Nations, for example through place-based stories, everyday discourse, ceremony, and other means of communication. They describe the core of the spiral as representing a constant connection to the distinct pedagogies, epistemologies, and ontologies specific to each Indigenous group, and the complex cultivation and caretaking regimes that are generated through experiential learning and observation as a dynamic process that develops from this core (Turner et al. 2000, 1277). Several Secwépemc Knowledge Holders in this thesis describe the significance of this spiral in Secwépemc worldviews for describing the dynamic and cyclical processes of growth that maintain their connection to core philosophy and values. The spiral reflects consistent connection to core values at the center and at various interlocking points as it grows outwards, signifying a process of renewal, regeneration, and transformative work (teaching from Rhona Bowe 30 August 2018; and Kenthen Thomas 12 September 2018, this study).

2.2 Indigenous frameworks for measuring social-ecological resilience

Sterling et al. (2017) give examples from several local contexts of bio-cultural approaches to developing indicators of resilience. For example, the Nā Kilo ‘Āina (NKA) program was led by a team of Native-Hawaiian ecologists at the University of Hawai‘i at Hilo, who developed a set of community-level seasonal and ecological indicators as a method of observing and characterizing biocultural systems, and supporting community driven management (Sterling et al. 2017). The project focused on integrating Indigenous and Western scientific knowledges to inform harvesting practices, revitalize reciprocal relationships between people and place, and build capacity of community *kilo*:

Kilo is the act of observing but also refers to people who are adept observers and function as repositories of traditional and ecological knowledge to support a

balanced and productive system (Maly and Pomroy-Maly 2003). The goal of NKA is to build the capacity of community *kilo* to (1) continue traditional knowledge systems, (2) understand both social and ecological communities, and (3) incorporate that knowledge in local resource management. (Sterling et al. 2017, 74)

The Te Mauri Model Decision Making Framework is a second framework developed with the Combined Tangata Whenua Forum and Ngāti Pikiao and Ngāi Tahu. This framework uses Māori concepts of *mauri* as a foundation, and integrates Māori and Western understandings of sustainability into a multi-scalar indicator framework:

Te Mauri Model has four constituent dimensions: mauri of the ecosystem, mauri of the Indigenous People, mauri of the community, and mauri of the base economic unit, the family or household... Ecosystem indicators range from fertility of the land to water quality; cultural/ Indigenous indicators range from the use of traditional knowledge to heritage protection measures; community indicators range from access to community centers to life expectancy; and economic indicators range from employment availability to the price of energy. (Sterling et al. 2017, 83)

In Tuktoyaktuk, similar community-based climate change monitoring programs such as the Tuktoyaktuk Community Climate Resilience Project are led by and for the community with inter-agency support, building capacity for continuous monitoring by local monitors, and creating models for resilience in changing climates (Murray 2019). Kaljur (2020) also describes new research in Alaska highlighting the multiple dimensions of well-being from within Indigenous frameworks. Cody Larson, a scientist with the Bristol Bay Native Association, highlights how some of these central values facilitating social and ecological connectedness, such as food sharing, can be measurements of resilience (Kaljur 2020). For example, Larson (as cited in Kaljur 2020) describes community food sharing economies support identity, health and well-being, as well as maintaining relational bonds and connections with urban community members. Furthermore, it is an important way of monitoring subsistence harvesting and fish population health, and encouraging responsible resource stewardship (Kaljur 2020). Similarly, Proverbs (2019, 91) describes food sharing networks (e.g., sharing fish) in a

Gwich'in context as continuing to support land-based learning and monitoring, as well as contributing to well-being and resilience. Adapting to using both contemporary and traditional equipment to support harvesting is one way of supporting this (Proverbs 2019, 91).

These frameworks are examples of how Indigenous epistemologies and practices continue to be community-driven ways of measuring social-ecological resilience, as well as for re-visioning, resisting, planning, and creating Indigenous futures in relationship to land using these relational indicators as vantage points¹⁰⁶. Indigenous epistemologies, and skills and tools from within Indigenous intellectual traditions, have always been ways of measuring and re-visioning change¹⁰⁷. Furthermore, they respond to and manage environmental change in proactive and adaptive ways that are in alignment with the needs and priorities of local Indigenous communities and cultures (Sterling et al. 2017). Sterling et al. (2017) describe how culturally-grounded measurement systems that embody interconnected social, cultural, and ecological values, are answerable to Indigenous community needs and pedagogies, and build adaptive capacity at local levels.

2.3 Collective continuance

Indigenous food sovereignty and food systems have been described as one of several collective capacities¹⁰⁸ that anchor social-ecological relationships, and contribute to a society's overall social-ecological resilience (Satterfield et al. 2017; Whyte 2017, 3). Collective capacities support a society's ability to adapt to change, to access social memory and resources, and innovate while protecting core values and functions (Whyte

¹⁰⁶ See Tuck (2009a).

¹⁰⁷ Tuck (2009, 49).

¹⁰⁸ Potawatomi scholar Kyle Powys Whyte (2017, 3) describes collective capacities as central tenants that anchor culture, values, health, governance institutions, and social and ecological relationships, and contribute to a society's overall adaptive capacity (which he terms "Collective Continuance").

2017, 3). As Whyte (2017, 10) describes:

A high degree of collective continuance refers to the state of having collective capacities consisting of human institutions that are organized in ways that are suitable for adjusting to potential changes, learning from the past, and mobilizing members of society to tackle hard problems ... Food systems, as collective capacities, promote collective continuance by facilitating at least three types of relationships... that support (1) the means of advancing robust cultural and social ways of life, (2) peaceful diplomacy and emboldened resistance to domination, and (3) the societal decision-making protocols required for evaluating high stakes decisions.

Indigenous food systems and ecologies have been described as enhancing resilience through motivating social structures that protect core values and relationships between human institutions and ecosystems¹⁰⁹, as well as inter-generational continuity and innovation at harvesting and food processing sites (Satterfield et al. 2017). They encompass a network of values that maintain and enhance social relationships between families, communities, and regions, as well as maintain the reciprocal, dynamic and interlocking relational aspects of social and ecological systems across rural and urban contexts (Whyte 2017, 18). Indigenous food systems can also anchor cultural responsibilities, values, epistemologies, and ontologies, which can generatively inform and shape reciprocal actions and planning for Indigenous futurities in relationship to land (Whyte 2017, 10). Reciprocal relationships have been described as an anchoring value in Indigenous food sovereignty¹¹⁰, and Jeremy McClain (Ojibway) (as cited in Hoover 2019, 67) describes the network of interrelated roles and responsibilities between humans and nonhuman beings as "...that symbiotic relationship with your environment. To me that's food sovereignty: if you take care of your environment it will take care of you." Whyte (2018, 141) also describes how Indigenous food systems restoration is not solely about the recovery of knowledge, but about the restoration of cultural roles and

¹⁰⁹ Whyte (2017, 9).

¹¹⁰ Hoover (2019, 67).

responsibilities to nonhuman beings that share the land:

Indigenous peoples who seek to rekindle sturgeon populations, however, have goals that exceed the recovery of historic knowledge of sturgeon. They are dedicated to returning the fish to abundance and using the process to renew humans' own sense of accountability for the relationships of ecological interdependence they are part of but often ignore.

Norman Deschamps also describes “all of the value” connected with Anishinaabeg wild rice, and the significance of the network of relationships wild rice is embedded in, such as the health of the waters and ecosystems they grow in, as a treaty right for Anishinaabeg:

We are of the opinion that wild rice rights assured by treaty accrue not only to individual grains of rice, but to the very essence of the resource. We were not promised just any wild rice; that promise could be kept by delivering sacks of grain to our members each year. We were promised the rice that grew in the waters of our people, and all the value that rice holds. (Andow et al. 2009:3 as cited in Whyte 2017, 2)

Late Secwépemc Elder Wolverine (Jones Ignace) also spoke to the vital role of cultural foods in Secwepemcúlecw for motivating social and ecological relationships through his words, “food will be what brings the people together” (Morrison 2011). Anishinaabe scholar Winona LaDuke (as cited in Whyte 2018, 143) describes Indigenous food systems similarly, as an integral part of restoring social and ecological relationships, roles and responsibilities, as well as repairing multi-scalar relationships with settlers and other non-Indigenous people:

Maybe the fish will help a diverse set of people work together to make something right . . . The fish help us remember all of those relations, and in their own way, help us recover ourselves.

A wide diversity of Indigenous plants and animals shape and inform spiritual and ecological health for many Indigenous communities, and settler-colonialism and environmental degradation can impede these rights to healthy, sustainable and culturally appropriate foods and places (Reinhardt 2015, 87). Settler colonialism directly targets the

ecosystems, places, and species that maintain and produce these networks of relationships, knowledges, and the ability of future generations to access and add to this knowledge base (and envision futurities in relationship to land). Ironically, as Whyte (2017, 13) points out, “settler societies do this to strengthen their own collective continuance”.

Furthermore, impacts to cultural landscapes will also affect the ways people are able to teach, learn and enact Indigenous food sovereignty within those landscapes, determining what knowledge and practice will look like for future generations. In Hoover’s (2013) work with Haudenosaunee community leader Henry Lickers, he identifies the vital role of fishing and land for language, relationship, and culture in a Haudenosaunee context:

"People forget, in their own culture, what you call the knot that you tie in a net. And so, a whole section of your language and culture is lost because no one is tying those nets anymore. The interrelation between men and women, when they tied nets, the relationship between adults or elders and young people, as they tied nets together, the stories... that whole social infrastructure that was around the fabrication of that net disappeared" (Hoover 2013:5, as cited in Whyte 2016, 358).

Cultural resurgence takes place in active and everyday processes where Indigenous knowledges are lived, dynamic, and practiced (Simpson 2014; Corntassel and Bryce 2012). The ‘everyday acts of resurgence’ that protect land and reinstate Indigenous presence and futures can also challenge colonial, gendered and racialized food policies (Corntassel and Bryce 2012, 158; Matties 2016). In Shikaakwa (Chicago), Bang et al. (2014) describe restore(y)ing land¹¹¹ as the process through which Indigenous communities build robust futures through the process of restor(e)ying, reclaiming naming practices, and continuing to live their stories, relationships, and lives in relation to

¹¹¹ Bang et al.’s (2014) “restore(y)ing” concept will be referred to throughout this thesis. I use “storied landscapes” in this thesis to discuss the ways in which social and cultural processes are shaped by land, and in turn shape the land (Tuck and McKenzie 2015a, 5; Ignace and Ignace 2017, 59, 60).

Indigenous homelands (Tuck et al. 2014a). Furthermore, Bang et al. (2015, as cited in Rahm 2018) describe this process of re-engaging with plants and land-based knowledge as a process of “(re)making relatives”.

Many projects focusing on the restoration culturally significant plants are referred to as “eco-cultural restoration”, recognizing their dynamic process of restoring both social and ecological systems and relationships (Wildcat et al. 2014; Martinez 1994; Higgs 2003; Gomes 2012). Kimmerer (2011) further uses the term *reciprocal restoration* to describe “the mutually reinforcing restoration of land and culture such that repair of ecosystem services contributes to cultural revitalization and renewal of culture promotes restoration of ecological integrity”. This involves restoring access to healthy and culturally appropriate foods and the resurgence of spiritual, emotional, mental, and physical relationships and responsibilities to land, water, plants, and all living things (Coté 2016). For example, White Earth Anishinaabeg people restoring *manoomin* are also engaging with a process of cultivating and strengthening the wider network of relationships with community, family, and all relations on the land, asserting sovereignty over tribal lands, and keeping alive the stories, language, and processes that are embedded in *manoomin* cultivation (also see Whyte 2017).

Biocultural refugia¹¹², cultural keystone places¹¹³, and cultural refugia¹¹⁴ are additional concepts that could also have significance in characterizing collective capacities. Biocultural refugia and cultural keystone places highlight the significance of places of “high biocultural salience” (Ignace and Ignace 2020) that anchor individual and

¹¹² Barthel et al. (2013a).

¹¹³ Cuerrier et al. (2015); see also Ignace and Ignace (2020) for how the cultural keystone place concept has been applied in Secwépemc territory within the Ajax Mine Environmental Assessment process, which was proposed in Pipsell, a cultural keystone place of “high biocultural salience” that also anchors the Secwépemc *stspetekwill* “The Trout Children and their Grandparents”.

¹¹⁴ Cultural refugia describe the role of individuals or groups such as cultural Knowledge Holders who hold and transfer knowledges during periods of cultural disturbance or disruption (Garibaldi 2003).

collective social memory¹¹⁵ and Indigenous social and ecological knowledges¹¹⁶. The cultural keystone species concept has also been applied to discuss the significance of certain foods and places as cultural anchors for identity and well-being, and their capacity to motivate or enhance values and social and cultural institutions that protect or enhance collective self-determination and social-ecological resilience (Garibaldi and Turner 2004; Garibaldi 2009). Cultural keystone species as a concept can be important for understanding and highlighting the biocultural salience of some species, as well as for shaping policy and planning. However, this concept may also oversimplify the dynamic and robust relationships in cultural landscapes by defining a culture through a select number of focal species. The resilience of culture and social-ecological systems is not necessarily dependent on a single, isolated link to a specific species, but instead may be reliant on a wider network of capacities and relationships and responsibilities that hold them all together.

Whyte (2016, 363) describes Indigenous Food Sovereignty as a practical response to contemporary contexts and systemic impacts of settler colonialism on Indigenous food systems, ecologies, governance, homelands, and ability to practice and continue cultural responsibilities to land. As Whyte (2016, 359-361) describes, the strategic prioritization and restoration of culturally significant foods in a contemporary context is a strategic form of resisting erasure of Indigenous ecologies and futurities by settler ecologies and geographies, and visualizing Indigenous social-ecological futures. Indigenous food sovereignty plays an important and strategic role in its recognition of the vital role of Indigenous food systems in cultural renewal and planning for the future, through the series of values, relationships, institutions, and adaptive processes that are interconnected with them (Whyte 2016, 363).

¹¹⁵ For a discussion of the function of places as “sites of memory”, see Tuck and McKenzie (2015a, 111).

¹¹⁶ Barthel et al. (2013); Cuerrier et al. (2015).

2.4 Settler colonialism, and critiques of resilience

Indigenous peoples have developed collective capacities to adapt to a variety of changes over thousands of years (Whyte 2017; Garibaldi 2003). Cumulative changes over the past century, for example from settler colonialism and global climate change, have rapidly increased in magnitude, challenging the capacity of adaptive mechanisms to maintain balance in core collective values such as social-ecological integrity, health, food systems, and ethnobotanical and cultural knowledge (Whyte 2017; Garibaldi 2003). As Penehira et al. (2014, 98) describe, “it is important to acknowledge that some challenges facing Indigenous peoples have been insurmountable and the result has been their destruction or the destruction of their ways of life (Secretariat of the Permanent Forum on Indigenous Issues, 2009)”. Adaptive management and resilience planning also rarely addresses the underlying and systemic social, political, and economic conditions and social relations that create unequal vulnerabilities in the first place, and drive undesirable states (Shah 2018, 251; Hutcheon and Lashewicz 2014, 1390). Penehira et al. (2014, 100) describe the:

... importance of contextualising Indigenous peoples’ resilience, and our engagement with this notion, in our shared histories of colonisation. This includes an understanding of the racism and oppression that has created the sites in which we have been required to be resilient.

In Canada, compounding impacts of residential schools, day schools, Indian hospitals, the 60’s scoop and foster care systems, have removed generations of Indigenous youth from communities and families. Many Indigenous communities were also forcibly removed¹¹⁷ from land-based and culturally grounded education systems, access to cultural foodways, and governance in relation to lands, waters, and the foodways they support. Ongoing systemic, institutional, and individual experiences of

¹¹⁷ E.g., through the reserve system, land privatization and development, and forced relocations.

oppression and racism continue to impact Indigenous lives in political, economic, social, health, and cultural spheres; and ecological degradation is a compounding issue. Land and water are central to experiential learning within Indigenous knowledge systems, and Simpson (2014, 21) describes land dispossession as the single largest impact to continuity in Indigenous knowledge. While Indigenous knowledges are often constructed in academic literature as “dying” or “lost” due to their oral nature, less focus is put on the colonial systems that continue to dispossess Indigenous communities from land (Simpson 2004, 374).

In this context, several scholars have critiqued resilience theory as placing the responsibility for being resilient on Indigenous and marginalized communities to “bounce back”¹¹⁸ (e.g., adapt to current settler colonial systems) instead of on transforming the systemic conditions of racism and oppression that necessitate resilience and survival in the first place¹¹⁹; its connections to evolutionary theory and survival of the fittest¹²⁰ (though this is not always the context resilience and adaptive are used in); lack of agreement on how the traditional ecological concept of resilience is defined¹²¹; and concern regarding how protective factors and risk are defined, who is given power to define them, and what standards are used to measure them¹²². Definitions of resilience can be used in different ways, and resilience isn’t always necessarily positive (for example, undesirable systems can be also be resilient and difficult to change). Understanding what resilience is being built to withstand can support with informing management actions and planning for transformative and systemic change. Penehira et al. (2014, 97, 107) raise three central critiques to resilience theory:

¹¹⁸ Penehira et al. (2014, 97).

¹¹⁹ Penehira et al. (2014, 97); Hutcheon and Lashewicz (2014, 1393).

¹²⁰ Newhouse (2006), as cited in McGuire (2010, 120).

¹²¹ Hutcheon and Lashewicz (2014, 1384, 1387).

¹²² Hutcheon and Lashewicz (2014, 1385).

- Concern #1: “...resilience may be the State’s current mechanism to encourage Māori to re-frame our experiences of colonialism as successful adaptation despite risk and adversity... using terms like resilience potentially exposes Māori and Indigenous discourses to subjugation and a kind of psychic disorientation from our own traditions, values, structures and processes.”
- Concern #2: “... why would we re-name or re-frame Māori acts of resistance, collectivity and self-determination as acts of resilience. In short, we wouldn’t! Our acts of resistance need to occupy space as acts of resistance in the discourses we construct about ourselves and our complex and turbulent relationship with the State.”
- Concern #3: “...who benefits from the re-naming, re-framing and re-positioning that occurs with the introduction of the term resilience into Māori and Indigenous discourse. Indigenous peoples stand to benefit when we engage with our own understandings of resilience, on our own terms, and when we can, using our own languages... we seek a concept of resilience that emerges from our own realities, that speaks to our individual and collective selves, that recognises colonisation as a constant adversity, and that supports acts of resistance in order to dismantle colonialism and re-establish Māori and Indigenous self-determination.”

Secwépemc/Syilx scholar Dorothy Christian raises similar critiques with the word adaptive, questioning whether it “could be misconstrued as Secwépemc peoples simply adapting to colonial ways, rather than the other way around” (Dorothy Christian, personal communication, December 4th, 2020). For an example of the latter, she highlights how in recent decades, settler institutions have begun to recognize the need to adapt to Indigenous knowledge systems, which are newer in the academy but are deep and longstanding frameworks with thousands of years of cumulative knowledge about place. Western scientists in sustainability and resilience thinking, land managers, and planners have also recognized the capacity of Indigenous knowledge systems to enable adaptive management and resilience (Berkes et al. 2000, as cited in Thompson 2018, 61; Bhattacharyya and Slocombe 2016, 14). Ignace et al. (2016b, 456) discuss the importance

of Secwépemc knowledges continuing to be both cumulative and adaptive (maintaining the practice of land-based knowledges and continuing to generate knowledges within land-based learning contexts) within their own frameworks to restore and enhance environments, inform new relationships, and enable resilience and resistance in the present and future. The maintenance and revitalization of contemporary land-based monitoring and practices such as cultivating and gathering traditional foods and land-based learning, combined with deep Indigenous knowledge rooted in place, can build capacity for enabling adaptive management strategies, and understanding the role of land-based practices in mitigating unprecedented rapid climate change today (Thompson 2018, 90). Successful partnerships between western scientists and Indigenous Knowledge Holders, with Indigenous communities in decision-making roles, have also yielded important perspectives on social-ecological resilience that can inform adaptive management practices with the strengths of both knowledge systems (Thompson et al. 2020, 2).

As Penehira et al. (2014) describe, Indigenous peoples have our own diverse frameworks and languages to express concepts of resilience and resistance, due to thousands of years of foregrounded knowledge of overcoming adversity as well as developing social and cultural governance for planning for the future and adapting to change, and question the need to reframe Māori and Indigenous experiences in colonial terms. Building upon these critiques of state-centric frameworks of resilience, Penehira et al. (2014, 102) describe a continuum between resilience and resistance. In this continuum they describe resilience as characterized by survival, reactivity, individual, and state control. This is a state they describe as not being the goal of self-determination, but one from which “our histories and contemporary experiences of colonisation, coupled with the ongoing racism and oppression intrinsic to this, have at times demanded a resilient response in order maintain survival” (Penehira et al. 2014, 102). As Penehira et al. (2014, 99) describe,

Similarly to Indigenous people in other parts of the world, Māori have shown and continue to show incredible resilience through our resistance to colonisation. This

is one example of Māori resilience, demonstrating why resilience should not be considered as a single approach to wellbeing. Rather, resilience is one of a number of inter-related Māori and Indigenous approaches which, all together, constitute a system for responding to colonial oppression.

On the opposite end of the continuum, they describe resistance proactive planning for the future, flourishing, collective, and grounded in self-determination (Penehira et al. 2014, 102). They describe this continuum as enabling an understanding of how much energy is spent on survival and resilience, compared to how much is spent on flourishing and resistance (Penehira et al. 2014, 102). Their description of values-based planning is especially relevant to this study, because they speak to the ways in which culturally grounded values and indicators have always been ways of theorizing and planning forward in Indigenous frameworks:

In the spaces where we can assert our self-determining rights, we make our own decisions about how we want to live, and as Māori and Indigenous peoples, we are guided by the traditions, values and structures that are our own. In this sense, self-determination is a future-focused strategy, and it is also reclamative. In the few spaces where Māori can exert a level of self-determination, Māori processes and protocols provide the framework within which self-determination occurs.” (Penehira et al. 2014, 106).

I understand this to describe how culturally grounded values can support with understanding community strengths and resilience in the present, as well as the ways in which values can be forms of resistance and ways of planning for restorative futures in alignment with Indigenous worldviews. In other words, I understand that cultural values can be vantage points¹²³ for planning and reflecting on resistance, self-determination, restoration, and transformative change from within Indigenous frameworks and from within the unique pedagogies of each Indigenous Nation. McGuire (2010) describes the importance of understanding how communities have responded to colonial intrusion as important for understanding Indigenous strengths and solutions, and furthermore within a

¹²³ Tuck (2009a).

lens of understanding Indigenous languages and culture as living and dynamic, and deeply rooted in land and foregrounded by thousands of years of Indigenous knowledge systems built from relationships with land.

2.5 How I am applying resilience and adaptive planning in this thesis

Resilience theory can be applied in many different ways, and resilience is a dynamic process that can change according to time, context, and perspective, and is not always positive. For example, settler-colonialism can be described to be resilient in its creation of social-ecological traps and undesirable feedback loops (Eckert et al. 2018). As such, it is important to describe the context in which I am applying these terms, questioning the values that drive adaptive management and resilience, and to understand what resilience is being built towards. I use the term adaptive in this thesis to discuss how core values and methods of teaching described by Secwépemc Knowledge Holders in this thesis are both cumulative and adaptive in the sense that they are rooted in thousands of years of experience and knowledge of place-based change across the diverse ecosystems of Secwepemcúlecw. The use of this term does not refer to successful adaptation, despite risk and adversity, to settler-colonialism¹²⁴, but rather to the ways in which Indigenous values continue to drive community-grounded theories of change¹²⁵, the maintenance and revitalization of knowledge systems, and resistance that both maintains and revitalizes Indigenous futures in relation to land. I am applying the term adaptive to refer to this agency to plan for change, as well as shape change, according to community values and in future-focused ways that work by and for Indigenous communities.

To me, this doesn't refer to a means of adapting to environments where culturally significant plants are no longer there, but the ways in which many Indigenous communities are strategically prioritizing the revitalization of culturally significant foods

¹²⁴ Penehira et al. (2014, 97); Dorothy Christian (personal communication, December 4th 2020).

¹²⁵ Tuck (2009a).

in transformative and future-focused ways for the long-term maintenance and restoration of Indigenous land-based knowledges and cultural values. In this respect, this is not about creating a model of resilience to show how to endure, bounce back, or adapt to settler colonialism (though as Penehira et al. (2014) describe, resilience has also been employed as a means of surviving settler-colonialism); but to draw upon Penehira et al. (2014)'s description of resistance to describe the ways in which communities also resist some forms of change (e.g., settler colonialism) that are not in alignment with Indigenous futurities, and plan in restorative ways grounded in Indigenous frameworks and visions for the future. This is a theory of resistance in terms of proactive change and transformation from a system that is untenable and incommensurate with Indigenous health and well-being, and continues to impact responsibilities and relationships to land.

I also understand resistance as active, and can be situated in everyday and ordinary ways. For example, it may not always occur through acts of land reclamation or by "community champions", but also through the everyday ways in which people live, socialize, share stories and experiences, revitalize language, and rely on support networks with community and family. Everyday kincentric networks of relationship where values and relationship are forms of agency can be ways of reimagining Indigenous futurities. These everyday ways of living that elicit values and concepts such as caring for family can be forms of resistance, while also being contextualized in contemporary barriers and contexts of land loss, poverty, and land privatization that communities experience in tangible and concrete ways. In this respect, resistance can take many forms along this continuum (from land reclamation, systemic change, and through living, healing, and creating visions for a different and restorative future). However, there are also systemic barriers to this resistance being actionable in concrete ways that make change, as well as systemic inequities that continue to pathologize communities and create conditions of "risk" and "vulnerability" they are expected to be resilient towards, as Penehira et al (2014) describe above.

Highlighting the ways through which structural inequities create and sustain conditions of "vulnerability" and labels of being "at risk" (Shah 2018, 251) and create

drivers of undesirable change (e.g., settler-colonialism, ecological degradation¹²⁶) is important for understanding ongoing barriers to these Indigenous theories of change and resistance, and identifying spaces to support making transformative change in alignment with Indigenous epistemologies, communities, for example through self-determination, multi-scalar partnerships, revitalization of Indigenous laws and legal systems, and recognition of Aboriginal rights and title in Canadian legal systems. With increasing inter- and multi-disciplinary scholarship focusing on transformability in social-ecological systems, Shah et al. (2018, 251) also raise a number of considerations regarding the identification, study, and measurement of transformation and considering equity and justice in naming solutions to social-ecological change. Penehira et al. (2014) and Dorothy Christian (personal communication December 4th, 2020) also highlight the question of why resilience and resistance should need to be reframed in social-ecological systems thinking, when Indigenous communities already have ways of naming change, and responses to change, in their own diverse knowledge systems and languages. This is an important consideration for framing transformation moving forward¹²⁷.

Unanga scholar Eve Tuck (2009a) identifies four vantage points from Indigenous epistemologies for theorizing about change and creating transformative pathways for the future: Sovereignty, contention, balance, and relationship. Tuck (2009a) describes the significance of Indigenous epistemologies for thinking about and addressing the paradox of “reform versus revolution that can limit theories of change in PAR [participatory action research]”, as well as for creating vantage points for re-constructing/re-forming/re-evaluating and measuring theories of change. Similarly, the

¹²⁶ Eckert et al. (2018), Garibaldi (2003).

¹²⁷ Tuck and McKenzie (2015, 127-128) similarly, in their call for Indigenous methods for social science research, describe challenges raised by Archibald (2008) and Wilson (2008) as to the incommensurable nature of adapting dominant research methodologies (e.g., qualitative methodology) to suit Indigenous research paradigms and oral traditions. Both scholars describe the problematic nature of relying on methodologies that are not driven by Indigenous theory to communicate Indigenous perspectives, where methodologies are furthermore grounded in sometimes incompatible belief systems (as cited in Tuck and McKenzie 2015, 127-128).

question of capacity to manage resilience and adapt within current social-ecological systems, or transformability to create a new system when the current system is untenable, is also discussed by Walker et al. (2004). As Walker et al. (2004) write, “Knowing if, when, and how to initiate transformative change, before it is too late to escape a seriously undesirable and deepening basin of attraction, is at the heart of SES [social ecological systems] transformability”. The current undesirable and untenable system in this case is settler-colonialism and its cumulative impacts to Secwépemc plants, health and wellbeing, and ways of life.

Tuck (2009a) describes “theories of change” as strategies and pathways for the re-visioning and creation of transformative change. As Tuck and Yang (2013, 253) describe:

We use the words “theory of change” to refer to beliefs or assumptions about how social change happens, is prompted, or is influenced... we do not mean anything certain or linear... Reflecting or imagining a theory of change is an ontological and epistemological activity, related to core questions of being and knowing... The change-work itself of a collaborative, the participatory process, is one, perhaps the first, transformative act. I also understand change as “small wins,” local efforts to make the immediate conditions of our communities and ourselves better.

All theories of change are mediated by internal values around what is worth preserving and achieving, and also operate within multi-scalar social structures, values, governance process, as well as institutional and material constraints that influence adaptation and transformability (Christie et al. 2017). Following Tuck (2009a) and Sterling et al. (2017)’s work describing Indigenous epistemologies as vantage points for measuring and planning in both Participatory Action Research and social-ecological resilience, I understand Tuck (2009a)’s concept of “theories of change” can also be applied to theorizing potential collective pathways that create transformative change to escape a social-ecological trap. Community-centered theories of change guided by Indigenous epistemologies can create Indigenous futurities grounded in community strengths, values, and restore(y)ing relationships to each other, to community, and to land (Bang et al. 2014; Tuck 2009). These community-driven theories of change can also

challenge and subvert colonial theories of changes that try to evidence deficit and brokenness in Indigenous communities to elicit response or to be consumed by white settler communities (Tuck 2009). Resistance, collective theorizing and action is also a category defined by Boonstra et al. (2016) as “rebellion towards social-ecological traps” (Eckert et al. 2018). It is the processes of relationship renewal, resistance, and refusal from within Indigenous pedagogies that form the basis for continuity, innovation, and knowledge generation for new generations.

As described, in the context of this research, adaptive refers to agency and deliberate innovation to proactively shape, create, and plan for the future. This does not imply biological adaptation, but rather focuses on the ways in which learning is continual and informs interactions between people, animals, and place. In this context, I use the word adaptive in this thesis to refer to some of the central tenants of Indigenous kincentric and relational systems that contribute to overall adaptive capacity, and move the continuum from resilience and survivance, which in some cases are necessary for coping with the current system, towards resistance, flourishing, and transformation. This adaptiveness does not benefit settler-colonialism, but contributes to Indigenous futurities that are grounded in Indigenous values for the future.

2.6 Multiple scales of sovereignty

Complex systems that emerge from a variety of interrelated and non-linear factors (e.g., Indigenous food systems restoration, biodiversity conservation, and food security) are continually evolving, and can also be referred to as “Wicked Problems” (Signal et al. 2012). Analysis focusing on linear, reductionist, single-drivers and policy solutions is insufficient, and community-centered approaches based in local contexts and values are needed in order to understand the interactions between multiple drivers and the multiscale nature of social-ecological system change (Bennett et al. 2016; Signal et al. 2012). When considered with a critical and intersectional lens that centers narratives of Indigenous and racialized peoples, social-ecological resilience analyses can bring a whole-systems approach that focuses on the interconnectedness of these multiple drivers,

and understanding adaptive capacity across multiple scales (Iles and Montenegro 2015; Berkes and Folke 1998 in Bennett et al. 2016).

Adaptive social-ecological systems planning relies on an integrated approach with diverse partnerships across spatial, temporal¹²⁸ and relational scales (Iles and Montenegro 2015). While food systems literature to date has usually conceptualized scale more narrowly in terms of size or government level, relational scale networks expand analysis of scale into networks and relationships that intersect across all of these levels (Iles and Montenegro 2015). Relational scale can support in guiding connections, relationships, and collaborations between sovereignties at multiple scales, creating new pathways guided by small projects networking together across scales (Iles and Montenegro 2015).

Wittman et al. (2017) forefront the importance of multi-scalar approaches when approaching complex social-ecological problems, and finding leverage points at different scales to support systems change. Food systems are nested within multiple scales and sovereignties, which affect both human well-being and ecosystem health (Wittman et al. 2017; Iles and Montenegro 2015). Sovereignty is also a highly contextualized process that is reconstructed according to cultural and social values, legislation, and changing societal actors (Iles and Montenegro 2015). Key “mediating mechanisms” in complex food systems identified by Wittman et al. (2017, 1292) include “community governance and other regulatory and policy environments... distributive and procedural justice... and the diverse objectives of a range of actors in the food system.”

A common feature of social-ecological traps is path dependency, or positive feedback loops that are difficult to break. Iles and Montenegro (2015) suggest that small projects networking together across scales can build resilience, and the potential to self-organize across a number of new pathways across relational scales that may have the potential to break social-ecological traps. Shifting to a state of interdependence rather than one of autonomy can have the potential to bring networks together that can support

¹²⁸ Wittman et al. (2017).

foundational features (in this case, Indigenous agendas and social-ecological resilience in food systems), and create an adaptive structure that can act within a complex system of “threshold effects, emergent properties, network-dependent cascades to move system into different states where it may potentially undermine dominant power structures” (Iles and Montenegro 2015). Using relational scale, multiple sovereignties and processes can be mapped across relational, temporal and spatial scales to support food sovereignty movement theories of change.

Grey and Newman (2018, 721) describe the need for supportive policy environments for Indigenous food sovereignty movements, and describe Potato Park as one innovative example of multi-scalar relationships and policy environments supporting community governance, stewardship, as well as secure and sustainable access to resources for the development of novel food products. The International Institute for Environment and Development (2005) argues that protection policies cannot isolate intellectual components of Indigenous knowledge systems from interrelated cultural, biological, and landscape components. Potato Park, where six Quechua communities in Peru cultivate and steward over 1,200 traditional varieties or landraces of potato, is an Indigenous Biocultural Heritage Area (IBHA) using a *sui generis* system and mobilizing multi-scalar relationships to support the joint management of Potato Park under customary law (Argumedo 2008). The purpose of Potato Park is to maintain and restore Indigenous knowledge systems and the interrelated cultural, spatial, biological, and temporal dimensions connected with them, through enhancing local biocultural diversity, revitalizing customary laws, and contributing to sustainable self-determination and livelihoods (Argumedo 2008). The park leverages partnerships across relational scales to support an Indigenous-led theory of change¹²⁹ to affirm traditional governance, reinstate and validate biocultural refugia, and support traditional cultivation and management practices. Parque de la Papa (Potato Park) works to protect seed sovereignty,

¹²⁹ See Tuck 2009

agrobiodiversity, and biocultural landscapes through strategic partnerships “with scientific research centers, government agencies, and global treaty negotiations at levels ranging from the municipality of Cusco to the United Nations” (Iles and Montenegro 2015, 483). They reinforce their power to exercise sovereignty through traditional management through “various other actors and institutions; the latter help legitimate the park through ‘recognition’ and can provide critical resources such as support for traditional markets and livelihoods. As its networks expand, the Park is being recognized more and more readily as a sovereign actor” (Iles and Montenegro 2015, 483). As described in this context, working across multiple relational scales can strategically leverage Indigenous interests and management, and in this case supported leveraging national and international recognition and reaffirmation of Indigenous sovereignty (Iles and Montenegro 2015).

Notably, Whyte (2018) also refers to the outcome of negotiations between the Whanganui Iwi in Aotearoa and the Crown recognizing the Whanganui River as the ancestor of the Whanganui Iwi, and as a legal entity, Te Awa Tupua¹³⁰. Whyte (2018, 138) describes the vital role of Indigenous rights and leadership, educational programming, and research for protecting biocultural diversity and the practice of Indigenous responsibilities to land:

The Whanganui Iwi (Aotearoa), for example, succeeded in getting the New Zealand government to confer legal personhood on the Whanganui River, which is ancestrally, spiritually, nutritionally, and economically significant to the Iwi members. The College of Menominee Nation founded its own Sustainable Development Institute in 1994, based on the idea that sustainability has always been part of Menominee life, including values such as “respect for the land, water, and air; partnership with other creatures of earth; and a way of living and working that achieves a balance between use and replenishment of all resources.”⁵ Quechua peoples of the Andes region, specifically the Paru Paru, Chawaytiri, Sacaca, Pampallacta, Amaru, and Kuyo Grande communities, have created the Potato Park, a biodiversity conservation zone protecting over nine hundred varieties of native potato. (Whyte 2018, 138)

¹³⁰ See Cheater (2018) for additional analysis of the Te Awa Tupua (Whanganui River Claims Settlement) Act.

Collaboration among diverse actors, leadership, and enabling processes in public governance are all approaches to dealing adaptively with complexity and tackling “wicked problems”, with all of the emergent surprises and feedback loops characterizing social-ecological systems and adaptive management policy (Head and Alford 2015). These collaborations, however, need to center a naming of resilience and resistance defined by Indigenous communities¹³¹ that further supports the active role of Indigenous peoples in social-ecological systems. A significant part of building adaptive capacity lies in adequate supports and resourcing of networks and transformative pathways grounded in critical understandings of place, that center Indigenous voices, stories, and laws.

Resilience does not exist in isolation, and is also determined by access to human, social, physical, financial and natural assets, network capacity and relationships, and social memory that support the ability to build adaptive capacity to recover, reorganize, and shape change (Bennett et al. 2016; Folke et al. 2006). For example, Barthel et al. (2013a) highlight the dual roles of access to land and resources, and capacity building at local and regional scales, as being central to resilience in food systems. Resistance also requires systemic change through the support of Indigenous-led work to dismantle settler-colonial systems and center Indigenous voices, stories, and priorities in order to rebuild Indigenous governance practices, legal systems, restoration, and adaptive capacity to reorganize, reshape policy, and reshape change (Bennett et al. 2016; Folke et al. 2006; Eckert et al. 2018).

Shifting a focus to resilience perspectives in policy, land tenure, and resource management shifts perspectives from controlling change, to managing the capacity of social-ecological systems to adapt to change (Folke 2006). Resource management has an important role in the face of multiple mounting pressures including climate change, and the embedded cultural resilience, identity, and rights that are interconnected with Indigenous food systems and ecologies (Satterfield et al. 2017). These conversations

¹³¹ Penehira et al. (2014).

cannot be had without addressing privilege, racism, and which epistemologies and knowledges are fore fronted in resource management decision-making and policy.

3. Theoretical model: culturally-grounded indicators for measuring social-ecological resilience

3.1 Background

Human-caused cumulative ecological degradation points to an urgent need for change in social-ecological governance and practices (Artelle et al. 2018). Food systems are also nested within multiple scales and sovereignties, which affect both human well-being and ecosystem health (Wittman et al. 2017; Iles and Montenegro 2015). Indigenous ways of knowing about interrelationality, kincentricity and agency of plants and animals in social-ecological systems can provide guidance for restoration, conservation and wildlife, land use planning, and defining the scope and nature of Aboriginal rights and title (See Chapter 5). Culturally grounded and biocultural values-based frameworks for measuring social-ecological resilience and resistance can potentially be important for creating more responsive frameworks for adaptively planning for social-ecological change and restoring human-caused environmental degradation (Artelle et al. 2018; Sterling et al. 2017). As Artelle et al. (2018) describe, value systems of place-based peoples that connect people to their environments and guide behaviours for sustained social-ecological relationships already provide examples of durable models. Sterling et al. (2017) propose that grounding the measurement of resilience in social-ecological systems in longstanding culturally-grounded indicators can provide critical tools for supporting adaptive management in times of rapid change.

Indigenous peoples have applied adaptive frameworks to maintain resilience and plan for resistance, and manage social-ecological systems in response to ecological and cultural change through time (Garibaldi 2003; Sterling et al. 2017). As described in this chapter, the Nā Kilo 'Āina (NKA) program and the The Te Mauri Model Decision Making Framework are two examples of Indigenous-led and culturally-grounded

measurement systems that are being used to support community management of biocultural systems (Sterling et al. 2017). Unangax̂ scholar Eve Tuck (2009a) also describes, within an education context, how Indigenous epistemologies can create vantage points for theorizing about change and developing transformative pathways for the future.

As demonstrated by the Shuswap Roundtable in Chapter 5, values based frameworks can also provide an important point of connection for cross-cultural work and shifting power dynamics on local levels to center Indigenous voices, stories, narratives, and leadership while using multi-scalar relationships to act upon this in land management settings. Beyond planning for land values like recreation, they are more broadly asserting an Indigenous-led framework to center Secwépemc understandings of land for the purpose of creating collaborative planning tables that are grounded in critical understandings of place and acknowledgement of Secwépemc territory. Culturally-grounded values based frameworks can also provide frameworks and guidance for connections, relationships, partnerships and collaborations between partners working at different scales. This can potentially create new pathways that can break undesirable feedback loops and support small projects networking together across different scales (Iles and Montenegro 2015). Culturally-grounded indicators for values-based planning can create important frameworks for assessing food systems restoration according to community values.

As described by Secwépemc Knowledge Holders in Chapter 5, *knucwetwécw* and *yecwemenulécwu* are two cultural concepts connected to Secwépemc food systems restoration, and *stsptékwle* and *sléxlexéy'e* are methods of teaching and learning about cultural concepts in *tmicw*-based learning contexts. I understand these concepts and contexts could potentially be vantage points¹³² for thinking about change, reflecting on and evaluating action, and re-visioning transformative pathways for restoring

¹³² See (Tuck 2009a) in Chapter 3.

relationships to land and community through community action, policy change, and other pathways and in this time of resurgence. These two values, and the role of *stsptékwle* and *slexexé'ye* as methods of teaching in *tmicw*-based contexts, present a framework that is meaningful in *Switzmalph* and can be a culturally-grounded framework for community governance of local ecosystems and plant species.

3.2 Theoretical model

The following social-ecological resilience model was inspired by Eckert et al.'s (2018) social ecological trap model from their work led by the Kitasoo/Xai'xais, Wuikinuxv, Heiltsuk, and Nuxalk Nations in the area modernly referred to as the Central Coast of British Columbia, as well as from Garibaldi's (2003) Cultural Refugia model from her work with late Neskonlith Elder Dr. Mary Thomas. Social-ecological traps occur when pathways are created from a series of drivers to create feedback loops, moving ecological and social systems beyond sustainable thresholds to undesired states (Eckert et al. 2018). Eckert et al. (2018) identify ecological degradation and colonization as historical (and ongoing) drivers characterizing an undesirable state in a social-ecological trap in Kitasoo/Xai'xais, Wuikinuxv, Heiltsuk, and Nuxalk Nations marine food systems, which continue to impact social-ecological resilience in their food systems and communities. Ann Garibaldi (2003) derived a similar model in Secwépemc territory from her work with the late Neskonlith Elder Dr. Mary Thomas to examine potential impacts from social-ecological disturbance on knowledge transmission in Secwépemc territory. In this model, Garibaldi (2003) identifies potential causes of social-ecological change (e.g., landscape development on traditional lands, cessation of Indigenous management practices, participation in a wage economy) that create an undesirable feedback loop that she terms the "cultural bottleneck". Both characterize the presence of historical (and ongoing) drivers that occur externally, historically, internally, and from multiple scales, to create social-ecological traps.

Eckert et al. (2018) and Garibaldi (2003) identify several community-led

responses to social-ecological traps as potential transformative pathways to transcending the social-ecological trap, and creating new and desirable states. On the Central Coast, Eckert et al. (2018) identify stewardship principles, cultural revitalization (e.g., youth education programs), documentation and revival of TEK, and reassertion of Indigenous management rights as mechanisms for potentially transcending the trap. Furthermore, Eckert et al. (2018) suggest that:

...supporting First Nations' ongoing work to overcome the social-ecological trap needs to involve (1) recovery of depleted resources [as cultural continuity depends on access to these valued species and environments], and (2) reinvigorating Indigenous governance practices.

In Garibaldi's (2003) model, she highlights the potential of Knowledge Holders to act as "cultural refugia", which she defines as "individuals or groups that serve as a source of traditional/local knowledge during times of cultural disturbance" (Garibaldi 2003, 13). This includes acting as "cultural refugia" for biocultural knowledge, which can potentially support in building adaptive mechanisms to support eco-cultural restoration, planning for transformative pathways out of undesirable social-ecological traps, and creating more desirable future states.

3.3 Historical and ongoing drivers

Similar historical (and ongoing) drivers as identified by Eckert et al. (2018) (settler-colonialism and ecological degradation) have been identified in the literature as cumulative impacts to Secwépemc food systems (Garibaldi 2003; Thomas et al. 2016). Evidence for historical and ongoing drivers that possibly contribute to a social-ecological trap in Secwépemc territory are described by 93% of community consultants in this study (see Chapter 5). Knowledge Holders spoke about cumulative impacts to Secwépemc social and ecological systems, referring to:

1. Settler colonialism¹³³

- Policy, and land tenure landscapes (settler colonialism and land appropriation, pre-emptions and land privatization [including BC Parks], land and resource conflicts, urban development, recreation, leading to decreased access to and availability of medicines and traditional foods); and
 - Socio-cultural impacts of settler-colonialism (Assimilation, cultural change, impacts to Indigenous ways of knowing, intergenerational trauma, lateral violence, nutrition transition, residential school, Child and Family Services and overrepresentation of Indigenous children in foster care, and structural and systemic racism);
2. Ecological degradation (Contamination, industry, agriculture, forestry, highways, railways, climate change, decrease in quality and quantity of Secwépemc plants, invasive species, over-grazing, and overharvesting)

The memories that community members have of these changes over the past two generations outline how systemic barriers create a feedback loop leading to the cumulative decline of both Indigenous biocultural knowledge systems and the ecosystems they are entwined with. These drivers contribute to: 1) the cessation or decline of Indigenous management practices and land-based education; 2) barriers affecting agency in Indigenous food systems (e.g., through policy, legislative and land tenure landscapes that prevent access to harvesting areas, participation wage economy, socio-economic experiences and food insecurity, funding for community food projects, capacity, hunting regulations); 3) ongoing ecological degradation; and 4) Muting/sleeping of Secwépemc knowledge and language (Eckert et al. 2018). These four components have been

¹³³ I chose to use the term settler-colonialism rather than colonialism to highlight this as a distinct type of colonialism that is grounded in settler replacement of Indigenous peoples through occupation and appropriation of Indigenous lands, resources and culture, and the ongoing processes of settler-colonialism that continue to impact Indigenous peoples through policy and legislation.

summarized in the social-ecological trap model below.



Figure 1 Culturally Grounded Contexts, Methods, and Concepts as Vantage Points for Transformative Pathways out of Social-Ecological Traps. Background photo by Kristal Burgess (2020).

Figure 1 Note: Yellow spiral model at bottom right lists *stsptékwele* and *slexexé'ye* as contexts for teaching and learning about cultural concepts such as *knucwetwécw* and *yecwemenulecwu*.

3.4 Catalysts for change

Resistance in this model is the release phase characterized by Walker et al. (2004), which gives way to reorganization, restoration, resurgence, and the potential for new pathways out of the trap (Walker et al. 2004). In the model above, resistance represents possible catalysts for change and transformative pathways out of the social-ecological trap, defined by themes from community interviews (e.g., cultural resurgence, land-based education, maintaining and revitalizing Secwépemc land-based knowledges

through community-led land-based monitoring programs, eco-cultural restoration of Secwépemc harvesting areas, recognition and affirmation of Aboriginal rights and title¹³⁴, revitalization and reinstatement of Secwépemc legal and governance systems, and multi-scalar relationships, *see* Wittman 2017 and Iles and Montenegro 2015) as well as from the literature (e.g., biocultural refugia). The two cultural concepts or values described by Knowledge Holders, and the role of *stsptékwle* and *slexexéye* as methods of teaching in land-based contexts, are positioned as culturally-grounded indicators or vantage points for reflecting on and visioning change, as well as creating new pathways that could potentially lead to a desirable and restorative state. Importantly, as discussed previously, resilience and resistance does not exist in isolation, and also require systemic change to dismantle harmful settler-colonial systems and center Indigenous voices, stories, and priorities in order to rebuild Indigenous governance practices, legal systems, restoration, and adaptive capacity to re-organize, reshape policy, and reshape change (Bennett et al. 2016; Folke et al. 2006; Eckert et al. 2018).

3.5 How these theories situate my work

Stories are powerful, and have the ability to shape how we relate to and navigate place, the way social and cultural institutions and knowledges are generated, as well as the way they are enacted to shape place, theories of change, and futurities in relationship to land (Matties 2016). This theoretical background describes how settler-colonial conceptualizations of place draw on settler-colonial theories of change to shape policy and legislative landscapes in the interior of British Columbia. Critical place inquiry,

¹³⁴ Aboriginal rights and title are inherent rights (rights referring to constitutionally recognized rights or treaty rights, and title referring specifically to the *sui generis* collective right to ancestral territories) which are recognized in the Canadian legal system. Secwépemc rights and title, as with most Indigenous Nations in British Columbia, parts of Québec, and the Northwest Territories, have never been ceded through treaty. The Canadian legal system is distinguished here from Indigenous legal systems and laws, which refer to the pre-existing and diverse legal systems of each Indigenous Nation. As Secwépemc scholar Dorothy Christian describes, ‘in Secwépemc laws, we as humans have “roles and responsibilities” to the land and all beings we share the land with.’ (Dorothy Christian, personal communication, December 4th 2020).

social-ecological resilience and theories of resistance, and Indigenous food sovereignty intersect to position these historical, critical, and ongoing systemic contexts, as well as situate Indigenous food systems restoration movements and geographies of resistance.

These theories contextualize historical and contemporary drivers in social-ecological traps¹³⁵, and describe the importance of culturally-grounded indicators, land-based practices, and food sharing networks for measuring change and resilience in meaningful and community-driven ways (Sterling et al. 2017; Tuck 2009; Kaljur 2020). Furthermore, they describe the need for policy frameworks that are answerable to Indigenous communities, pedagogies, and ecologies, that center kincentric relationships and Indigenous decision-making power in food and land based economies. This background illustrates the need for an increase in examples of culturally grounded indicators for measuring transformative change, and social and ecological processes and feedback.

This study contributes to this theoretical base by proposing the vital importance of Secwépemc cultural values and storytelling for creating culturally-grounded frameworks for transformative and restorative change. In this study, Secwépemc storytelling and values are frequently discussed as part of living kincentric ecologies, and vantage points for both connecting to the past as well as planning for the future. These values are powerful because they continue to inspire social cohesion and connection between human and nonhuman relatives, and have the potential to shape, inspire, and affect change. They have a long view that is accountable to both ecological systems as well as human and non human communities, which could be important for measuring both social and ecological processes and feedbacks.

This study also illustrates the ways in which Secwépemc communities are agents of change, generating Secwépemc geographies and community-based theories of change through cultural values and social, political, and ecological meaning-making processes.

¹³⁵ Eckert (2017); Eckert et al. (2018); Garibaldi (2003).

These Secwépemc geographies continue to exist alongside settler-colonial geographies, and draw from Secwépemc processes and values to generate transformative pathways for Secwépemc futurities in a policy and legislative context that have worked to displace Secwépemc communities from land, economies, and education systems for over a century. As Sarah Hunt (2014, v) describes, “Indigenous geographies continue to produce their own socio-legal identities and territories of meaning, which exist alongside colonial ideas about Indians and Indian space”. These values and methods of teaching are frameworks that, when interpreted and directed by Secwépemc communities, can inform adaptive planning and restoration that considers the interconnectedness of social, cultural, and ecological spheres of ecosystems. This includes the material importance of land for Indigenous land-based practices such as hunting, fishing, and harvesting that continue monitoring, observation, and experiential learning processes in changing social and ecological contexts, which can inform responding to, and measuring change and adaptive capacity.

While this study initially focused solely on culturally significant plants, these emergent values describe the rootedness of Secwépemc plants in a network of interrelated social, cultural, and ecological relationships. This case study in Chapter 5 describes central values highlighted by Knowledge Holders in Neskonlith’s Switzmalph community, and from Secwépemc land-based educators in Secwépemc territory more broadly, that guide Secwépemc food systems restoration. Furthermore, this study proposes these values can also create an adaptive framework for measuring social cohesion and ecological health (e.g., via land based education and monitoring), and guiding potential transformative pathways out of social-ecological traps (see Figure 1).

Place-based theory introduced in this chapter also creates a foundation for discussing the role of place, Indigenous ways of knowing, and Indigenous ethical frameworks in guiding process-oriented research. This study contributes to literature highlighting the need for more accountable research that respects and values Indigenous ways of knowing through describing my own methodology and process of learning from each of these central values (see Chapter 6). This study describes the importance of

culturally grounded values, epistemologies, and stories in creating frameworks for guiding researchers to engage more deeply with community-centered ethical models for working with cultural knowledges.

3.6 Limitations and future directions for research

Sterling et al. (2017)'s work on culturally grounded indicators shows examples of several models developed within Māori and Native Hawaiian contexts, as well as other contexts globally. These models have been applied within community-based resilience assessments, human well-being assessments, biological and socio-economic indicator assessments, climate change adaptation, disaster response, and many facets of impact assessment (Sterling et al 2017). The values in this study could have potential to inform more meaningful and community-grounded environmental and cultural impact assessments within the Canadian Environmental Assessment process, however their applicability would require future research and direction by the Secwépemc Nation to determine whether these values are applicable and relevant more widely or within this context. At this time, this framework represents a snapshot in time of values relevant to Secwépemc food systems restoration grounded in Neskonlith's Switzmalph community, and Secwépemc land-based educators whom we spoke with from Secwépemc territory more broadly. This project focused solely on community members predominantly from *Switzmalph*, as well as their family members from *Splatsín* and Secwépemc land-based educators from Secwépemc territory more broadly. As such, this study remains community and context-based. Further community, band, or nation-level direction and research would be needed if these values were to be used in a wider context. As values are dynamic and shaped iteratively by each generation and context, this model is likewise living and dynamic and would need to be revisited by the community to ensure the values remain relevant, community based, and applied within appropriate contexts.

As Sterling et al. (2017) state, more processes for identifying and setting criteria for appropriate indicators needs further study and refinement especially when evaluating

interactions and feedbacks between socio-cultural and ecological systems. In addition, further research is needed for to determine the results of using these adaptive frameworks over longer time frames and both successes and challenges with specific methods of measuring.

Chapter 4: Methodology

1. Introduction

This study engages both critical methodologies¹³⁶ and Indigenous methodologies¹³⁷. I apply critical place inquiry to understand how values and relationships to food and place in Switzmalph, and Secwépemc territory more broadly, inform existing and future pathways for Secwépemc land-based education and food systems restoration. My research questions supported me in understanding ways in which cultural values in Switzmalph are informed by place, and how they are applied in contemporary contexts and cultural resurgence processes to restore(y) landscapes and culturally significant plants for future generations¹³⁸. Furthermore, showing the process of applying these methodologies in critical and Indigenous place inquiry can give insight into the ways in which Indigenous values and ways of knowing, can guide reciprocal research and ethical frameworks and collaborative ethnography (see Chapter 6).

This chapter will explain my rationale for why this approach yields an important perspective for my research topic and is key to answering my research questions; my study design and methods; the principles from critical and Indigenous methodologies that have guided this research process; as well as limitations of the chosen methodology.

2. Background and rationale

Collaborative ethnography and Indigenous methodologies guided by critical place inquiry deliberately center questions of ongoing ethical and moral responsibilities in relational and reciprocal practice, accessibility of research to communities, “collaborative

¹³⁶ Collaborative and critical ethnography, *see* Tuck and McKenzie (2015a); Campbell and Lassiter (2010); Hallett et al. (2017).

¹³⁷ See storywork in Archibald (2008); Christian (2019); Young (2015); and Indigenous research methodologies in Absolon (2011); Kovach (2009); and Wilson (2008).

¹³⁸ See Chapter 3 for a theoretical background on place, cultural resurgence, and restore(y)ing landscapes (term from Bang et al. 2014).

reading, writing, and co-interpretation” (Lassiter 2005, 78), and addressing power dynamics in community voice and representation in texts.

Following Archibald (2008), Young (2015), Christian (2017), and Peltier (2018), I engaged with storywork principles as a framework for engaging more respectfully and responsibly with story, learning about the relationship between story and place, as well as learning my own responsibilities as a researcher in this process. I did not use storywork principles to outline a “right” or prescriptive method for a research framework, but to describe my own process of learning to engage more deeply with these principles, as well as with the three emergent Secwépemc values, and the role of *stsptékwle* and *slexexé’ye* as methods of teaching, described by Knowledge Holders in Chapter 5). This highlights my own process of learning how to engage more deeply with Indigenous ethics and ways of knowing through in this study, and does not represent a Secwépemc understanding nor encapsulate the full meaning of each.

Following Tuck and McKenzie (2015a), Campbell and Lassiter (2010) and Hallett et al. (2017)’s examples of collaborative ethnography and story analysis, this study gathered, mobilized, and co-generated knowledge in a way that centers researcher accountability to communities, critical discussions of place, and action that builds on community-identified priorities. Furthermore, this study follows theoretical commitments in Indigenous critical place inquiry by centering the non-abstraction of land and Indigenous sovereignty (Tuck and McKenzie 2015a, 146-169). Critical place inquiry is a relevant approach because of its adaptability with a variety of critical and Indigenous methodologies and methods; and because of its focus on interrelatedness between Indigenous knowledges, relationships to place, and inquiry into the systemic realities of ongoing settler colonial processes and contexts that affect both (described in both Chapter 1 and Chapter 2).

Furthermore, examples of collective data analysis and design processes that are co-designed through community and researcher partnerships are limited (Hallett et al. 2017). The process-oriented nature of this study adds to this literature through describing my process of co-designing a framework for collaborative story analysis (as described in

b) Conversation methods in data analysis in this Chapter).

3. Study design

This study design is composed of five primary research stages: Co-Designing research focus; gathering knowledges; mobilizing knowledges; meaning-making/data analysis; and collective reflection/verification (see Figure 2 Study Design). Figure 2 illustrates the iterative and reflexive process of co-designing the research focus, revisiting community protocols, and reflecting on observations after data gathering and mobilizing phases (described further in Chapter 6).



Figure 2 Study Design. Background photo by Kristal Burgess 2019, used with permission.

Table 1 shows the critical place inquiry methods engaged in data gathering, analysis, and dissemination stages of this study, as well as the food systems and place-related data generated by each method.

Table 1 List of critical place inquiry methods used to gather knowledge on Secwépemc food systems and place (*adapted from Tuck and McKenzie 2015a, 119-121, and developed with reference to the current study*):

Type of Method	Research Phase	Food Systems and Place-Related Data Centered on this Study	Works Referenced
Written Methods			
Narrative/ (Auto)biography	Researcher Preparation Gathering Knowledges: Observation and Reflection Mobilizing Knowledges: Observation and Reflection	e.g., Personal journaling (Auto-ethnographic); reflexive experiences and observations of place; conversations about place; self-location.	Absolon (2011); Kovach (2010).
Textual/Document analysis	Researcher Preparation Gathering Knowledges	“Connections to place (historical and/or current); Analysis of social inequities in relation to place” (Tuck and McKenzie 2015a, 119); Analysis of ethnographies and historical information shaping land tenure and policy landscapes in Secwepemcúlecw and barriers accessing harvesting places; Literature review on interrelatedness between culturally significant plants, legal systems, Secwépemc ways of knowing, and Place; Research on cultivation of culturally significant plants for place-based restoration and informing educational resources to teach about place.	Tuck and McKenzie (2015a, 119); Bonneau (2013); Billy (2015); Billy (2003); Billy (2006); Friedland et al. (2018); Thomas et al. (2016); Ignace and Ignace (2017); Christian (2017, 2019); Morrison (2011); Turner and Turner (2007); Goeman (2008); see additional in Chapter 2.
Oral Methods			
Protocols	Researcher Preparation Gathering Knowledges Mobilizing Knowledges	Harvesting protocols; knowledge sharing protocols; Place-based protocols and ethics.	Kovach (2010); Wilson (2008); Christian (2017); Peltier (2018).

Type of Method	Research Phase	Food Systems and Place-Related Data Centered on this Study	Works Referenced
Storytelling/ Storywork/ Interviews/ Narrative inquiry	Gathering Knowledges	<i>Stsptékwle</i> and <i>slexlexéye</i> stories, language, and place names interrelated with place; Secwépemc relationship with plants and land. Memories and place-based stories communicating connection to place, sometimes in land-based trips; respectful processes for gathering stories and working with cultural knowledges.	Archibald (2008); Kovach (2010); Peltier (2018); Christian (2017, 2019); Young (2015); Absolon (2011); Cruikshank (1998).
	Mobilizing Knowledges		
Sharing Circles/ Workshops	Gathering Knowledges	Land-based workshop, community verification, building adaptive management model; how Secwépemc methodologies teach about place; memories of place; “decolonizing analysis of place” (Tuck and McKenzie 2015a, 119).	Tuck and McKenzie (2015a, 119); Kovach (2010); Hallett et al. (2017); Young (2015).
	Mobilizing Knowledges		
	Collective Reflection and Storywork		
Conversational Methods	Gathering Knowledges	Identify positional narratives about place; central themes in Secwépemc ways of knowing related to plants, food systems, and to place; Initiated informal kitchen table check-ins to discuss connection to place.	Kovach (2010); Peltier (2018).
	Meaning Making: Data Analysis		
Mobile Methods			
Walking Interviews/ Go Alongs	Gathering Knowledges	Spending time in place; experiential learning about place and plants; learning about kincentricity and agency of plants and animals; “Connections to places; Narratives of place-related issues” (Tuck and McKenzie 2015a, 121)	Tuck and McKenzie (2015a, 121); Cuerrier et al. (2012); Carpiano (2009) (Go-Along method).
	Mobilizing Knowledges		
Arts & Social Media Methods			
Visual Art	Gathering Knowledges	“Connections to places; Understandings/practices of places; Expressions of place-related issues; Participants speaking out on place-related issues” (Tuck and McKenzie 2015a); visual representations of place.	Tuck and McKenzie (2015a); Pukonen (2008); Bagelmen et al. (2016).
	Mobilizing Knowledges		

Type of Method	Research Phase	Food Systems and Place-Related Data Centered on this Study	Works Referenced
Other			
Secwépemc Feast at Salmon Arm Arts Centre	Mobilizing Knowledges	Building relationships on place-related issues; Participants speaking out on place-related issues; Participants presenting about the importance of place and environmental health for harvesting; Storytelling and narrative as a method of teaching about connection to place.	Bagelmen et al. (2016).

Stage 1: Co-designing research focus

The focus of this research was co-developed through an opening community feast and informal conversations with Knowledge Holders and my mentors and advisors in Switzmalph, and background research and textual/document analysis. Partnering with the Neskonlith Education Centre and engaging in preliminary conversations with Neskonlith Councillor Louis Thomas, Kenthen Thomas (Educator at the Neskonlith Education Center), and Tammy Thomas (Director of the Neskonlith Education Center) were essential for grounding this study in relationship and gaining an understanding of community priorities. These conversations and the community feast shaped the direction and relevance of the project, and guided me in understanding community expectations of reciprocity.

a) Self-location

I learned that identifying my story and what led me to this work is an important protocol that is part of approaching this work honestly and with accountability. My self-location also influences the way I experienced and carried out this work, the methodologies I was influenced by and the types of knowledges I privilege, and the relationships I generated in community and how we related to each other.

Kwey, Akiganawenjigikwe nidijinikàz. Timiskaming miinawaa North Bay

Nidonjabà, Secwepemcúlecw nindaa.

My maternal ancestral ties (kinship and *Indian Act* band membership) are both Algonquin Anishinabe from Timiskaming First Nation in Quebec, and settler (French) from Levack, Ontario. My paternal ancestral ties are settler (Scottish, Irish) from Levack, Ontario. I didn't grow up with connection to our relatives or community in Timiskaming, but grew up in North Bay (territory of Nipissing First Nation, and lands covered by the Robinson Huron Treaty of 1850), and I have been living in Secwepemcúlecw as an uninvited guest for six years. My maternal great-grandmother, Agnes Mines, left Timiskaming First Nation to move to New Liskeard with her parents, and later to Sudbury (Atikameksheng Anishnawbek territory) where many of our family live today. I remember especially her quietness, gentleness, and love, and will always be grateful for her presence in our lives growing up. My maternal grandfather and his siblings were in and out of foster care in their youth, and I understand now the systemic nature of colonial violence and intergenerational trauma that impacted their relationship to identity and community. I deeply appreciate the strength, humour, and encouragement from my grandfather who supported me in answering questions about my own identity, sharing stories about our family and culture with me, and supporting me in reconnecting with family and community in a loving way. I am currently in a process of reconnecting, which to me involves building relationships to my community and identity through being open and honest about my own story, and learning to do this with humility and an open heart and mind.

I have been taught that it is important to acknowledge my ancestors and approach this work openly and honestly. To me, this also includes being clear about situating myself as a person with white-passing privilege, to be conscious of the spaces I occupy, and to approach this work with humility and as a learner. One of my biggest concerns with self-identification centers around taking up space. I acknowledge my responsibility to tell my own story honestly, and to acknowledge my privilege and responsibility as a white passing person, center the priorities of the communities I work for, and to be

accountable for past relationships between researchers and communities as a student in the university. I am also a visitor in Secwépemc territory, and many parts of writing this thesis felt awkward to me because I am working in a community that is not my own, and writing about topics that are outside of my own culture and that I have little framing for. As a result I felt that much of this work was generated from learning how to be accountable to relationships with Secwépemc Knowledge Holders and friends of mine from community, and learning protocols for working in their territory and working respectfully with their knowledge and perspectives. My positionality is a big part of highlighting my own journey here, and this also involved learning to listen and sit with my own fears and feelings of awkwardness, knowing they come from an important place that also demands accountability of me, and asking for direction from my teachers and friends here when they arose.

When I first considered applying Indigenous research methodologies in this project, many questions came up for me related to my understanding of my own identity and relationship to Indigenous epistemologies. For example, although Indigenous ways of knowing were central in guiding the process of this research, could I use Indigenous methodologies when I did not feel like I had a strong grounding in Anishinabe epistemologies myself? Additionally, I am a mixed-ancestry Anishinabe (Algonquin) woman going through a process of reconnecting with nationhood, community, and culture, but I am also working in Secwépemc territory — so would it be appropriate to draw heavily on the philosophical framing of the work of scholars such as Anishinabe scholar Kathleen Absolon (2011) as a researcher here in Secwépemc territory?

Self-location is a critical part of researcher responsibility¹³⁹ because, as Tuck & Guishard (2013, 16, as cited in Tuck and McKenzie 2015a, 118) describe, it centers researchers' "blind spots and biases" and dispels ideas of "neutrality and objectivity" in data interpretation. In both collaborative ethnography and collective storywork, self-

¹³⁹ See also Absolon (2011, 74).

location is part of centering a relationship of respect and reciprocity (Kovach 2010). Self-location is also part of many Indigenous community protocols, and can give a background on our own lives so that others can assess our motivations (Wilson 2008), and mitigate power differentials in research (Kovach 2010).

Following Kovach (2010, 59), I kept a journal of my thoughts, anxieties, questions, influential papers and informal conversations throughout the research stages outlined in **Figure 2** as a method of engaging with insider-outsider dynamics and reflecting on my responsibilities in research. This reflexive process helped me reflect on my biases and positionality, how my relationships in Secwépemc territory shaped my understandings, as well as to reflexively focus on the purpose of this study as we continued to engage in new projects. Journaling was part of my critical reflexivity work to consistently challenge my self-location, be aware of my interpretive lens, and address thoughts and patterns that emerged throughout the research process. This is an important part of practicing accountability through reflecting explicitly on power dynamics in representation and centering the ways in which my contributions and writing are intersubjective, informed from my own experiences and understandings (Absolon and Willett 2005) as well as intertwined with my relationships and how these guided my way of coming to know and understand.

b) Researcher preparation

1. Ethical considerations

The researcher preparation stage of this research involved facilitating an iterative process of learning about Neskonlith community priorities, protocols, and processes, and engaging with other methods of preparation including journaling and textual/document analysis (see Table 1). An important part of this process also involved learning about existing ethics guidelines and principles for research with Indigenous communities¹⁴⁰. I

¹⁴⁰ Examples of guidelines for ethical research in Indigenous communities that I reviewed include: OCAP [Ownership, Control, Access, Possession] Principles (First Nations Information Governance Center 2014; I

looked further to Indigenous research methodologies to understand ethical research more deeply in the context of Indigenous frameworks for relational accountability (Reo 2019; Absolon 2011; Kovach 2010; Wilson 2008; Archibald 2008; Young 2015; Christian 2017).

As a university graduate student I have a particular responsibility to follow the Tri-Council Policy Statement (TCPS2)¹⁴¹. Chapter 9 of the TCPS2 provides specific guidance in research involving First Nation, Inuit and Métis communities, and is in alignment with calls from many Indigenous researchers for “ethical space” and research practices that align with Indigenous worldviews and provide benefit to engaged communities (Canadian Institutes of Health Research et al. 2018; Peltier 2018; Wilson 2008; Smith 2012; Kovach 2010; Absolon 2011). This chapter provided important guidance for this study, and I sought engagement from community leadership early in the research process, and prior to recruiting and seeking consent from individuals, to jointly determine the nature and extent of research and relevance of research to community needs and priorities (see Articles 9.1, 9.2, 9.3, 9.13 Canadian Institutes of Health Research et al. 2018, 112-115, 124). Chapter 9 also outlines researcher obligations to learn and respect community protocols, codes of practice and customs in addition to receiving approval from the University of Victoria Human Research Ethics Board (HREB) (see Articles 9.8, 9.9, 9.10, Canadian Institutes of Health Research et al. 2018,

described further in Kovach 2010, 145); the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans Chapter 9: Research Involving the First Nations, Inuit and Métis Peoples of Canada and Chapter 10: Qualitative Research (Canadian Institutes of Health Research et al. 2018); and the IPinCH website, an initiative through Simon Fraser University to address Intellectual Property Issues in Cultural Heritage (IPinCH 2016). Kovach (2009, 144) also references the Royal Commission on Aboriginal Peoples (RCAP) guidelines (1996), which require researchers to explain community participation in research, how consent was provided, how research designs were built around local protocols and validate Indigenous knowledges, and how the community or Nation would benefit from a proposed research project.

In addition to OCAP’s *Ownership, Control, Access, and Possession* principles, Raven (in Absolon 2011, 79) also suggests adding *Benefit* into the OCAP principles, to ask the question: “how is this benefitting communities and the seven generations to come?”.

¹⁴¹ Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council (2018).

118, 119, 120). The process of receiving approval for this research from the University of Victoria HREB was an ongoing process that involved re-submitting modifications for approval as new changes emerged through the study (e.g., changes to pool of participants, joint funding applications, additional community engagement workshops on request of my advisors at the Neskonlith Band).

The TCPS2 also recommends a letter from formal or customary leadership to proceed with research, which for this study involved the inclusion of a Band Council Resolution from the Neskonlith Band Kukpi7 (Chief) and Council in my University of Victoria HREB application (Canadian Institutes of Health Research et al. 2018, 122). Although we did not use a research agreement for this research on direction from Councillor Louis Thomas, the TCPS2 outlines important considerations for developing research agreements, including the outlining of costs, co-authorship, dissemination of results, and other mutual expectations through the research process (Article 9.11, Canadian Institutes of Health Research et al. 2018, 123).

As described in section 3.1 b) of this chapter, co-designing research focus was part of a collaborative engagement and participatory approach with nature and scope of engagement directed by my partners at Neskonlith, who guided research focus and the reciprocal action-oriented research stages to be relevant to community needs and priorities. For this study, this included sourcing funding for a research partner position, funding for honorariums for Knowledge Holders, funding 2 workshops for the creation of community language-learning tools such as the Secwépemc Plant Knowledge Cards, and harvesting for the Secwépemc Feast collaboration with the Salmon Arm Art Gallery, building garden boxes for Elders, funding the building of a community garden, and sourcing funding for a strategic plan (see Chapter 6, this thesis; Article 9.12, 9.13, 9.14, 9.15, Canadian Institutes of Health Research et al. 2018, 123-125). Knowledge Holders roles as experts and teachers in this study were acknowledged in all associated publications, such as in this thesis and in the Secwépemc Plant Knowledge Cards, with permission from Knowledge Holders (Article 9.15, Canadian Institutes of Health Research et al. 2018, 126). Community involvement in data interpretations and

verification of findings is outlined in section 3.3, 3.4, and 4.1 of this chapter, and confidentiality, privacy, and additional risks are outlined in participant consent forms (following Articles 9.16, 9.17, Canadian Institutes of Health Research et al. 2018, 128). I received guidance from community partners at Neskonlith with regards to cultural protocols (outlined in section 3.1 d of this chapter), workshop design, and forms and community newsletters, with consideration of prioritizing oral methods of communication over text heavy documents for Elders and also former residential school students participating in the study (see Article 9.16, Canadian Institutes of Health Research et al. 2018, 127). As described in Chapter 6, intellectual property right discussions between the researcher, community, and institution were followed for copyright considerations in the Secwépemc Plant Knowledge Cards publication, though as stated above, these were not included in a research agreement but outlined in participant consent forms and a template licensing agreement (see Article 9.18, Canadian Institutes of Health Research et al. 2018, 128).

Chapter 9 of the TCPS2, in conjunction with guidance from my community partners at Neskonlith and the University of Victoria HREB, was helpful for supporting my understanding of my responsibilities as a researcher, as well as guiding the process for determining mutually beneficial research goals, and centering the importance of relationship and reciprocity. As described above, I referred to the Tri-Council Policy Statement (2018), as well as participated in a relationship-based model of ethics guided by my community mentors at Neskonlith (Research partner Kenthen Thomas, Education Director Tammy Thomas, and Neskonlith Band Councillor and Knowledge Holder Louis Thomas). These relationships provided direction and guidance throughout this study to ensure I met the needs of the Switzmalph community, and followed local community protocols and internal band processes. While I received ethics approval through the University of Victoria Research Ethics Board (Certificate # 18-246) (see Appendix A: Human Research Ethics Board approval), I also learned that ethics is a process that requires continual community direction and engagement, and is fundamentally grounded in relationships that continue beyond the completion of this research project.

The Indigenous Mentorship Network of the Pacific Northwest (IMN-PN), designed to connect Indigenous students working in health-related fields with Indigenous practitioners and researchers, also supported me in connecting with a mentor. Through IMN-PN my mentor, Dr. Alannah Young, introduced me to Archibald's (2008) storywork principles through her doctoral research, which identifies five pedagogical pathways (Nehiyaw Cree and Anishnabe Gee-zhee-kan'-dug "Cedar pedagogical pathways") for how Elders teach in land-based settings at rural Manitoba medicine camp, a land based health education program. Storywork as a method became formative to this study, and our phone calls shaped my learning about ethical research with story, as well as risks around copyright that can emerge when academic research includes cultural knowledges. For example, there are cultural knowledges shared in research settings that are not meant to be published for academic purposes, and it is the responsibility of researchers to learn and follow protocols related to knowledge sharing, seek out additional community permissions when required, and respect Secwépemc rights and responsibilities to their cultural knowledges and oral histories. There are added ethical concerns with publishing cultural knowledges wherein they can be cited or interpreted by people from outside the cultural frameworks and communities that give them life. I engaged with this learning through working with Knowledge Holders to understand the personal stories they wished to share related to this work, and identifying cultural knowledges, some related to medicinal plant use, that were not permitted for public knowledge. Action-oriented stages of this study were important for centering this work in land-based contexts directed by Knowledge Holders, and the written thesis outlines my own process of thinking about ethical research and the writing and mentorship that guided me in this. Furthermore, while I hold the copyright as the author of this thesis, I have included an intellectual property rights statement at the front of my thesis to acknowledge that the intellectual property over cultural heritage and personal stories included in this thesis belongs to the Knowledge Holders who shared them, and to the Secwépemc people.

2. Cultural protocols

I understand there are multiple dimensions and understandings of ethics I engaged with in the process of this research. For example, I followed guidelines in the Tri-Council Policy Statement and through the University of Victoria Human Research Ethics board to understand my responsibilities as a researcher participating in community-engaged research. I also worked with community mentors at Neskonlith to understand local expectations for ethical frameworks, and to understand the specific protocols and practices of reciprocity that I would also need to fulfill as part of my obligations as a researcher in Neskonlith. Cultural protocols are one of a number of ethical dimensions to this work which, as referred to in this thesis, are practice-oriented principles that outline engagement with relationship, responsibility, reciprocity and reverence towards cultural knowledges (Archibald 2007 in Young 2015, 17-18). Learning and understanding local community protocols and processes is important for engaging in research that is both respectful of relationships, and reciprocal in concrete ways (Kovach 2011, 66; Tuck and McKenzie 2015, 118a). Cultural protocols strengthen the ethical foundation of a project by outlining community guidelines for working with community, Nation-based, or family knowledges; honouring orality and sacred nature of story; understanding and validating Indigenous epistemologies; and maintaining transparency and a community-based support and direction throughout the project (Kovach 2010, 143). As Margaret Kovach (2009, 143) describes,

Any researcher wishing to carry out research with Indigenous communities possesses an awareness of such protocols, and the broader the breadth the better... while most protocols cannot provide a specific direction on a particular research project, they will offer guidance as to how to assess the ethical implications. Protocols are most useful when followed in conjunction with local community protocols (which may be research specific or not).

Ethical resources are guidelines whose effectiveness depends on how well they are followed throughout the research process, as well as how they are used in conjunction with local protocols (Kovach 2009, 146). Kovach (2009, 147) describes the importance

of “ethics as methodology”, or relational models of ethics that revisit ethics as an ongoing process of engagement, rather than a singular institutional step at the beginning of research:

Indigenous epistemic research conducted under Western funding or academic parameters holds a unique ethical complexity that is less about liability and is more relational... Simply because a researcher is Indigenous (or following an Indigenous framework) does not automatically translate into community trust. Trust needs to be earned internally. Trusting relationships are engendered in a variety of ways: following protocol, showing guardianship over sacred knowledges, standing by cultural validity of knowledge, and giving back.

The ethical guidelines highlighted above, in conjunction with local community or Nation-based protocols, and research agreements or statements of principles, are important ways of protecting from ethical misconduct and preventing extractive research practices (Kovach 2010, 99). As Kovach (2009, 147) describes, responsibilities to relationships are ongoing, constantly negotiated and understood with each new step of the research process.

Community protocols and reciprocity were continually revisited through informal conversations and meetings with my Research Partner Kenthen Thomas, Councillor Louis Thomas and Education Director Tammy Thomas (see Observation and Reflection in Figure 1, and Table 1). These informal conversations and my journaling process were methods for reflecting on my experiences and interpretations as they reflexively changed through the research process.

Following Archibald (2008); Young (2015); and Christian (2017, 2019), I engaged with storywork principles¹⁴², in conjunction with guidance from local mentors regarding local Secwépemc protocols¹⁴³, to guide and help me reflect on respectful engagement with cultural knowledges and values related to Secwépemc land-based

¹⁴² Archibald (2008).

¹⁴³ Absolon (2011); Kovach (2010, 99); the Tri-Council Policy Statement Article 9.8, Canadian Institutes of Health Research (2018).

education and food systems restoration (See Chapter 6 for the application of these principles).

3. *Textual/document analysis*

Three literature reviews informed this study, using search engines including Google Scholar, the University of Victoria McPherson Library search engine, UVicSpace, Web of Science, Academic Premier, and JSTOR. The first literature review focused on the ethnobotany, *Secwepemctsin* language, and propagation protocols for eight culturally significant Secwépemc plants to inform the design of the *Knucwetwécw* ethnobotanical garden and Secwépemc Plant Knowledge Cards. The second literature review focused on interrelationships between Indigenous land-based education, Indigenous food sovereignty, and social-ecological resilience theory. The third literature review was completed in 2020 as part of a Research Assistantship for a SSHRC Insight Project titled Indigenous Social Entrepreneurship: A Co-generated Approach¹⁴⁴. Select papers from this third literature review supported informing my understanding of changes in policy and land tenure landscapes in Secwepemcúlecw, and their resulting impacts on Secwépemc food systems. This process was iteratively informed by the Gathering Knowledges phase of this study, which guided additional literature I reviewed.

Stage 2: Gathering knowledges

The Gathering knowledges phase (see **Figure 2** and Table 1) was informed by both critical and Indigenous research methods. This involved semi-structured and conversational interviews and informal ongoing kitchen-table check-ins using conversational methods¹⁴⁵ with my Research Partner Kenthen Thomas and 18 community

¹⁴⁴ Principal Investigators for this study are Dr. Ana Maria Peredo, Dr. Irene Henriquez, Dr. Rick Colbourne, Dr. Robert Anderson, and Dr. Bettina Schneider.

¹⁴⁵ Kovach (2010, 124)

collaborators (5 youth and 13 adults and Elders); 5 youth workshops; 1 *tmicw*-based workshop; and 2 Secwépemc plant knowledge card workshops.

The interview participant list was generated using both snowball and purposive sampling methods (Tongco 2007). The initial participant list was created from recommendations from my research partner Kenthen Thomas, as well as Education Director Tammy Thomas. Additional interviews were added based on recommendations from community collaborators and Knowledge Holders we interviewed. An initial list of questions related to Secwépemc plant cultivation and food systems change was developed and refined with my research partner Kenthen Thomas, as well as reviewed by Education Director Tammy Thomas, after being informed by preliminary informal meetings and a community meeting (See Appendix B: Interview questions).

Interviews followed a semi-structured or conversational format, meaning the list of interview questions was followed very loosely and selectively depending on direction we received from community consultants¹⁴⁶ during interviews. Follow up questions sometimes were not included on this list, but were asked in a conversational format by Kenthen or myself to contribute our own thoughts and experiences as well as to follow and inquire further into the direction led by community consultants.

Conversational methods align with Indigenous research methodologies as they recognize Knowledge Holders and storytellers as teachers, and create space for them to convey the specific knowledges and messages they think are relevant to the context in a culturally nuanced way (Kovach 2010, 123-124). As Kovach (2009) describes, highly structured interviews can cut off this space for Knowledge Holders and storytellers to participate in fluid and culturally nuanced ways typical of oral traditions. The fluidity of conversation methods give structure and context, but allows collaborators to direct the process to speak to what they feel is most relevant without having narratives limited by

¹⁴⁶ Following Lassiter (2005)'s the Chicago Guide to Collaborative Ethnography, I chose to use the term "community consultant" when referring to Elders, Knowledge Keepers, community members, and youth involved in this study. I chose to do this in respect and recognition of their positions as Secwépemc Knowledge Keepers and cultural knowledge experts.

structured or semi-structured parameters (Kovach 2010, 123-124). I chose both semi-structured and conversational interview methods understanding that this is important for people to have more power and agency to share their stories in ways that are meaningful to them (Ryen 2000 as cited in Kovach 2010, 99). These methods are also important for showing respect for the voices, stories, and oral nature of knowledge sharing- recognizing conversations as emergent and directed by collaborators rather than highly controlled by the interviewer.

Interviews also followed a process of respectful story gathering (Peltier 2018), which included gifting tobacco or sage, a card, food, and an honorarium (Neskonlith community honorarium rates) to each of the 13 Knowledge Holders we interviewed. The 5 youth we interviewed were participants in the Neskonlith youth summer program, and we brought a small gift (packages of Secwépemc plant seeds, a \$25 gift card, and a thank you card) to thank them for their time.

Stage 3: Mobilizing knowledges

The “Mobilizing knowledges” stage of this study (refer to Figure 1, and Table 1) worked to create meaningful tools and action based on community direction and input to contribute to transformation and change. This involved supporting with planning and coordinating the Secwépemc Feast in collaboration with the Salmon Arm Arts Centre, the creation of a language and place-based educational tool: the Secwépemc Plant Knowledge Cards, and a *tmicw*-based workshop with Knowledge Holders and youth (see Chapter 6 for more detail). Action-oriented stages of this study were important for engaging in reciprocity and giving back. This involved taking direction from community members in Switzmalph to create meaningful and community-oriented tools and events, and engaging in work that could contribute locally to ongoing initiatives led by community members.

Stage 4: Meaning making and data analysis process

The data analysis process was composed of five stages of collective meaning-making: 1. Interview transcription; 2. Conversational data analysis¹⁴⁷; 3. Draft values model and newsletter design; 4. Community verification feast and strategic plan workshop to incorporate community feedback into values model; and 5. Individual conversations and informal visits with community consultants and parents/caretakers of the youth who participated to review stories and ensure they are presented respectfully and clarified if necessary. These five stages are consistent with an explicitly and intentionally collaborative research framework.

a) Interview transcription

I transcribed each interview and Secwépemc Plant Knowledge Cards workshop verbatim, and returned printed or electronic copies to each community consultant, along with a CD with the audio from our conversation. Community consultants could then review their transcripts and audio and revise them for accuracy, to add information and context to stories, and to have the opportunity to retract sensitive information for sensitivity. Although I did not receive revisions to the transcripts themselves in this stage, this provided an important opportunity to engage in ongoing conversations with community consultants, receive feedback on the project as a whole, and continue to spend time together and build stronger relationships that helped me to better understand the context in which this work was situated.

b) Conversation methods in data analysis

Following Hallett et al. (2007) and Kovach (2010), my research partner Kenthen Thomas and I used conversational methods for data analysis, collectively re-listening to stories from interview audio, coding emergent themes using NVivo, and recording our

¹⁴⁷ See Kovach (2010); Hallett et al. (2017).

own conversations related to each story. This was a recursive and circular process that involved moving back and forth between the audio, transcripts, and reflections on our own experiences and relationships with place. This collaborative analytical method moved beyond synthesizing primary data to co-generating new secondary lines of knowledge through the process of talking about our individual relationships and interpretations of the data and the collective story this study engaged with. This also allowed me to check my own interpretations with Kenthen and be open to both giving and receiving feedback (Wilson 2008, 131). These conversations were audio recorded to give context for our thematic interpretations of community stories, as well as to record the further theories we generated about our own subjective experiences related to this project and food systems restoration.

After this initial round of data analysis, I printed our final list of themes and attached a quote or summary of each theme to the bottom of the associated theme card. Kenthen and I categorized each theme into 6 broader thematic categories and made a schematic chart drawing relational connections between each theme, to understand the connections community consultants shared with us in their stories and interviews. This relational chart supported us in narrowing down 4 primary overarching values that are present in the final model: *knucwetwécw*, *tmicw-based learning*, *yecwemenułecwu*, and *slexexéy'e*, *stsptékwle* as methods of teaching. This framework was revised further in a subsequent meeting into a final model that was included in a community newsletter.

Stage 5: Collective reflection and verification

These three emergent values, and the role of *stsptékwle* and *slexexéy'e* as methods of teaching, provided a framework for the community newsletter, which we presented to community collaborators in a sharing circle¹⁴⁸ and community verification feast at the

¹⁴⁸ Following Kovach (2010, 129). Sharing circles are one Indigenous method adapted to contemporary research settings (Kovach 2010, 129) of “weav[ing] together” stories and narratives to build a collaborative theory or description of a phenomena (Absolon 2011, 137; Kovach 2010, 129). General guidelines of research sharing circles include: sharing food (Kovach 2010, 124-125; Absolon 2011, 127); tobacco offerings, storytelling and

Switzmalph Melamen Centre in November 2019 (see Appendix C: Community newsletter). This sharing circle was focused on reviewing the two values we interpreted as central to the interviews, as well as the role of *stsptékwle* and *slexexé'ye* as methods of teaching in land-based learning settings, and reorganizing the themes to create a collective narrative¹⁴⁹ or story about this process (Absolon 2011, 137). The community newsletter included the two values, along with *stsptékwle* and *slexexé'ye* that were referenced in interviews to communicate the context for teach value, along with an explanation drawing from conversations with Knowledge Holders, future directions proposed in interviews¹⁵⁰.

Splatsín Elder Ethel Thomas opened the community meeting with a prayer, and Kenthen made a spirit plate to thank ancestors and *tqeltkúkwpí7* (Creator) for bringing us together safely and to guide the meeting. We started by sharing food, and then began to review the community newsletter, each of the themes, and the process Kenthen and I took to understand these themes within the context of the interviews. We then focused on the content of each theme and whether the themes chosen were representative of how the rest of the group saw the central values that guide food systems restoration in Switzmalph, and Secwépemc territory more broadly. Then the circle opened for Knowledge Holders to share their experiences of the project, stories related to the themes, and to reorganize or add to the collective story of the project.

The Secwépemc Plants Stewardship Plan community meeting in January 2020 was an additional opportunity to revisit the values from the community verification feast and co-develop an adaptive framework for future restoration and stewardship planning in

humour (Absolon 2011, 127); acknowledgement of those in the circle and of ancestors (Kovach 2010, 124-125); and dialogue and sharing stories related to a question rather than a structured interview question-and-answer format (Kovach 2010, 124-125; Absolon 2011, 127).

¹⁴⁹ As Dawn M (2005, as cited in Absolon 2011, 137) describes, “Collective storywork, as a research methodology is the active process of sharing, telling or engaging with multiple stories, for the purpose of documenting consistent and important themes. Collective stories are the final products or versions of what has just been processed, through reflection, analysis and conclusion”.

¹⁵⁰ Names were not included in the newsletter nor were direct quotes used to respect confidentiality.

Switzmalph (which informed Figure 3 in Chapter 5).

a) Informal follow-up conversations

The community verification feast and individual follow up conversations with each Knowledge Holder were an important part of checking in with community consultants to ensure that their perspectives were included respectfully, and that the collective story that emerged through the research process was one that carried meaning for the people who shared their stories with us. While these were planned as in person meetings, due to the COVID-19 pandemic this verification largely took place via email and telephone calls. This involved giving community collaborators the opportunity to review their quotes in the context of Chapter 5 and/or Chapter 6 of this thesis, in order to clarify and check they are not misinterpreted. These drafts listed community consultant names as “Temporarily anonymized for review” until quotes were approved.

4. Limitations

4.1 Collaborative story analysis, storywork, and collaborative ethnography

Critical theorists challenge the idea of shared voice in collaborative inquiry, highlighting the complex power dynamics that are part of the contexts in which sharing occurs, and the question of which audience collaborative narratives are being written for (Jones and Jenkins 2014). The intended audience of a text can deeply change the content, presentation, and frameworks in which a collaborative ethnography is analyzed and presented. Jones and Jenkins (2014) highlight the ways in which underlying power dynamics in research partnerships can often demand Indigenous collaborators and communities to be in the position of *sharing* for the desire of non-Indigenous audiences without resulting in social change:

... it is unsurprising that [I]ndigenous scholars or researchers might be cautious about collaboration and dialogue with members of colonizer groups. If shared talk becomes an exercise only in making themselves more understandable or accessible to colonizer groups, with no commensurate shifts in real political

power, then it becomes better to engage in strengthening the internal communication and knowledge, as well as self-reliance, of the people (Jones and Jenkins 2014, 13).

Absolon (2011, 48) raises this question in her own work, and describes the importance of asking: who is this work for? Does it centralize non-Indigenous desires to learn about “the Other”, or does it centralize and forward Indigenous ways of knowing that can address Indigenous needs and support other Indigenous writers and community? When it comes to sharing and sharing knowledge—who is the beneficiary of sharing? As Absolon (2011, 48) describes:

Many people are curious about Indigenous knowledge and ceremonies, but I am certain that it is Indigenous people that need to reclaim that pathway first. I have been cautioned to write primarily for the Indigenous audience, which is where my commitment lies. My intention is not to create pathways to sacred knowledges, but to provide support and information from which Indigenous scholars will benefit.

Absolon (2011) describes the importance of creating Indigenous spaces for Indigenous people, where sharing contributes primarily to building Indigenous knowledges, narratives, community and culture. In this method of sharing, it is Indigenous people who have the power of deciding when, in what circumstances, and *if* knowledge is shared with outside audiences.

I thought about Absolon’s (2011) words throughout this process. To me, doing this work in a good way meant ensuring that this contributed in concrete ways to community priorities and building knowledge within community. In this thesis I consciously do not include sensitive cultural knowledges, respecting their protocols, place, and belonging in community as well as respecting the rights to the ownership, control, access, possession, and benefit¹⁵¹ of Indigenous cultural heritage by the Indigenous communities that give them life. Rather, I focused on community narratives

¹⁵¹ See OCAP Principles, FNIGC (2014).

and describing our process in a helpful way that might support other Indigenous scholars. I understand this thesis is inescapably a document with multiple and possibly unintended audiences. My process involved understanding that the place of some cultural knowledges is specifically meant to remain within community and not in academia, and attempting to create a way in which approved stories and narratives shared by Knowledge Holders could be represented in their own words, while also positioning my own inter-subjective learning through this work.

One concern both Kenthen and I shared in this process was decontextualizing community consultants' stories from their larger intended narrative. This is in line with challenges with story analysis acknowledged by several critical, and Indigenous, scholars (Kovach 2010, 130-131; Christian 2017, 132-133; Young 2015, 56). Four primary incompatibilities for collective story analysis identified by Hallett et al. (2017) include:

- decontextualizing story through thematic coding;
- disrespecting wholistic nature and integrity of individual stories;
- misrepresentation of stories or disrupting the agency of storytellers by removing their identity and voice in relation to their story; and
- disrupting the active nature of meaning making between the storyteller and listener by analyzing stories in text and conveying solely the interpretation of the university researcher.

Hallett et al. (2017, 1268) point to a gap in clear process-oriented examples of more appropriate analysis methods in Indigenous contexts. Several Indigenous and critical theorists, and researchers engaged in community-based participatory research¹⁵², describe important approaches to collaborative story analysis that are grounded in, or in alignment with, Indigenous epistemologies and protocols in response to this gap. For example, both Christian (2017, 132-133) and Young (2015, 56) give examples of how they used Indigenous inquiry and interpretive meaning-making in their research in response to these challenges. Their works offer important lessons for study designs that

¹⁵² E.g., Jones and Jenkins (2014); Absolon (2011); Hallett et al. (2017); Peltier (2018); Archibald (2008); Young (2015); Christian (2017, 2019); Thompson et al. (2020).

focus on addressing these challenges and work to engage respectfully with Indigenous ways of knowing in Indigenous-led or community-based contexts. These examples offer important reflections on the ways in which Indigenous ways of knowing can encourage a deeper engagement with ethical research and values that are in alignment with Indigenous worldviews.

In response to this, I tried to share community perspectives through the inclusion of lengthier direct quotes highlighted by Kenthen and myself in the data analysis process to try to keep community stories intact and to try to reduce fragmenting them. I also followed a mixed-methods approach of both interpretive meaning-making and thematic analysis with lengthier quotes to center community voices (Kovach 2009, 131 as cited in Christian 2017, 132). Repeated listening to these audio recordings, conversational data analysis methods with Kenthen, as well as ongoing check-ins with community consultants through the community feast and subsequent home visits shaped this interpretive process, and the larger collective story each narrative was nested within. This collaborative process takes time, and is grounded in dialogue and relational accountability that extends both throughout, and beyond, a research project. Collaborative processes are not for people who are rushed with rigid pre-determined agendas, but require reflexivity, intimacy, and dialogue, which I understand are all part of relational work. As I had the privilege of living in Secwepemcúlecw through the 3.5 years of this research, and will continue living here after this thesis is submitted, place and community deeply shaped my own understandings of this project and the stories that emerged within it. In addition, this shaped my perspective of the larger socio-political narratives these values connect to and how they are embedded in generative, cyclical, and ongoing work led by the Switzmalph community.

Qualitative data analysis is values laden, and shaped by process, methodology, and individual interpretations of how and what meaning is made (Peltier 2018). My own interpretations of how the individual stories shared with us come together to create a collective story in this research is not only influenced by my own positionality, but by the relationships and ongoing conversations I've had with each of the people who have

shaped this project.

This thesis represents my own process of learning, and many of the *stsptékwle* shared with us are not included here out of respect for collective knowledge and sharing permissions, as well as respect for orality in teaching by Knowledge Holders. These stories are living and connected to land and Secwépemc people, who will always be the holders of this knowledge and must also be the directors, interpreters, and spokespeople.

Chapter 5: Guiding Cultural Concepts and Contexts for Teaching and Learning in Land-based Learning and Eco-cultural Restoration

“Our food is our culture; reconnecting with the food will bring the people together to eat our culture again” (Louis Thomas, fieldnotes, August 2019).

The objective of this chapter is to synthesize my understanding of *knucwetwécw* (helping one another) and *yecwemenulécwu* (the role and responsibility of Secwépemc people as caretakers of land in Secwepemcúlecw) as two cultural concepts related to Secwépemc land-based education and food systems restoration. Furthermore, *stsptékwle* and *slexexéye*, and *tmicw* (land)-based learning are described as the contexts through which teaching and learning about cultural concepts, such as the two listed above, occurs.

These cultural concepts, methods, and contexts for teaching and learning emerged through semi-structured and conversational interviews with 18 individuals (5 youth, 13 adults) from Neskonlith’s Switzmalph community, their family members from Splatsín, Secwépemc land-based educators from Secwépemc territory more broadly, as well as non-Indigenous collaborators working in land-based education and environmental planning fields. Furthermore, they were informed by transcripts and notes from two full day workshops, and one land-based workshop with an additional 8 community consultants were also analyzed and thematically coded.

These values, and the methods through which they are taught were integrated into an adaptive framework in the *Yecwemínte re Tmicw: “Eating Our Culture” Secwépemc Plant Stewardship Strategy* prepared with the Switzmalph community, and were verified in two verification sessions, and ongoing informal check-ins with community consultants. The adaptive framework shown below in *Figure 3* was collaboratively developed during a community feast at Switzmalph as a visualization of the role of *stsptékwle* and *slexexéye* as contexts and methods for teaching about cultural concepts such as *knucwetwécw* and *yecwemenulécwu* in land-based learning contexts, which was also used as an adaptive framework for the Secwépemc Plants Stewardship Plan (January 2020):

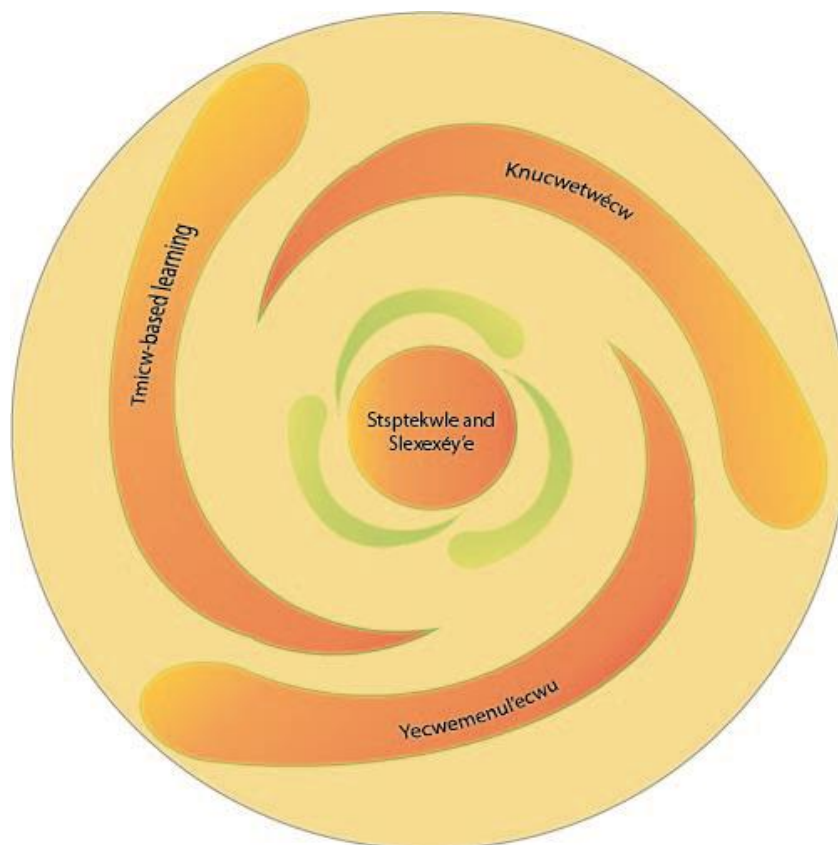


Figure 3 *stsptékwle* and *slexexéyé* as Methods of Teaching about Secwépemc Values. Co-developed in January 2020 workshop in Switzmalph.

This model positions *stsptékwle* and *slexexéyé* at the center to signify their role as methods and contexts for teaching and learning about cultural concepts and land-based learning. These cultural concepts, as well as the role of land-based contexts, spiral out from the center to represent their continuity and innovative nature.

Importantly, although there is a tendency in qualitative data analysis to categorize data in thematic boxes to structure results, there is a larger guiding principle of balance and *kwel'tknéws* (interrelatedness) that threads through and connects each of these values. Secwépemc scholar Dorothy Christian (2019) describes this as many values embedded and interrelated in layers of relationship with stories, oral histories, language, and land. In this respect, although conversations in this chapter are nested within the two values or

cultural concepts of *knucwetwécw* and *yecwemenulecwu*, the role of *stsptékwle* and *slexexé'ye* as methods and contexts for teaching and learning, or the importance of land-based learning as a context, I acknowledge that these categories are not exclusive, but are interrelated and interdependent with one another.

I learned that these values both guide and are generated through processes of cultural resurgence and food systems restoration in *Switzmalph* by asking the following question: *How do conceptualizations of community values, principles, and relationships to food in Switzmalph, and Secwépemc territory more broadly, inform the processes of existing and emerging land-based education initiatives, and future pathways towards food systems restoration?*

Any emphasis included in quotes in this chapter is added by myself to highlight sections that spoke to the relatedness of the quote to each value. Knowledge Holders have had the opportunity to review their quotes as they are included in the context of this chapter, and the revised transcript versions of the quotes are included, where applicable.

Tmicw (land)-based learning

In the Secwepemc case, I find that while many stories provide the oral map to resources on the land, *the land itself* becomes the map of human experience by which ‘telling one’s life’ is remembered. (Palmer, 2005)



Figure 4 Neskonlith Knowledge Holder Louis Thomas opening the *tmicw*-based workshop at Skunk Hollow

I learned that Secwépemc ways of knowing are grounded in *tmicw* (land), and access to *tmicw* is central to generating pedagogies, knowledges, education systems, relationships, and mental/emotional/spiritual/physical health. Three subthemes are highlighted as important values related to *tmicw*-based education: Sense of place and relationship to *tmicw*; observation and process of being on and learning from *tmicw*; and mentorship and access to Knowledge Holders for learning about *tmicw* and associated roles and responsibilities.

Secwépemc sense of place and relationship to tmicw (land)

They're one thing. They're not separate. The language comes from the land and the land is our bodies. The plants are part of our bodies. The swamps and swamp plants are our lungs, our livers, the water is our blood and the small plants and tributaries and lichens are our capillaries and veins. If we don't take care of our bodies, of the land, we die. And that's why all this healing starts with us—at the center. Which starts and ends with everything. We are the land. (Rhona Bowe 30 August 2018)

Rhona's quote highlights the interrelatedness between Secwépemc people and land, and the importance of looking after the land as a vital aspect of self and community care. As she describes, Secwépemc culture, lifeways, and social and ecological health are interconnected. I learned that Secwépemc sense of place and relationship to *tmicw* teaches about the embeddedness of Secwépemc people, language (*Secwepemctsin*), values, and ways of knowing in *tmicw*. Place names evoked in the language also teach about relationality, landscape features, and histories of cultivation across the landscape. They are indicators for meanings that can be evoked through linguistic acts and actions, and are actualized through the agency of people. Secwépemc place names anchor Secwépemc history and stories to the landscape, pointing to teachings about the physical and ecological characteristics of landscapes, landscape cultivation, past events, and relationships between Secwépemc, land, and other nonhuman relatives. I also learned that place names are vital for understanding histories of Secwépemc ancestors who cultivated and shaped the landscape, and the enduring connections of Secwépemc people

communities today. Place names also teach about landscape change or ecological degradation over time, for example the Secwépemc place name for the Salmon River delta is *Switzmalph*, which translates to “soopolallie bush¹⁵³” (Louis Thomas, fieldnotes, June 2018). This place name connects to oral histories that teach about this valley as an important harvesting area that brought many families together to pick soopolallie and other berries. Reflecting on the now-rare referent of this, this place name also teaches about landscape change over time¹⁵⁴, Secwépemc histories and presence, and can also inform restoration of plant species and culturally significant ecosystems for future generations:

Every place here has a name ... we had our own way of identifying where we were... Cstalen is, like a cupboard. You can go there and live there year-round, you know you're going to eat, and you'll know where the food is and everything. And yeah. And now it's a—mostly just damaged, but I'm sure it can come back to life, the more we go back there and harvest it. (Donna Jules 04 December 2018)

Language, place names, and the presence of culturally significant plants in cultural landscapes teach about histories of Secwépemc ancestors who cultivated and shaped the landscape, the enduring interrelationships between Secwépemc people, language, and land, and current realities of community members who continue to harvest and cultivate connections to place today.

Silas Christian, a youth who participated in the *Switzmalph* youth program, and Kenthen Thomas spoke about how settler-colonial processes of renaming (Pasternak and King 2019) and the systemic removal of Secwépemc people from *tmicw*, result in barriers to learning language, generating *tmicw*-based knowledges, accessing culturally significant foods, and sense of place:

¹⁵³ *Shepherdia canadensis*.

¹⁵⁴ E.g., the Salmon River valley today is largely an agricultural area where many of these native species no longer grow to the extent they have in the past. See Ignace and Ignace (2017, 247) for further information about the connection between place names, landscape change, and development.

...that's what's making Aboriginals scared about land ... *all the land that's being found, the Aboriginals already did. They're [settlers] giving it a new name, owning it, building a whole new place there, ruining the nature there, all the food there.* (Silas Christian 30 August 2018)

...*the language comes from land... If you're talking about place names, it connects to the land.* If you're talking about plants, it connects to the land. If you're talking about us as humans, we're connected to the land. Everything is connected to the land. *All the language comes from what we see, what we felt, what we noticed that was on the land...* if you become disconnected from the land, then as far as I know, you lose the language. And by us coming to houses, being put in houses, in churches, always moving from vehicles and never barely touching land, you know- how do you get that language back? (Kenthen Thomas 12 September 2018)

Kenthen's quote describes language as part of a way of being that is shaped through experiences, observations, and engagement with land. Even where some Secwépemc place names may be sleeping¹⁵⁵ or have been obscured from the landscape by settler place names, Knowledge Holders spoke about a continuity of connection to land that remains deeply interrelated with language, ways of knowing and being, identity, mental, physical, spiritual and emotional health, and to ancestors. Culture and connection to *tmicw* were described as being important anchors for healing and balance in the lives of some of the Knowledge Holders we spoke with.

It felt good, it felt like—how do you say it, like *they placed us in Neskonlith, but yet when we go out into the Shuswap land, I wouldn't even know the Indian names for the mountains, but wow.* You see the water coming down, the waterfalls, *just beautiful out there...* And fresh air. Like we used to go, what, get up three o'clock, go out five o'clock, just take potatoes—boiled potatoes, eggs, for lunch. (Delores Purdaby 03 September 2018)

I love nothing more than being out on the land ... And knowing that at one time, some of these places, even though we don't have the knowledge anymore, that some of these places were used for many different purposes than we know. And

¹⁵⁵ See Leonard (2008), who uses the term “sleeping” to describe dormancy (not being lost but are sleeping, and can be awoken through resurgence processes). He uses this term to talk specifically about languages, and in this chapter I am using this term in reference to place names.

it's just an incredible journey to be out there, and *to see, know, learn ... sometimes you just feel it*. You just feel—I don't know how to explain it but *it's like you can just feel your ancestors there... there's a word that means "come to my senses", and that's almost like what happens when you're out there...* Just by being in the bush and walking around, or being in water and feeling that, or being in a sweat lodge made of all earth. Yeah, it's just an incredible feeling. Sense, awareness, peacefulness, excitedness all at the same time... (Kenth Thomas 12 September 2018)

[re: why it is important to be out on the land, learning about and restoring the plants] ... I think it's kind of like a religion. Something you can believe in ... it's that connection to something that's more tangible, more—to me it's kind of spiritual. Because you don't get that same feeling when you're walking on the sidewalk, right? To me that's what it's all about. *I think it's more that spirituality and what was given to us. And I think that's what's missing in our society.* (Louis Thomas 30 August 2018)

... *our grounding which is what the land does for us*. It's the most healing because there's no room for ego, when you go out to the bush, the trees don't care about your big elk that you got, or the biggest fish that you got, or how much you get paid. They don't care. And you're going to be grounded—your senses are going to start to awaken, because they have to. You know—what was that noise? What's that smell? And your senses become invigorated. ***The spruce, the different medicines tend to open up your emotions and flesh out—you almost become sedated where you can be healed ... and that's what we want brought back.*** But we want it brought back so that there's a medical system that allows a person to have that choice. (Rhona Bowe 30 August 2018)

Reflecting on these quotes, Knowledge Holders spoke to the many ways through which sense of place is evoked, given meaning, and felt deeply through memory and ancestors, language, story, and experience. The experience of being on the land was described as being grounding, and part of experiencing the presence of other beings who share the land. The significance of land as a tangible anchor for memory and spirituality was described as an important aspect of emotional and spiritual health, healing, and balance. As Rhona and Louis describe, land is an anchor for sense of place as well as an important aspect of healing is important to recognize and restore for mental health and overall well-being.

Observation and process of being on, and learning from, tmicw

Tmicw-based education engages different learning styles (e.g., social, interpersonal, kinesthetic/tactile) through involving multiple senses in experiential learning-by-doing. For example, *tmicw*-based knowledge can be learned through engaging physical elements such as touch, taste, smell, and physical movement through the landscape, engaging with story to learn about ecology, indicators, and protocol and respect towards plant and animal relatives, as well as building interpersonal relationships between Elders and Knowledge Holders in the process.

It's so impactful—that little time that they can spend out on the land. They don't forget... I always take the Little Fawn nursery out to the spring fishery... I'll snare fish with them... I'll gather them all up by the creek bank, and I'll start telling them about the fish ... and why we are here. And so they get into the story ... they're not going to get that if they're just on the computer. They're not going to get that experience. So, land-based teaching—nothing can beat it. I think you'll find you'll get more interest in learning to dig deeper too, right. Like, why, you know, the life cycle of a trout—we're going to go back now and learn about it. You know? A garden. Right? Getting kids out in the garden, and I think there's a lot of fascination in that. (Ed Jensen 24 January 2019)

... I've been learning it for always [knowledge about plants], it comes natural to me, I didn't really feel that I knew enough to teach. I would compare myself with somebody who has a degree or whatever, until one day I sat with a bunch of people with degrees... And we had all these sticks and we had to identify them ... And they're like, 'we don't know'. I said, what? Smell them. 'we don't know what they smell like' ... And I realized it's because *you can't learn the smell from a book, or the texture. You can't feel them, you can't see where they grow, how they smell, how they taste...* (Rhona Bowe 20 August 2018)

The saskatoon also in the winter time, if you're looking for them, you scratch the side of it and ... *You smell the saskatoon, you'll always remember that smell. Grandma always said ... you see some really nice long sticks for your baskets, and you go over there and scratch and you see if it's saskatoon it'll give you that smell ... you get something else different than a saskatoon stick to put on the top, your basket will break as soon as that thing dries ... So that's why the saskatoon sticks were always used, on the baby carriages and in the birch bark baskets and stuff like that, so. I was always told to use that around the top, hey. (Gerry Thomas 19 January 2019)*

As a teaching tool, land is... you compare that to the classroom—it's so different... when you watch how the birds fly, you see their patterns, you hear their sounds, you're learning. And you see the tree and you smell—you're learning. All of your senses are being utilized. (Kethen Thomas 12 September 2018)

Land education ... from the harvesting, giving offering and prayers to the final product to when we extract the medicines, we use everything ... so there's a whole spiritual and mental piece... (Crystal Morris 29 August 2018)

These quotes illustrate how orality and experiential and sensory learning are central to Secwépemc education systems. As Switzmalph Elder Lloyd Charlie (03 September 2018) describes, “*You learn by watching people, that's what you do.*” Splatsín Elder Nuxnuxskaxa cts'717élt [Julianna Alexander] (14 August 2018) also describes the importance of orality for passing on knowledge: “*it's not been written in a book. It's oral history, we've always been oral, passing it down from generation to generation to generation.*”

Knowledge Holders described the importance of the active and consistent practice of *tmicw*-based education and plant cultivation as being central to learning culture, tradition, and how to survive:

I think the relationship to the land is very important, having water, land and of course air to survive ... and of course to your health as well ... we need to know where all of our food is, and comes from. And at one time we must have knew what to eat and what not to eat, and we followed the birds I guess, and the animals, I guess, they're really important, knowing what to eat. We only eat, were allowed to eat what the birds would eat as well... berries or seeds. We—there used to be a lot of seeds, nuts around here that we had to go and collect as well ... So, for me it's survival, and knowing that when I was growing up it was hard work, it kept us busy but it was just as well. (Donna Jules 04 December 2018)

We follow the food, we follow the salmon, we follow the, you know, medicines and we follow the birch and cedar and different things that we need—that we use—and for me it's a survival thing... Because, you know, if you don't practice, you don't get good. If you just sit idle, you forget... So, for me, it's like, every day living lifestyle that I have to keep doing in order to keep it. In order to share it, even. I guess like if we don't harvest all those plants, they'll just die or whatever,

and we won't be doing our job like the ant [the Worm *stsptékwle*]—you know, every day is busy, busy, busy. (Nuxnuxskaxa ctś717élt [Julianna Alexander] 14 August 2018)

Well you know, it's just like going to the bush and you're starving. *You don't have to starve when you're out there. If you know what your—what's good to eat, you'll never starve when you're in the bush, cause there's always something out there to eat.* I mean, you can't say you're hungry. Those people who say they live off the land, I bet if you put them in the bush they'd starve to death... That's what I think anyways—if they know about the plants that's fine, but the ones who say they're living off the land by planting a garden, say they're living off the land, they wouldn't make it in the bush. It's totally different... (Lorna Thomas 17 August 2018)

Conversations also focused on the importance of ceremony and connection to family that comes along with harvesting and land-based education, as well as the importance of continuing to pass on *tmicw*-based knowledges to youth, and teaching youth how to learn from land. The active part of practicing and living knowledges is part of a larger process of cultural resurgence, continuity, and ensuring knowledge and relationships to *tmicw* continue for future generations:

Where we used to pick ... in Enderby ... around the hydro lines, *I remember going up in the hill with my grandma ...* I believe that's where a lot of my teachings came from, with the plants and how to take care of them, and storytelling. *Everything always had a ceremony... when we became young women we went through a ceremony. When they became men there was a ceremony for the young men ... And those old people they practiced it.* We've lost all of that because of the residential school and the sixties scoop ... *I have grandchildren, great-grandchildren coming. All of our babies that are coming behind ... I would like to see something too, some kind of preserving ... of our traditional way and culture.* (Ethel Thomas 19 January 2019)

I'm really big on teaching my own kids, my nephews, children around me about plants—because who's going to carry on this knowledge? It makes me feel good it's been lost for so long, it's time for us to start saving and preserving our medicine. If we were to call my little nine-year-old down here — she's the one who's taken the interest in the plants. If you ask her about a plant she knows about — she can tell you what it looks like, she can tell you its medicinal uses. (Crystal Morris 29 August 2018)

We do need to feel well as adults, as younger Elders and older adults, but let's look at the younger kids and say, what are we going to do? ... *we want them to be healthy, we want them to be rooting the community more with our language, more with this, more with spirituality, more with love and caring and compassion and being able to trust, and let's instill that value back in these as a community.* Whether it's a school, whether it's our band offices, whether it's family situations—all the dynamics, all in one—I think we'll have a stronger community. *Teaching them the food, teaching them how to preserve, teaching them where it is—the value of the land, because without the land we won't have food, without the air, we won't have food without water. We won't have food. We won't be here period... we need to go back to that ... do it in everyday, kind of thing.* (Donna Jules 04 December 2018)

I think parents are going to have to teach them that value back, knowing where the food is, whether it's here—and where is it safest too. I always find the safest and the most peaceful and the most harmonious and spiritual connections is in the mountains. (Donna Jules 04 December 2018)

The process of being on the land and exercising cultural roles and responsibilities intergenerationally is also part of a larger a process of resurgence and restoration. As Duane said, “This is their culture, getting out on the land. With the reserves, then people are taking over our traditional areas ... This was our gym, digging roots. How do we get their taste buds back to where they used to be?” (Duane Manuel, fieldnotes, August 2019). As Duane Manuel describes, the process of being on the land is important for observing changes in the landscape and locations where plants grow, exercising responsibilities as *yecwemenułecwu* (caretakers) across the landscape and learning how to relate to traditional territory beyond the colonial boundaries of the reserve, teaching youth their culture, learning about the diversity of tastes and flavours of culturally significant plants, and exercising and gaining health through harvesting.

Mentorship and access to Knowledge Holders:

Mentorship and access to Elders and Knowledge Holders is vital for guiding experiential learning in *tmicw*-based education, and can also support connecting with reconnection with identity, land, and experiential learning opportunities for Secwépemc people who did not grow up with access to these teachings at home. Knowledge Holders

can give important instruction for *tmicw*-based learning from drawing on generations of accumulated Secwépemc Knowledge and cultural relationships with land, and the relationship that forms between Elders, Knowledge Holders and learners in *tmicw*-based learning settings is an important part of the process. Learning from Knowledge Holders was described as a formative part of *tmicw*-based education:

When I was sixteen that's when I started learning how to make baskets from Theresa Purdaby, my mother in law, and her mother Christine Allen. Further down the road when Aunt Mary [Thomas] came back that's when I started learning from her. *I'm lucky I learned from three strong Secwépemc women, and not only from them but from many other Secwépemc people as well, from young and old. We laughed together and were happy. Before we get our cedar roots and birch bark we always thank mother earth with tobacco. We don't take too much, we always move around to different places to harvest, as it's all Secwépemc land. I'm lucky to have Lloyd Charlie too, because he's the one who really helped me.* (Delores Purdaby 26 October 2020)

If you're lucky enough to grow up in a family that has really strong cultural and traditional connections ... and the parents are always out berry picking and collecting and harvesting ... that's another way [to access *tmicw*-based learning]. Also, Elders, Elders in communities. (Kenth Thomas 12 September 2019)

And I don't know if it was an inspiration or something and I talked about smoking. *And my Kye7e said, well, I'll help you ... So, they taught me and Lloyd how to sqw7ex, you know, start smoking the salmon, that's where I learnt the way. So, all the salmon I used to get from there and start smoking it ... we didn't have deep freezes in those days, so we had to preserve it in some other way. We had to smoke it.* (Louis Thomas 30 August 2018)

[Making *sxúse*, "Indian Ice Cream"] I used to eat it all the time, *mom used to make some all the time. We didn't have egg beaters and she used to use cedar roots—make it up, wrap it up like a clipper, clip it up...* We didn't have no egg beater, she used to use that as an egg beater ... *And she whipped up the cream ... Mom [Dr. Mary Thomas] would make bannock and eat berries all day long.* (Lorna Thomas 17 August 2018)

We used to harvest whatever we needed [cedar roots], and whenever we'd be walking up we'd be getting different stuff that was along that time of the year. And as you're doing it you're picking whatever you can, you're saving it, and you put it away. A lot of the times, a lot of the roots and stuff like that, you put on the stove—I was asking, what the heck is in that pot? ... my last three years with

grandma¹⁵⁶, I think that was one of the best things, *I really enjoyed grandma. Did a lot of stuff with her, walked up in the bush a lot. She showed me a lot of different stuff, what to do.* (Gerry Thomas January 19 2019)

...my mom had gardens, and she taught me stuff ... later in life I had my own garden, I remember the first one I grew, and I laid it out and I did it the way she taught me ... it was all about the fascination of seeing it grow and then having something in the end, right? ... if you've never seen it and never experienced it, you'll never know that it's there. It's presenting the opportunity. (Ed Jensen 24 January 2019)

Secwépemc Knowledge Holders described the vital importance of opportunities for youth to learn land-based knowledges from Elders, that integrate language in interactive and land-based settings. Language revitalization figures deeply into land-based learning, and language continues to construct mental, socio-cultural, and physical cognitive maps that shape understanding and relationships to place and identity. Language is shaped through interactions with place and communicates complex biocultural knowledges, and the interconnectedness between ecological, socio-cultural, topographical, and relational aspects of place. In this respect, language revitalization can in turn be important for communicating and relating to place and identity using cognitive maps grounded in Secwépemc experience and ways of knowing. As Billy (2015, 12) describes in her role as a Secwépemc language educator:

As language educators, we have a role to play to facilitate this transfer of knowledge from one generation to the next. For, as my father, the late Joe Michel, used to say, it is time to start “putting on your Secwépemc binoculars” in order to see Coyote’s universe. I can only imagine how powerful it will be to put on our

¹⁵⁶ Gerry Thomas’ late grandma Christine Allen was an Elder from Neskonlith. Her great-great granddaughter Tanita Sampson (n.d. a) created a website with R.J. Haney Heritage Village titled “Gathering and Sharing” to teach about Christine Allen, as well as about Tanita’s great-grandmother Dr. Mary Thomas (Gerry Thomas’ mother). In the words of her great-granddaughter Tanita Sampson (n.d. b), the late Dr. Mary Thomas, who received Honorary Doctorate degrees, “received world recognition for her environmental and cultural work... Mary never lost her vision for one community that included the people of Salmon Arm and the First Nations. She continued her dream of a cultural center on her land at the Neskonlith reserve. She had so many accomplishments. She paved the way for her people to follow behind and try and preserve the environment and keep her legacy going on and on.”

Secwépemc binoculars and start listening to our stories in our own languages again.

Leonard (2008, 25) describes the positive feedback loops between culture and language revitalization discussing the context of revitalizing his own “sleeping” language, *Miami*. Leonard (2008, 32) also importantly describes how the ways in which the ways we talk about language as “dead”/“extinct”/or “sleeping” all have very real political and social implications that guide future policy, research, and relationships to identity, and language revitalization programming. Land and place provide a context for experiential learning and understanding in a nest of relationship. For many urban Indigenous communities, language and story can also continue to teach lessons through place even when not present in homelands and territories.

Ed Jensen, a land-based educator from Tkemlúps, also spoke about the place-based nature of Secwépemc *tmicw*-based knowledges in the specific caretaker areas of Secwepemcúlecw:

All of the things I know about the plant world, and all of the things that I do with plants, it all revolves around, of course, intergenerational teachings, ways of being that were passed down to me from centuries of survival in the valleys and mountains of Tk'emlúps and area. My grandfather Eddie Jensen, who I take my name from, was raised by his grandfather, a man named Felix Auxime, who was raised by his grandfather ... So those values and teachings that I have are—they're very authentic, and they're very area based. They're based on all of the knowledge that those men gain from living in this area. (Ed Jensen 24 January 2019)

Knowledge Holders also described the importance of mentorship for passing on knowledge about roles and responsibilities to younger generations based on their strengths and learning styles. One example of traditional roles described by Neskonlith Elder Donna Jules is from her experience as a child, when a group of Elders had the role of directing community harvesters to ripe berry picking areas:

I remember a group of Elders coming to my grannies and they would say, oh, this year we have to go here, we have to go there, and we would—they would travel by horse, like a horse and buggy kind of thing, a horse and wagon, and it would

take us days like into Kamloops, or it would take us a day to get to where the huckleberry patch was. Yeah, we'd have to walk most of the ways. Yeah. But it was fun, we looked forward to it in July. We'd stay there until the end of August, I could only guess, because my brother was taken back to residential school. Yeah. I would have loved to have stayed up there more." (Donna Jules 04 December 2018)

Ignace and Ignace (2017, 193), with contributions from Nancy Turner, describe the importance of social institutions and roles such as *yecwmiḡmen* (western *Secwepemctsin*) and *yecwminma* (eastern *Secwepemctsin*)¹⁵⁷ for coordinating and monitoring plant cultivation and timing for harvests through seasonal rounds across different elevations (e.g. Ignace and Ignace, with contributions from Nancy Turner, 2017, 193-204; see also Peacock et al. 2016, 199). The following conversations describe the importance of *tmicw*-based education for teaching youth about cultural roles as *yecwemenuḷecwu*, and about the closely interrelated nature of “socialization, laws, and politics [which] were all entwined very intricately” (Donna Jules 05 October 2020). As Donna Jules (05 October 2020) describes, everything ties back to land and way of life:

Education was never a forced or formally taught, it was a part of everyday life; and people knew when someone has a special gift and reinforced it with those knowledge keepers surrounded her or his life. The land was a harsh teacher, if didn't get ready for winter then be very hard lesson, possibly your life. There are stories about all morals that are told rather than scolding. Laws were harsh also, though unwritten it was enforced by grandparents. (Donna Jules 05 October 2020)

*Everybody has a role to play ... we had our experts. We had our doctors, we had our craftspeople, we had our warpeople, our singers, our storytellers and all of those things, right? So I think if you look at it in that sort of way, who can carry the knowledge properly. Who can carry it, and express it properly, and pass it over properly? I mean, I'm not going to say I'm an expert on medicines, but I know what medicines I use right? ... I always go to an expert—I go talk to Rhona, right? She knows a lot about medicine. Or I go to see some of my Elders, and I ask them about some of those things. So I mean, *know your role I guess. That's the bottom line.* (Ed Jensen 24 January 2019)*

¹⁵⁷ Meaning “resource caretakers”, see Ignace and Ignace, with contributions from Nancy Turner (2017, 193).

...that's a prime example of your role and how important that is. You need to be taught properly. You need to be taught how to harvest, right? And how to help those plants ... *the same goes with everything, like if you don't teach people how to pick berries properly, when to pick them, how much to pick—the same thing's going to happen there. It's going to get over-harvested, or it's going to get sick. It's going to—something's going to happen—something bad will happen if we don't listen to our stories and our teachings.* (Ed Jensen 24 January 2019)

But *they were kind of looked at as their best skill at different things.* So how they put—how they put somebody of value, like the Elders up there is hereditary. Because they have all this knowledge of everything. And so, when a person, or a woman, at that time—when they were ready to have their child, they kind of knew what that person may be. And when they're in their—you know, when they're born, they see them, they have their spiritual vision, they know, or they wait to see, like maybe say the grandparents are really spiritual, but *they wait to see if this child is good at hunting or berry picking or story telling or a knowledge keeper.* (Nuxnuxskaxa ctś717élt [Julianna Alexander] 14 August 2018)

... we have gifted children in different areas, and that's the way we valued our children a long time ago—if they were valued as a hunter, well they knew geology, they knew astronomy, they knew basically everything they needed to know as a hunter, right? They did have other secondary skills—learning how to cook, how to survive out in the bushes for not just days—maybe sometimes months. Where, and we did have people who knew the medicines, so that took a lot of physics and chemistry and all the things that are needed. (Donna Jules 04 December 2018)

Ed Jensen spoke about the depth of training in for becoming a hunter following Secwépemc laws and protocols and the role of uncles in this training process, and notes the sharp contrasts between the depth of time and experience required for Secwépemc cultural training to become a hunter compared to Possession and Acquisition License (PAL) tests and the provincial CORE hunter education course. He describes how his own process of being trained as a hunter taught him about his roles and responsibilities, and how to properly exercise rights as a Secwépemc hunter:

Like a lot of the stories that I've heard are kind of centered around who I was growing up. You know? Why I do protocol around, follow it, why we're so thankful for that. They strengthen my conduct, right? Like *today, common law,*

you can go on a weekend and write for your PAL, your possession and acquisition licence for firearms. And then on another weekend you can take a wildlife course, I forget what they call it. and then you can get a hunting licence, right? Over two weekends. Me, I spent the first six years of my training learning. My uncles didn't let me kill anything ... they'd take me to the field, they'd sit there, they'd make me just sit there and watch what comes up, maybe a coyote coming, some birds, a herd of deer, some moose or whatever ... What are they eating? And then I'd watch them interact ... They showed me that they cared for each other ... they love each other! They have feelings. They know how to be scared, they know how to be happy—they know all of the things that we know! And so it made it harder for me to kill. And there's a good reason for that ... I have something that not a lot of people have anymore, and because of it I know how to restrain myself. I know how to humanely hunt... I'm not opportunistic where I'm just going to shoot everything I see, because that's not right. There's ways of managing the herds too, right? And so those lessons I learned are ingrained to a point...like it's just—the way I was taught—that's law. That's the law. Don't break the law. And you know, I appreciate your conservation efforts and whatever you're doing there, but I can't break my ingrained law. (Ed Jensen 24 January 2019)

Knowledge Holders also spoke about the ethics of knowledge sharing in the context of building relationships and understanding between Secwépemc and non-Secwépemc communities, and the differences between knowledge that is appropriate to be shared in outside circles, and knowledges that are kept within community. Questions that come up in this consideration of ethics and sharing are highlighted by land-based educator Ed Jensen:

I think what we're talking about around sharing that knowledge, you know, it needs to be shared with the appropriate audiences ... but there has to be a way too where it needs to be a general sharing of knowledge, where we say okay, yes this is what we do, but you need to know your place in this. You're not the one to do this. We need to have those caretakers, right? We need to have the ones—I guess managers, so to speak. Who can—our chiefs, they were the managers, right? Who would say, okay, it's time to go out and pick saskatoon. Speqpeq'uwi. It's time to go out now, it's ready, we're going to go out and then have the people do the harvest, and then berry chief comes along and says, okay that's enough. Now we're going to go over here ... we've been self-managing for a long time, but not everybody's a manager, right? Not everybody has that deep knowledge enough to know when they're doing a good thing or a bad thing. There's experts like Rhona Bowe who will tell you—hey, what are you doing? It's not time. You're just killing that plant for no good reason. It's not going to do you or I any good if

we're going to rip it out of the ground right now. But let's come back in three weeks and I'll show you how. *So more teaching, and to the appropriate people, and I think that if we take that family-based approach, the way we used to run things was every family was responsible for their family. And they would have those roles in the family*—the people who went to the berry chief and said, hey! It's almost time here, what do you think? Oh, well let me get back to you. Right? And then it happens. And then they go back to the family and say okay, round them up, let's go. (Ed Jensen 24 January 2020)

Schools

Mentorship and *tmicw*-based education takes place in a variety of settings, some examples being knowledge sharing and workshops hosted between nations, and within schools (e.g., Little Fawn Nursery, see Arnouse 2019; immersion schools such as Chief Atahm [see Billy 2003] and *Tsm7aksaltn*; band-run schools such as the Neskonlith Education Center, and the School Districts). The biggest challenge for programs to integrate land-based learning in outdoor settings are safety requirements that satisfy child care licensing requirements (Arnouse 2019, Little Fawn Nursery).

Some youth and adults spoke about struggling to find a mentor, or about challenges growing up outside of community and not having access to mentors and Knowledge Holders. Silas Christian, a youth from *Switzmalph* who was involved in the *Switzmalph* summer youth program, described the importance of having the *Tsm7aksaltn* daycare he attended to learn about culture:

Tsm7aksaltn...That's where I learned about Indian potatoes, Indian ice cream, and I also learned a lot about—I learned more actually about animals, plants and stuff like that. I also learned about sunflowers, and how you can cook them... Maybe more people—like the people that learn could become workers, help out children when they grow up they can be a worker too... and maybe more places you could learn... Cause right now the only places I know to learn it from is from school, where I barely learn, and then there's also the daycare that I used to go to (Silas Christian 30 August 2018)

Schools have an important position for motivating experiential learning through working with local Knowledge Holders to teach about harvesting, cultivating, and

processing foods:

Just by taking them out and showing them. Taking someone out and saying—this is how you do it. this is how you collect them. Also in the schools, you know, like Chief Atahm... *I know the one in Enderby does that, and the ones up in Alkali Lake are really strong on that.* Yeah, and medicines—knowing which medicines to use, how to use them, and teaching which ones to stay away from. (Kenth Thomas 12 September 2019)

...it's good to learn the native foods too, eh? For these younger ones... teach them to go out and gather it... The Elders will tell them, you don't pick this one, you pick this one... Then you can look at plants, leaves, whatever ... *I think there should be more Elders out there teaching these young ones. Especially in schools...* they'll explain it to you more directly and you understand what they're talking about... then at least I'll know how to show the next generation when they go out, they ask me to take them out and I can show them this is what you pick, and this one here you don't pick. (Lloyd Charlie 03 September 2018)

I do a lot of work in the schools, and it's really based around what I know about making tools and how they were used—hunting and fishing and those are my areas of expertise, right? And *I think that we're underutilized.* Like I'm not going to be around forever. They're keeping me pretty busy, but I think I could be a hell of a lot busier. I think also, *there needs to be another me coming up behind me. An apprentice.* And I've put it out there. Come and work with me. Let me teach you. Because I need you to teach the people coming up behind you—right? And the thing is it goes back to this world we live in. (Ed Jensen 24 January 2019)

I show all the kids, not just the Native kids, I show all the kids, so that way when the kids look at it, they can see what we're seeing. And they can tell the people—they can tell their parents, oh no no, don't wreck that. That's good medicine for us. No no don't cut that, try and preserve as much as you can. *Like I tell them, when you look at the mountain that's our store.* When you look up there, people say, oh I see trees, I see animals. I see rocks. And then I tell them that when I look up there, I see my store. My store which I need, that I get all my roots and everything that I use from up there. I get my berry pickings, I get my berries from there, I get all my roots—any kind of roots that you can think of. And I took as much as I can, and I show the kids ... So that way they can understand a little bit more of what we're trying to save... When they feel it they understand a little bit more, and I say, when you look at the mountain now, you'll know, you'll understand why we're trying to save the mountains. All the food that you can get off there. And it's not just only our people that are wrecking it—you see the little places where there's a big hole in there, there used to be trees in there? That's from cutting them down. And that's a scar in the mountain, I always say, that's a

scar on the mountain like how we get a scar on our hands. Nothing will grow there. You think of all the little scars that you've got—no hair will grow on there, nothing will grow on there. It'll just—it's just like that scar that they did on the mountains. So when you look up there, and you see all the little parts where they cut out the trees and everything, a lot of our potatoes and stuff like that were in there. And that's gone. So it's just, places where we've got to watch and stuff like that, and think about what we're going. Just sharing as much as we can. (Gerry Thomas 19 January 2019)

However, some Knowledge Holders also cautioned sharing plant knowledges considering many rare and culturally significant species that have been overharvested in classroom settings:

Don't take it just because it's there and you've learned about it, perhaps show it but not harvest it, especially if you do not know how to prepare it... *I know of a classroom of about 18 students who were taken out on the land each of them harvested nine to ten bitterroot. This plant is hard to find....if you're not going to use it and respect it and leave it alone—*

because in that case, bitterroot in that area was, up until the fires, pretty scarce. It was hard to find. But leave it alone ... *it was wrong to bring eighteen young people—it's okay to show them and observe, show them the pictures—but to go out there and ...take take take, it is wrong. A medicine that's already in shortage in our territory—it is a no no. so when you talk about protocols, it's about being—spelling it out.*

It is my worry ... sharing too much knowledge and too many people are going to be taking and not using it or taking to take. I agree to an extent, there's some sharing and knowledge translation for educational purposes, but there's leaving it alone if you're not going to utilize it and put it to use, and don't know what to use it for. Don't take it just to take it. (Crystal Morris, and 19 January 2019)

As Crystal describes, clear protocols around harvesting and knowledge sharing in educational contexts are needed, as well as increased education about cumulative declines in plant species and habitats. Many Secwépemc Elders in this study described the need for increased education to understand how to restore Secwépemc plant habitats and populations for future generations.

Culture camps

Tmicw-based culture camps were also discussed as meaningful ways to connect to youth, community, land, language, and teachings. Connecting youth and interested community members with mentors and Knowledge Holders, and creating encouraging and supportive environments for people to learn and share knowledge were described as important parts of this.

... the culture camp—I've been in my position [at Splitsín Health Services] for less than two months, the community has given direction in the CCP plan and we all agree *we need to reconnect with the land, we need to learn more about traditional foods, traditional medicines, land-based activities* —we've tried, we know there's challenges there, but at the same time, it's an opportunity and we need to keep trying... *it's about passing on the importance of tradition and knowledge.* (Crystal Morris 29 August 2018)

So the rumblings in Secwepemcúlecw were that there were going to be a few Secwépemc who were going to teach some *Secwepemctsín* in the same way ... they did it up in one of the Cree Nations, like just up near Red Deer... *they put their school out on the land, and they just went straight to the language... at Chief Atahm I would see the young kids outside, running around, and touching the stuff that they were learning about when they were learning the language ...* It's understanding being right out on the land and learning about that, you know? (Kenthen 12 September Thomas 2018)

We always have classes over here with the younger generation, with Erica, she has classes going on, *teaching the younger ones how to can and pick berries.* She's always got something going on with the younger generation. So, I'm very proud of my niece. (Jane Thomas 19 January, 2019)

In addition to supporting *tmicw*-based learning, culture camps provide importance spaces for connecting with community and youth in care, revitalizing trade networks, and increasing community spaces and programs to bring people together to heal, learn, and teach about food.

They have to be taught that [values]. And in order to be taught that we have to be allowed to teach them that, and in order to do that we need to take them back out on the land and show them the value of who they are and what they're for, and

that's the importance of those cultural camps and the storytelling that Kenthen does, and the interviews that you [university researcher] do, and—cause *it brings back the importance of what originalness was supposed to be, and how to look after it*. So it starts with us, really... And ensuring that with our next generation. So it's pretty important. All of this is important. Nothing can be left out. (Rhona Bowe 30 August 2018)

... when we were out at the culture camps, we had Secwépemc Child and Family Services children and their caretakers ... we took those youth out on the land where they were to camp— there's no, there was no cell service, no wi-fi, no nothing... So, they were all interacting, they were playing, they were running around, and when they're running around they're grounding themselves. *They're grounding themselves to become part of the land. And then we take them out to show them different medicines and what those medicines do—we were teaching them the value of what is theirs and what is theirs to look after*. And so, then we're creating that for them. If you just leave them, then what happens, they still—they suffer a lot of trauma, they don't know where they're from, they don't know their purpose, they don't belong anywhere, and you have this big mess that's being created as we speak right now. So, what we're doing is really sticking our nose in everybody's business and saying—okay, so you, I see you have some of our youth. *We have a story to share with them, or we have a song to teach them*. (Rhona Bowe 30 August 2018)

I think there's a huge piece missing in our life of being connected... *I think having a place along the mountain where people can go, and bring whatever they need to be connected again, to each other, to themselves, to feeling good again. I think we all need a place like that—I need a place like that, I guess I can't talk for everybody, but — and bringing people you need up there... someone that speaks the language... But especially for the kids too... Whether it's in the summer, bring our families, or whether it's in the winter — we can go there in the winter, all, any season, and be there ... Being in a home like that, cyistéń, I think is — if you've ever been in one it's just like being home again*. Like having a home. It's circular, it's warm, it's made from everything from the earth, it doesn't have electricity... (Donna Jules 04 December 2018)

...if we had a camp in the mountains, like build a couple cyistéńs [camps], I can go there, and me, I could go there as an individual, or I could take my family and I could ask someone ... can you come up and teach me how to do baskets? I could ask a hunter to come up and say, well, show me how to make tools out of these bones, or—I don't even know how to tan a hide, I could teach them how to fish. I can fish, and preserve that, and dry the meat, dry the fish — whatever. I can go picking berries, and I know where the medicines are, I know what medicines to use ... there's everything you need out there. So if we had a place like that, people

have a choice of course, we can bring an A and D [Alcohol and Drug] worker up there, or a healer up there — we can bring whatever it is I need to heal myself to, ground myself to ... make sure I have water and food, and people to help me build a sweat, if that's what I need... whatever I need to become whole again, and that's what I'll do. And *I see that in my — in a vision somewhere yet, where people can go and do that and be connected again, to each other.* (Donna Jules 04 December 2018)

Knowledge Holders highlighted the role of community-led culture camps, as well as formal linkages with agencies such as Secwépemc Child and Family Services and programs involving other community support staff to reach both youth in care as well as provide contexts to support individual and community healing in land-based contexts. It is important that culture camps be community-run and led. Neskonlith Elder Donna Jules also highlights the role of schools in working to provide safe and supportive environments in *tmicw*-based settings where youth can have access to mentors, traditional teachings, and to learn to learn songs, dances, language, plants, and cultural values:

I think in the school district, if we were to have a place like that, they can learn the songs and dances, they can learn the language, they can learn how to be a good hunter, be a good provider, get some values instilled in them too, and know that there's a healthy place—maybe they're not coming from a healthy home. But there's a healthy place to go—you can live out there if you want with your parents, and go there to be safe, go there to be grounded without electricity, without all this other stuff going on. So I think if the district can help support that kind of education, or that kind of learning I guess, would be a, would be a bonus not only to them but to the community. All the communities. (Donna Jules 04 December 2018)

Re-introducing traditional foods as medicine

Many Knowledge Holders also spoke about Secwépemc foods in a holistic way, capturing the embeddedness of culturally significant foods in spirituality, relationships, connection to ancestors, and as medicines.

Our food, our plants, that's our medicines. I don't find them separable... (Rhona Bowe 30 August 2018)

...*everything we ate was medicine*, because it gave us Iron, A, B, C ... they're all medicine ... we ate them in the springtime, there was different plants that we ate later on in the summer, then there was ones later on in the falltime like raspberries and huckleberry—you know, every plant had a purpose for food. (Nuxnuxskaxa ctś717élt [Julianna Alexander] 19 January 2019)

Land-based education can be important for learning about the importance of Indigenous food systems and seasonal foods for dietary health (Mailer and Hale 2015), and planning for seasonal harvesting. Knowledge Holders spoke about impacts from the nutrition transition, the health of land-based foods and game that have these plants in their diets, and the importance of ensuring foods are accessible to community members:

Our bodies are adapted to everything that we have here. If we can just eat a little bit of it and stay away from processed foods a little more, our people are going to get healthier, right? So really important work. *Very important in making it accessible too, right?* (Ed Jensen 24 January 2019)

I crave certain things. And always at certain times of the year too, and I guess that's when my body needs it, right. And *it always coincides with when it's ready.* Heart and liver—man by the end of August my mouth is watering for—you know, and that's the first thing I eat after every kill. (Ed Jensen 24 January 2019)

... those kinds of foods only grow in the springtime, and they feed everything that wakes up, that are hibernating, and they eat those. Same with the humans — we collect certain things for vitamins, and — cause during the winter you don't have certain vitamins and ... iron from different foods, eh? Different vegetables and different bulbs. (Nuxnuxskaxa ctś717élt [Julianna Alexander] 21 August 2018)

...the *wild game* — moose, deer, elk, caribou. Any game like that, cause *they eat ... Indian medicines ... That's why they're healthy and that's why when you eat wild game meat it tastes better than what's in the store...* I like eating wild game and stuff like that, mountain sheep and that, cause they eat all that ... minerals and stuff like that too, eh?... Wild game is better than what you buy, your meat, in the store. (Lloyd Charlie 03 September 2018)

That's why I say, *the more you eat more Indian food, the healthier your body will get*, eh? That's why I try to eat as much as I can out there. (Lloyd Charlie 2018)

I heard stories that our people used to live to 130 years, 140 years old ... And it's probably because of the things they ate... And then, the ways of our being

changed right? We started eating things like pork and flour and stuff like that, eh?... And you know, just so many things just started killing us off, cause it's not the way that our bodies are meant to tick. *The key to health is right here, it's within 60 miles of us...* (Ed Jensen 24 January 2019)

Several studies have focused on nutrient composition in Secwépemc foods, and the effects of harvesting times and food processing methods¹⁵⁸ on nutrient composition (Kuhnlein et al. 2016). About sixteen key geophyte “root” plants with starchy tubers, rhizomes, and bulbs were particularly important in Secwépemc diets, estimated to have composed approximately one third of diets¹⁵⁹ to slightly less than 50% of diets in the Interior Plateau for an estimated 12,000 Secwépemc people in the 1770s¹⁶⁰. As noted by Ignace and Ignace, with contributions from Nancy Turner (2017, 184):

In the mid-1970s, Ike Willard estimated that around the turn of the century, when he was young, about 200 pounds (90.7 kilograms) of scwicw (glacier lily) would last a family for the winter months (Palmer 1975b, 54). Mary Thomas estimated that in addition, a family would dig as much as 100 pounds (45.4 kilograms) of skwenkwínem (Indian potatoes) (Turner, M. Ignace, and Loewen n.d., 153). This was at a time when families already grew potatoes and other vegetables in gardens, and the harvest of edible roots before the arrival of market starch foods would have been much higher. Eugene Hunn has estimated that on the Southern Plateau, where camas was the most important root plant, up to 50 per cent of the diet derived from root plants, whereas on the Northern Plateau, including Secwépemc territory, root plants may have been a slightly lesser part of the Indigenous diet (Hunn and Selam 1990).

Secwépemc “root” plants have generally similar harvesting, management, processing and storage protocols¹⁶¹ Mullin et al. (1998, 769) describe the importance of Secwépemc root foods for long term dietary health through their analysis of the role of

¹⁵⁸ E.g., pit cooking (*tsq̓elstém*) root crops such as Avalanche Lily (*Erythronium grandiflorum*) and Balsamroot (*Balsamorhiza sagittata*) is a method of slow cooking in an underground oven, which converts complex carbohydrates into more digestible and palatable form (Ignace and Ignace, with contributions from Nancy Turner, 2017, 181; Kuhnlein and Turner 1991, Loewen 1998, Peacock 1998 as cited in Turner et al. 2000).

¹⁵⁹ See Turner et al. (2000); Tk'emlúps Te Secwépemc (2018).

¹⁶⁰ See Ignace and Ignace (2017, 116); Loewen et al. (2016).

¹⁶¹ Turner et al. (2000)

macronutrients present in select Secwépemc roots, carbohydrates in particular, in contributing to dietary energy requirements. Peacock et al. (2016, 182) and Turner et al. (1990) similarly describe how plant populations would have been severely depleted had they not been managed and enhanced, given their importance as essential sources of carbohydrates, dietary fibre and essential vitamins and minerals in Secwépemc diets.

Many Elders also spoke about how they preferred the taste of Secwépemc plants to field cultivated varieties, and the uniqueness of certain areas such as the *Switzmalph* valley for gathering certain types of plants, such as *sxúse* berries:

I'd like to see more of it growing, come back ... *Wild raspberries, oh, they taste so great ...* I find them sweeter, and more tasty, and also you know, it's natural grown from the sun. You get a lot of Vitamin C and stuff like that—that's really good for you, health wise. A lot of people really need that. And same with all the food that grows, that's why they called this—that's what grandma used to say, that *this valley was just rich with fruit. That's why they used to move here in the summer and the spring, to do a lot of picking and drying of the fruit. Get all their fruit in, eh?* (Jane Thomas 10 September 2018)

...those wild strawberries too, eh?... They make really good jam... And you don't have to use that much sugar... That's how sweet they are... Another thing that they don't have on here is the Oregon grapes. I love eating them. When I'm real thirsty I like eating them—it quenches your thirst right away. (Lorna Thomas 17 August 2018)

... [Spring Beauty] only took three minutes to cook—put them on a plate and put butter on it, and salt. They taste like hazelnuts. Yeah, they're really tasty. I like them. Yeah, the spring beauties, I really never had a chance to taste them, because they were so tiny. You can put them in your mouth and not even taste it, they're so tiny. (Lorna Thomas 2019)

Crystal Morris and Louis Thomas spoke about some ways of strategically and gradually re-introducing many of the flavours and diversity of Secwépemc plants into diets in their families and communities:

We're having Indian tacos for dinner and that's become our traditional food, it seems to be. You put a piece of fry bread and some hamburger and lettuce and tomatoes and—it is what our young people recognize as a tradition. In general people recognize this too, when we go to gatherings, what do you go for? You go

for the Indian Taco, we go for the tacos. When we talk about traditional foods, it seems to be, in today's society, it doesn't have the same meaning as it did 30 years ago—well, I'm going to go and get a deer and we're going to have deer stew and oven bannock, or traditional tea.

I've been trying to re-introduce traditional teas to community, as an alternative to juice and to the water ... So, I took a little bit of cane sugar, poured it in with my traditional medicine, made the sweet—the nicest smelling traditional tea I could come up with, I was surprised how delicious and aromatic it was.

At a family reunion of about 200, we went through two big pitchers of iced traditional tea. Kids thought it was iced tea bought from the store. So when you're competing with today's foods and traditional foods—you almost have to have that competitive edge ... I suggest to give them a little bit of sugar, you start pulling the sugar back, until there's no sugar. (Crystal Morris 29 August 2018)

When I think of food and I think about the food systems, I know, at least as I age, I have become more aware of how Western foods have not agreed with me... And it's made me more mindful of passing on good eating habits to my kids, and realizing that the body can only handle so much. Traditional medicines have helped me begin to heal the years of food that do not agree with me. *When I do think about food, I think about it more holistically...* that's become really important in our lives, and *I can do that with my teachings on traditional medicines and traditional foods and traditional teas – implementing that into our diet.* (Crystal Morris 29 August 2018)

I seen the disappearance myself. Same with our hazelnuts, our tiger lily, you know—we'd have to really look at what the people really like, so we'd have to really concentrate on that as the main food source. You know, like the wapato—we've never tasted that before, cause it disappeared from our diet a long time ago. And I think the coming of the railway had a lot to do with that—the railway and the highway. It damaged the ecology of the bay. Even our bulrush disappeared from down there. (Louis Thomas 30 August 2018)

Louis Thomas described the importance of the diversity of Secwépemc foods and their connection to Secwépemc culture: “when people talk about native foods, they talk about salmon and bannock... there is so much more to our foods and culture than salmon and bannock... we're like the wapato, are we going to grow?” (fieldnotes August 2019). He describes how focusing strategically on plants that community members like for restoration and as a way of re-introducing traditional foods into diets can be a strategic way of starting to approach food systems restoration. For example, some Knowledge

Holders spoke about the importance of experiential learning and transplanting Secwépemc plants as a starting place in a larger process of cultural resurgence, and the importance of learning how to harvest and how the plants taste again:

“I wanted to do the experiential so I know what I’m talking about. You know when I give talks, I know the sweat that the people had to go through to build it. A better understanding. And yeah. Yeah, see, I guess you’d call that hope. All the plants. Just think, it was just an idea of transplanting a few – where it will go.” (Louis Thomas 2018)

In *Switzmalph*, there has been a strategic focus on the restoration of two important root foods, *scwicw* (Avalanche Lily) and *skwekwíne* (Spring Beauty). As community members describe, these potatoes (as they are referred to by many in *Switzmalph*) were traded frequently in their parent’s generation, and families living in *Switzmalph* traded berries and other traditional foods, which commonly grow in the *Switzmalph* area (*Switzmalph* meaning soopolallie bush), for *skwekwíne* from families in Sk’włax (Little Shuswap Lake Band). As Whyte (2016, 363) describes with Anishinaabeg wild rice, this strategic prioritization of specific Indigenous foods for restoration is part of a restorative process given impacts of historical and ongoing drivers such as settler-colonialism and environmental degradation on Indigenous food systems. In *Switzmalph*, I believe the strategic prioritization of *scwicw* and *skwekwíne* could also be viewed as a way of reconnecting with culture, community, and traditional foods, while resisting Secwépemc erasure from cumulative factors and contemporary contexts of settler-colonial landscapes such as landscape change, ecological degradation, wage economies, limitations on mobility due to socio-economic circumstances and reserve system, and social and cultural impacts of settler-colonialism. Furthermore, the way Louis describes Secwépemc food systems restoration could also be seen as strategic prioritization of Secwépemc plants as a step in creating transformative pathways for Secwépemc futures outside of social-ecological traps in settler landscapes, and their erasure of Secwépemc foods and place. These two plants are incremental ways of restoring Secwépemc food systems, maintaining and revitalizing land-based knowledges,

and planning for and imagining Secwépemc futures beyond settler colonial landscapes.

Barriers to accessing culturally significant foods and medicines

Several historic and ongoing barriers to accessing Secwépemc foods and medicines, related to colonial and systemic factors, continue to shape Secwépemc peoples' experiences and relationships to foodways. Knowledge Holders spoke about the reality that many Secwépemc youth have not had the opportunity to taste many culturally valued foods, and learn about the language and values interconnected with them, due to recent cumulative changes to social, cultural and ecological systems. Examples of these socio-economic and systemic barriers are discussed briefly here, and were discussed in more detail in Figure 1 in Chapter 3. Three of several socio-economic barriers identified by Knowledge Holders affecting access to culturally valued foods and medicines, and agency in food choice include: rising fuel costs; wage economies demanding increased time and resources; and the need to travel longer distances to harvesting areas due to cumulative development. Furthermore, land tenure, policy and legislative landscapes and racism were identified as systemic barriers; and intersect with other barriers such as overharvesting and hunting licensing requirements.

Land privatization and grazing leases on Crown land were also described as impacting both the ability to harvest as well as collecting baseline data for cultural heritage studies. Rhona Bowe, Ed Jensen and Lorna Thomas all spoke about experiences with racism while harvesting, especially concerning harvesting areas now on privatized land.

Private land—people do not want you on their land, they worry about whether you're going to find artifacts, and if you find an artifact, then it becomes cultural heritage ... this is where prejudice really becomes alive and well ... And then there's some that are okay, but for the most part it prevents us from getting to a lot of our medicines ... or else they make them into parks. (Rhona Bowe 30 August 2018)

Last year I did cultural heritage work ... my job was to go out in the affected territory and just take baseline data ... And *then I come to a fence, and it'll say no trespassing*, right? I jump the fence anyway, I want to go see what's in there, and I find a lot of stuff. I find great berry patches, I find good hunting ... balsamroot—I found a field of it like I've never seen anywhere. Like it was huge, probably hundreds of acres, and it was just thick, right? And sure enough, *all around that area we found a pit cooking sites and pit house sites that weren't previously recorded, right ...* Grazing leases, the Crown land that's getting leased out to ranches, they're posting no trespassing. The policy around that needs to change pretty damn quick—they have no title to that. They have a lease. They have no right to keep us out, but yet it's posted no hunting and no trespassing anywhere... *a lot of that baseline data needs to happen behind locked gates... so we start doing our sovereignty at higher levels, and we start utilizing the food sources and medicine sources more, and we start taking ownership of it more, it's going to make our title and rights cases stronger ... We need to really insist that things like cultural heritage studies are done on broader scales and with far more reaching effects—not just the study area itself... You can't just fence off an area and say that what you do there isn't going to affect everything around it.* (Ed Jensen 24 January 2019)

In addition to concerns regarding land privatization, some Secwépemc harvesters also commented that they would like to exercise their Aboriginal rights and have access to harvest and cultivate culturally significant plants in provincial and national parks. Knowledge Holders described the multidimensional experiences of being gradually pushed out of harvesting areas, as well as the role of national and provincial parks in creating environments where Indigenous people do not feel safe, welcome, or are at risk of being charged despite affirmed Section 35 Aboriginal rights. Provincial and national parks and protected areas have a long history of dispossessing and restricting Indigenous peoples' access to, and management of, traditional hunting, fishing, and harvesting areas, which may also present a barrier for the recovery of Indigenous food systems (Proctor 2014, 200). In BC Parks (1997a) Conservation Program Policies, Appendix 4, they describe:

It is the policy of BC Parks not to unjustifiably infringe the exercise of any aboriginal rights or treaty rights in parks and ecological reserves. The application of strategies and policies outlined in BC Parks Conservation Program Policies

will be undertaken with full consideration of aboriginal and treaty rights to harvest.

This policy outlines a very particular take on legal obligations and mandates of BC Parks, though it is troubling due to the vague nature of what would constitute a “justifiable” infringement. In BC Parks’ future strategy (Government of British Columbia 2016), they describe commitments to reconciliation involving increased opportunities for “traditional activities... and economic opportunities” for Indigenous peoples in protected areas:

Our ability to embrace [Indigenous] historical and deep connection to these lands, and to facilitate opportunities for them to undertake their traditional activities and offer new economic opportunities within protected spaces, will be a critical part of BC Parks future and will become part of our commitment to achieving long term reconciliation.

Some First Nations have agreements with Parks Canada and BC Parks that recognize and affirm Aboriginal harvesting rights in these respective parks and protected areas, while in other national parks within traditional territories there remains a risk of Indigenous harvesters being charged (Truesdale and Brooks 2017, 18; BC Parks 1997b). While Section 35 Aboriginal and treaty rights in the *Constitution Act*, 1982, recognize Aboriginal harvesting rights, their practice in national and provincial parks remains a grey area because of the potential for all harvesting regulations in parks to be a “justifiable infringement” based on conservation, public health or safety, and there remain perceptions among some Indigenous harvesters of not being welcome to harvest in parks generally. Furthermore, although these policies and commitments¹⁶² from BC Parks recognize Aboriginal rights, more work is needed to implement Indigenous governance and management of culturally significant landscapes and species in provincial protected areas and parks. McCune and Cuerrier (2020, 162-163) describe the importance of recognition for culturally important plant populations by parks so they can

¹⁶² BC Parks (1997a); Government of British Columbia (2016).

be guided by Indigenous communities regarding appropriate protection mechanisms, as well as accessibility to Indigenous harvesters. However they also discuss the problematic nature of parks designations and issues of broader accessibility of sensitive areas to visitors outside of Indigenous communities (McCune and Cuerrier 2020, 162). In Cree territory in Québec, parks have been described “either as a tool for conserving their valued medicinal plants or as a barrier to accessing their own lands” (McCune and Cuerrier 2020, 162).

Land tenure and policy landscapes in the Interior of British Columbia shape Secwépemc food systems in a variety of ways. Changing land tenure landscapes including the reserve system, land pre-emptions, and increased development resulted in rapid changes to the interconnected social, economic, relational, and ecological components of Secwépemc food systems, including the nutrition transition. Socio-cultural impacts from The reserve system, residential schooling and foster care systems, and other systemic barriers have also collectively contributed to creating barriers to the access and availability of Secwépemc foods, and from passing on *tmicw*-based and food systems related knowledge over several generations. Neskonlith Councillor and Knowledge Holder Louis Thomas describes how the reserve system and other systemic and ongoing barriers not only fractured Secwépemc access to land and their ability to practice roles and responsibilities as *yecwemenulécwu*, but also fractured social relationships between Secwépemc communities:

The plants are saying, you know what, we're going to leave you if you don't use us anymore. Because the simple fact is, we got away from it... and you know, the reserve system didn't really help our people. All it did was isolate us... And that created that division amongst our people. At all one time, you know, we always talk about—we're all Secwépemc. But we're not anymore, you know, we're individual bands now. We're either Neskonlith, Adams Lake, or Little Shuswap, or Shuswap Band, or Simpcw, or whatever. We always talk about unity, but we still talk about ourselves as bands. (Louis Thomas 30 August 2018)

Louis Thomas's quote speaks to several things: the entwined nature of social, cultural and ecological systems; impact of land tenure, legislative, and policy landscapes

on Secwépemc social and ecological relationships; the agency and personhood of plants; the importance of Secwépemc roles and responsibilities as *yecwemenulécwu* for the maintenance and enhancement of social-ecological systems; and the relationship between land tenure and accompanying colonial policies and legislation on social relationships and identity between communities.

Revisiting the term “Indigenous Food Sovereignty”

We did not use the terminology “Indigenous food sovereignty” when we asked community members about relationships to food and food systems restoration except for in two cases. However, we did ask questions that explored some of the central principles of Indigenous food sovereignty identified in the literature, such as self-determination, relationships, and effects of colonial policy and land tenure changes on Secwépemc food systems. Neskonlith Knowledge Holder and Councillor Louis Thomas spoke directly about how, in his perspective, the term “Indigenous food sovereignty” doesn’t reflect Secwépemc culture and relationship to land: Sovereignty feels colonial to me, that’s not our culture...To me, this is like eating our culture. Returning to our culture again (fieldnotes, July 2019). Louis Thomas’ response is an important reflection on the interrelatedness of cultural revitalization and food systems restoration. Furthermore, he describes the importance of culturally specific definitions of relationships to food, and critiques the capacity of words like sovereignty to capture Secwépemc concepts, relationships to, and processes of food systems restoration and their interrelatedness with culture, language, and story. Instead, Louis consistently used the words “Eating Our Culture” to describe the restoration of Secwépemc foods in Switzmalph. I understand Louis’ description of “Eating Our Culture” as the necessary systems-level changes, planning, and processes of resurgence in language and cultural values that are interrelated with Secwépemc food systems restoration. Specifically, he refers to how a resurgence in cultivating and eating culturally significant foods is also a process of cultivating and eating/embodying culture and cultural values embedded in these foods. Both the title of

this thesis and the Secwépemc feast and art exhibit at the Salmon Arm Arts Centre reflect Louis' concept.

General and broader terms like Indigenous food sovereignty may be useful in communicating a common global movement and set of values among Indigenous communities specifically. Other Secwépemc-driven projects, such as the Indigenous Food and Freedom School led by Secwépemc scholar Dawn Morrison, as well as the Okanagan Nation Alliance working on Syilx food systems restoration¹⁶³, use the term Indigenous food sovereignty to describe a larger movement of regenerative Indigenous-led and community based food systems restoration, grounded in local and culturally-specific principles and values, that has been gaining traction over recent decades. In specific contexts, as Louis Thomas highlights, there may be more suitable and culturally grounded words that speak to the relationships between people and food. These differences are important, because they describe the diverse languages, ecosystems, histories, pedagogies, and values of each Indigenous Nation that inform and contextualize food systems restoration. The many cultural nuances and contexts that make up the larger Indigenous food sovereignty movement may be overlooked when using broader terminology, as well as the limitations of the English language for capturing culturally grounded concepts.

Research partnerships and future research

Knowledge Holders discussed the potential for creating avenues for *tmicw*-based learning through participatory research partnerships with formal institutional linkages that hold positions, and training, for community members to direct research with Secwépemc plants. Importantly, research partnerships also need to value Secwépemc knowledges and the guidance of community experts who monitor plants through their extensive time harvesting on the land, as well as decision-making roles for participating

¹⁶³ Okanagan Nation Alliance (2017).

Indigenous communities, and clear processes and procedures for approaching intellectual property rights in associated publications, confidentiality, and Indigenous rights and responsibilities to their cultural heritage (e.g., see Bannister and Thomas 2016, 359).

Knowledge Holders discussed a need for further health research focusing on monitoring health effects of returning to traditional diets; contemporary locations and health of culturally valued plant species, as well as methods for preserving; best practices and results of plant propagation, eco-cultural resurgence projects, and restoration activities as mitigating factors given climate change and other cumulative impacts to Secwépemc lands and habitats; as well as presence and composition of medicinal and other plant species in seasonal diets of game. Knowledge Holders described the deep place-based nature of Secwépemc knowledge, and the importance of maintaining and revitalizing knowledge systems through land based monitoring, and generating observations and experiences of contemporary climate change effects on Secwépemc plants, game, and seasonal indicators.

The animals ... They're like us. They've spent millennia developing their own ways of being in their own natural surroundings. So, they know which medicines to go after, they know where they are, where they grow. And you'll see that in the way they migrate yearly—you'll find animals in certain areas at certain times of the year. These are studies I'd like to see happen too. And I'd personally like to participate in those. I want to observe. I want to know what bucks are eating to get ready for the rut. I want to know what they're eating to grow their horns in the springtime. I want to know what the does are eating to get themselves ready to have their babies. You know, I want to know what they're eating if they get a cold ... we can learn from them. We can, you know, we can learn more from them to learn from what's left of the knowledge that we have left. Right? That's how it was learned in the first place. It's a good start, right? And really, there needs to be studies on the plants themselves. (Ed Jensen 24 January 2019)

... the other piece about that is knowing and maybe documenting where are our Indigenous plants? Where are they nowadays? And how can I start fixing it so that they will be in abundance again? The value of just knowing how to survive—spiritual connections... (Donna Jules 04 December 2018)

Our medicinal and edible plants ... how do we preserve it? ... there needs to be more education for how to take care of our plants, our foods. Because ... just the

other week there were some guys that had went hunting. They got two deer, but *one of the deer they had to throw away because it had some sort of disease ...* when we talk about our food, *our fish is also getting sick. We can't find plants where we used to go ...* we also need to teach [the kids]—how do we take care of these plants? *How do we preserve them for the generations that are coming behind them?* (Ethel Thomas 27 April 2019)

... we don't really know what those edible bulbs and the blueberries and huckleberries, I don't know the nutrients that they really need in the dirt. (Nuxnuxskaxa ctš7l7élt [Julianna Alexander] 21 August 2018)

Because how did they, *how did our people keep them, so they produced more berries*, you know? Because they get that size, well, it seems like there's less and less of them...they must have had a system in place to really keep them growing. And I don't know if they had another, I don't think they had another system of moving them, but they must have had some way of making sure that they either spread or you know, I don't think we'll ever have the answer to that unless through trial and error ... there's probably more medicines and other uses down here that we don't really know. I firmly believe that our people had a use for every plant. (Louis Thomas 30 August 2018)

I was contemplating a project ... I was going to be like the subject, it would be like a three-year project where year one would be all about *gathering and collecting everything I would need to survive through a year, an annual cycle*. And then *weaning myself off of the crap—the sugars and the caffeine and all of that processed food*, and morphing into this paleo diet, and spend one year fully immersed in it and eating nothing but stuff that I could get here. And then *carrying on and doing medical studies on myself, before and after*. Right, *what are the true benefits?* ... that first year it would be all about just learning. And there's stuff that's out there that nobody knows, because it was lost. Right? We'd have to re-learn that. You know, what makes it palatable, what can we truly survive on? Because *you want a diversity, you just don't want to eat the few common things that we know about ...* this year I got moose, elk, deer, pronghorn, rabbit, grouse, and salmon and trout—like all the protein I'll ever need, right? ... I do so much with it too, like I make jerky, dry meat, sausage, you know? ... But those are the things we need to re-learn, right? So, *a part of that too about food sovereignty is use, right? Like it's good to have that common knowledge of what we can eat—but ways of preparing it, preserving it and preparing it ... that's a big part of it—you want to be able to enjoy what you're eating, right?* You don't want to get sick of it. It has to be tasty, we're just puny humans, you know. Like, *that pleasure in life is eating*, and we've learned that through restaurants and stuff like that right. (Ed Jensen 24 January 2019)

As Ed Jensen describes, restoration of Secwépemc food systems is also about appreciating diversity, taste, and maintaining and revitalizing food preparation and preservation knowledge and skills. He describes Indigenous food sovereignty as part of an active process of regaining health, understanding different methods of preserving and preparing foods, and recovering and enjoying the unique and diverse flavours of Secwépemc foods.

Conversations with Knowledge Holders and youth in this study clearly identify the importance of *tmicw* in Secwépemc pedagogies, and the importance of access to *tmicw* for the maintenance and restoration of Secwépemc land-based knowledge systems. As Secwépemc scholar Janice Billy (2009) describes, ‘Secwépemc pedagogy, traditionally, was based on the land. Our Elders say “the land is your teacher” and you will know what to do based on your knowledge of the land’. Elders and Knowledge holders were also discussed as having the role as mentors and teachers of cultural knowledges. *Tmicw*-based education, and the values and cultural concepts that emerge from this, iteratively shapes and is shaped by land. *Tmicw*-based education has an important and restorative role in the restoration of Secwépemc food systems and their interrelated linguistic, social, cultural, and ecological aspects, and in current contexts of climate change may play an important role in monitoring, mitigation, and planning.

A prominent theme that came up in some discussions with Knowledge Holders that needs to be valued and taken seriously is the concept that knowledge and language are never lost. While they have been suppressed by years of colonial legislation and policies that have removed people from the land and from their communities, the knowledge itself comes from the land and has been described by some Knowledge Holders as being part of who they are. Some people we spoke referred to knowledge as being “part of their DNA”, or collective memory.

In many Indigenous tribal epistemologies, dreaming is a methodology of recovering or attaining knowledge (see Kovach 2010, 57–58), and some Knowledge Holder we spoke with referred to dreaming or ceremony similarly as a method of connecting with ancestral knowledge. Others spoke about situations where children have

taken an action that is remembered or recognized by older generations as a practice that used to occur. This is not to minimize the impacts of settler-colonialism on Indigenous knowledge systems, but instead I believe this describes the ongoing process of maintaining and revitalizing Secwépemc land-based knowledges with both Secwépemc processes (e.g., *stsptékwle* and *slexexé'ye*) and contexts (e.g., land-based learning in culture camps, monitoring, restoration of harvesting areas, other land based activities). For example, Knowledge Holders spoke about the importance of telling the *stsptékwle* and *slexexé'ye* that are connected with places on the landscape, and how they remind and teach about roles, responsibilities, and situatedness of law in place. Memories shared about ancestors sometimes highlighted the role of place as a context through which values such as *knucwetwécw* and *yecwemenulécwu* are taught, for example through describing the ways in which they shared food or knowledge of how to harvest and prepare foods, as well as protocols and processes for looking after places. Kwagiulth (Kwakwaka'wakw) scholar Dr. Sarah Hunt (2018) refers to the importance of place for co-generating relationship, teachings, and being sites of memory. She described her experience working with Māori geographer Naomi Simmons, who described this generative and storied nature of place similarly:

I had the opportunity to work with a Māori geographer, Naomi Simmons, who talked about the teachings of her own place, where her family's from, and the teachings that come from that. And said that when we forget the stories of our place and the teachings, our places remember, and our places will remind us. And so really, being in place and situating our analysis in place is key.

Bang et al. (2014, 44 as cited in Tuck and McKenzie 2015a, 94-95) describe similarly:

Indigenous scholars have focused much attention on relationships between land, epistemology and importantly, ontology. Places produce and teach particular ways of thinking about and being in the world. They tell us the way things are, even when they operate pedagogically beneath a conscious level.

I understand Naomi Simmons' and Bang et al. (2014)'s words as an important

reminder of the generative nature of place, and the continuity in how storied land is a living process which Indigenous pedagogies and relationships are both anchored to, and shaped by. They also reinforce the important understanding raised by some Knowledge Holders in this study that knowledge is never lost, but situated, maintained, and revitalized through the unique Indigenous pedagogies, places, and processes of each nation. In this respect, I understand the living nature of these values, contexts, and methods of learning describes future pathways for restoration and relationship in the future as well, through the maintenance and revitalization of land-based knowledges.

Knucwetwécw

...what did my grandma say, your garden, and your plants really show how healthy we are in community. (Donna Jules 04 December 2018)

*Knucwetwécw*¹⁶⁴ (“helping each other”) was described to me as the relationship that forms from cooperating, sharing, and working together. As Knowledge Holder and Elder Donna Jules describes above, Secwépemc plants can be an indicator of community, social, and ecological well-being. I learned that Secwépemc plants facilitate social and cultural values through connecting to and teaching values through *stsptékwle*, as well as through bringing people together and strengthening relationships, roles and responsibilities as *yecwemenulécwu* through working together and practicing *knucwetwécw*. Secwépemc scholar Dorothy Christian (Splatsín) furthermore describes the interconnectedness of land-based learning and the regeneration and reaffirmation of cultural values such as *kweltknéws*¹⁶⁵ (interrelatedness between family/community/more-than-human beings) and *knucwestsut.s* (personal responsibility/taking care of yourself)¹⁶⁶ (Christian 2017, 127-129; 222). Christian (2017, 222) describes *kweltknéws* and

¹⁶⁴ I use the spelling *knucwetwécw* instead of *knucwentwecw* in this thesis because this is the dialect spelling used by the Chief Atahm School (2017b).

¹⁶⁵ Spelling from Christian (2017).

¹⁶⁶ See “Practices of *Knucwestsut.s*” applied in Chief Atahm School curriculum (2017c); Chief Atahm language teacher Lucy William spells this as *knucwestsut*.

knucwestsut.s as being linked through the Secwépemc principle of reciprocal accountability, and land-based learning settings are vital contexts for learning about these principles, and understanding roles and multiple layers of accountability:

These principles speak to taking personal responsibility in how you give back to your family/community/Nation through your individual actions, to become part of the collective... By participating in this way we honour storywork principles, become a part of regenerating life on the land (Armstrong 2009), and we attend to the layers of multiple accountabilities in our communities (Christian 2019, 53).

Chief Atahm (2017) similarly describes *kwseltknéws*¹⁶⁷ as a central concept describing a network of relationality and responsibility between humans and the earth:

We believe that: All beings are related; All beings are equal; We have a responsibility to each other and the earth and therefore need to be mindful of our thoughts, beliefs and actions; The school has a responsibility to nurture, educate and develop the value of *kwseltknéws*; The strength of our Nation is based on *knucwetwécw*, maintaining strong family connections and sense of community; Families are important for nurturing, educating and developing healthy Secwepemc children. [emphasis added]

Initially, this second concept was called “Food Brings People Together”.

Secwépemc plants were described in our conversations as a central part of facilitating bringing people together and strengthening relationships. However, after reflecting on Secwépemc understandings of *kweltknéws* (interconnectedness) (Christian 2019) and the frequency the concept of *knucwetwécw* was brought up in our conversations with Knowledge Holders, this section was renamed *knucwetwécw* to describe referring to the value of helping and cooperation within a larger interrelated network of relations. In this section, *knucwetwécw* reflects the quality of connection, relationship, and responsibilities of humans in community to “help each other” through sharing and working together. Furthermore, we considered the interconnectedness of this with larger ecological contexts and relationships with non-human relations, and the role of non-human relations such as

¹⁶⁷ Spelling from Chief Atahm (2017).

plants or salmon for motivating this cultural concept of *knucwetwécw*.

When I first learned this word, I understood *knucwetwécw* as specifically describing relationship and cooperation between humans in community. However, I learned from Kenthen that *knucwetwécw* is not disconnected from its environment and context, and refers to cooperation within a larger kincentric network where humans are not at the centre, but equal members of a larger relational system (fieldnotes, October 2019). For example, Kenthen told the “Coyote and the Salmon” *stsptékwle* to illustrate how salmon teach people to practice the value of *knucwetwécw* as a role and responsibility to take care of each other, and the social, cultural, ecological, and relational aspects of ecosystems. I learned that it is important for me to understand the deeper meaning and significance that comes from inter-relationship, and the ways in which interrelatedness and kincentricity supersede western taxonomies and anthropocentric human/nature binaries.

Similarly, when I asked two Knowledge Holders if there is a concept in *Secwepemctsin* that would represent living a good life or living in a good way, both Elders directed me to two words: *knucwetwécw* (“helping each other”) and *yecwemínte* (“caretaking/looking after”):

I’ve heard a word, it’s *knucwetwécw*, it means helping each other. And another one called *yucwemínte r tmicw*, is look after the land... *If we look after the land of course, we’re going to be here forever. If we don’t look after the water, if we don’t look after the air, we’re not going to be here—we need those things to survive.* (Donna Jules 04 December 2018)

The usage of these two words suggests understanding “a good life” as inherently relational, and embedded in maintaining roles and responsibilities as family members, community members, and in a wider network of caretaking for relationships with nonhuman relatives and land.

The conversations below describe several aspects of *knucwetwécw* as related to Secwépemc food systems and land-based education, as well as future directions for living this value through community gardens and *tmicw*-based initiatives, and revitalizing trade

networks, and the importance of multi-scalar relationships for working together and building understanding.

“My biggest value is I share”: Building community and regaining health through harvesting and processing culturally significant foods

...my biggest value is I share ... because that’s what I believe in. because that’s what your grandmother [Dr. Mary Thomas] taught me, because she mentored me, and that’s what my other grandmothers, they sort of mentored me. (Nuxnuxskaxa ctś717élt [Julianna Alexander] 14 August 2018)

I remember them sharing [fish] when they went spearing in the fall, everybody below their house had kind of like a pocket of water, I don’t know if it was man-made or whatever, but the *fishermen would throw fish in that pocket of water and every now and then my grandmother would ask us to go and check if there was any fish there... that’s how they shared fish...* (Donna Jules 04 December 2018)

Sharing was described by several Secwépemc Knowledge Holders as their biggest value. Sharing food, knowledge, and skills was identified as central to building strong community connections, collective health, looking after each other, and survival.

Metwécw is the *Secwepemctsin* word for sharing food with community members (First Peoples Cultural Council 2020), and is one way traditional foods and plants can facilitate bringing people together to work together, and build connection and community. Delores Purdaby describes the positivity that comes from sharing knowledge with people who want to learn: “We’re always out there looking. We’re always happy. We take people who want to learn, and that makes us feel good because we’re sharing our knowledge” (Delores Purdaby 03 September 2018).

[re: reasons for sharing food]: We don’t want to see it [food] go to waste, for one thing. And *it helps each other—helps us to get—to be together.* (Delores Purdaby 03 September 2018)

As Delores describes, an important value instilled by sharing food is the connection and relationship between people.

Sharing is one value that is thrown into tension by unwanted colonial contexts and

experiences, that sometimes carry with them different value structures that negate relationality and responsibility in sharing, and can be driven instead by more capitalist economic structures or entitlement to all knowledge. Some Knowledge Holders reflected on these concerns with regards to sharing cultural knowledges, which I reflect on further in Chapter 6.

with a discussion on Indigenous rights to cultural heritage and intellectual property rights concerns. Many Knowledge Holders we spoke with described the importance of not commodifying or owning cultural knowledges, but understanding them as living, borrowed both from ancestors and the *Tellqelmúcw* (future generations):

It's how we were taught—like, it's the Creator's way ... we can't take everything you see—but *we can use everything in a good way*. You know, *we're only here to borrow all these things to make the best of it*, you know. The best way we know how. (Nuxnuxskaxa ctś717élt [Julianna Alexander] 14 August 2018)

It's a natural flow ... Even I learn when I'm out there sharing—I continuously learn and I just love it. But *I don't think it would be the same if I claimed it as my own*. (Rhona Bowe 30 August 2018)

I've been thinking about that statement, *if you know a song, it's your duty to sing it. if you know a story, it's your duty to tell it. if you know some traditions and protocols, it's your duty to follow them*. (Kenthen Thomas 12 September 2018)

[knowledge] *It's not ours, it's not mine to hold onto ... It's crazy that there's even a patent office ... when it comes to greed and money and people hold on to ideas and claim them as their own, and I don't think that- especially with knowledge, it shouldn't be held by anyone*. That's why I never claim to own a story ... well, if I write one on my own, then I'll say it's my story. Or my story is my story, but that's two different things- *stsptékwle* and your personal stories are two different things. (Kenthen Thomas 12 September 2018)

I'm learning, but I want to learn more – like I want to keep on learning and make this knowledge myself and use it in my stories and use it in my teachings that I give to students and that. And yeah, *just keep on passing that knowledge along* – because I think that's what needs to be done is, yeah, figure it out again and to just keep passing it along. (Kenthen Thomas 12 September 2018)

You have to learn from the Elders, that stuff. So I learned that because it's valued to them, *all this Indian food and stuff like that eh? It's valued to them*. Cause

that's their way, their traditional way, they eat and they harvest their stuff eh? Bring it home and cook it and eat it and whatnot. *That's their value, and they try to pass it on to us... So we could learn that and we could pass it on to our kids.* And their kids will, after, you know. That's valued. If we don't have that value, that's going to be gone... you're learning from them – the value of what they're telling you, and then you can pass it on to the next generations coming up. And that's more value than anything... *same with the language is valued ...* I wish there was more. I wish I could speak my own language instead of speaking English. When you speak your own language at least it's valued, at least you can pass it down to the next generation. (Lloyd Charlie 03 September 2018)

[re: Delores Purdaby, basketry]– that's important to her, and she passes it on to the next generation. This generation passes it on to the next generation. Why keep it for yourself, you might as well share it – come and do what I do and I'll teach you how to do it, then you can pass it on to the next generation, you know? (Lloyd Charlie 2018)

This value was also reflected by Quintessa Christian, a youth who participated in the *Switzmalph* summer youth program, when she described why *tmicw*-based education is important for her:

[re: whether *tmicw*-based education is important] Yeah... Cause if we don't we'll never get to teach anyone else when we grow up. (Quintessa Christian 30 August 2018)

Food and medicine sharing networks connect people:

Knowledge Holders described the importance of food sharing and trade networks during their grandparents' time for sharing foods, medicines, culture, and language, as well as connecting families, communities, and nations.

I remember *Grandma used to pick all the saskatoons and ah, foamberries [sxúse, Shepherdia canadensis] and go trade it with the natives over in Skwlax for Indian potatoes. Skwekwíne [Claytonia lanceolata]... Do an Indian trade eh? For the winter. Dry them, dry all our fruit and everything—I remember there used to be racks and racks out in the back there, over by Grandpa and Grandma's place out in the back, she had a lot of racks, up on the barn, everywhere—wherever she could. And gunnysacks, lay all the berries down and dry them all. We'd have all*

the fish all dried and everything. Whatever we could get our hands on. But there was plenty. (Jane Thomas 10 September 2018)

A lot of bands would—*people would gather, they call them gatherings. And of course they traded goods, dry fish, dry meat.* Beads, trading beads, metal knives and pots and different things. I remember a lot of those things. *I remember it was exciting for them to do...* for us being little it took forever to get there... But, eventually as we got older it got exciting. Because then *you wanted to see different people, we heard different languages, and saw some dancing and singing different. You know, it was all part of your learning...* (Nuxnuxskaxa ctš717élt [Julianna Alexander] 14 August 2018)

... everybody went and got their own fish, as far as I know, but every now and then my grandmother... *when somebody came to visit they'd say, oh, we'll trade you for- they always had some sort of a backpack.* It wasn't a backpack of course, it was something else. On their backs, so they would bring – I don't know what they had, bread, or anything they would trade almost, whatever we had, whether it was fish or – *my grandmother was so awesome with berries and apples, we had a cellar full of apples and cabbage and turnips and carrots and onions.* Oh, squash and beans ... *she would trade for whatever – oh, potatoes of course.* We'd bury those in the sand. Yeah, so she would trade for whatever they had. (Donna Jules 04 December 2018)

Mostly fish I remember growing up with. *I remember them sharing when they went spearing in the fall, everybody below their house had kind of like a pocket of water ... the fishermen would throw fish in that pocket of water and every now and then my grandmother would ask us to go and check if there was any fish there.* Sometimes there would be two, sometimes there would be ten – we'd have to lug it up to the house ... *that's how they shared fish ...* The fish would be dead by then ... they'd catch the fish at night, the boat would have a fire on it, and they'd be spearing it with spears ... *the boat would go by and pop fish in those pockets of water.* And then we'd – my grandmother would cut it up and dry it – smoke it. (Donna Jules 04 December 2018)

Food sharing and trade networks continue to extensively connect Secwépemc communities, and some Knowledge Holders described the role of these networks for revitalizing relationships and protocols between neighbouring nations. For example, Crystal Morris spoke about how relationships with Knowledge Holders from other Indigenous nations can create supportive networks for knowledge revitalization:

I'm a Secwépemc person getting to know the land base of all the plants and trees in our territory and from the seven nations of the Interior, it is definitely what's needed. They might say well, you're Secwépemc, or she is Coastal, but at the same time we have to revive this medicine somehow... It feels like we kind of fell asleep for a while, and now we're waking up to realize the trees are speaking to us, and yelling... my mentor, Dr. Jeanne Paul is about coming in and teaching us what's on the land and helping us process it into medicines and being respectful about it. Amongst her students we harvest together and trade what we do not have in our territory and cannot make it to their territory to harvest, if needed. (Crystal Morris 2018)

I learned that food sharing continues to be a common and vital practice; playing a significant role in health and well-being, relationships, and likely playing a strong mitigating force in economic inequalities many on-reserve communities face. I was told that sometimes the same can of salmon will be shared and appear in several households, and several times gifting food was talked about as a common practice in line with community values. In community workshops with the *knucwetwécw* community garden, sharing food with community members was outlined as a primary goal, and food was consistently discussed as an important way of bringing people together. Louis also described protocols for sharing food in a ceremony at the start of the root harvesting season. Because of their role in maintaining social health and well-being, as well as maintaining land-based learning and monitoring, food sharing networks have sometimes been described as an indicator of social-ecological systems health (Proverbs 2019, 91; Kaljur 2020). Knowledge Holders also spoke about how the continuity and resurgence of food sharing and trade networks between neighbouring Indigenous nations also brings a resurgence in maintaining and revitalizing protocols for harvesting in other territories, and maintaining relationships around food:

I was brought out to pick bitterroot at Spences' Bridge by the Nlaka'pamux... I was told, you know, at the beginning—this is how you do it. don't do this, don't do that, don't pick that. You know. We're letting you—we're giving you this gift. Don't mess it up. And I did that, I respected it. I don't go there on my own—I go and see those people, and I say I'd like to take a little bit of bitterroot home. And they know because of what I showed—I proved myself to them. You know?

This—I do it the way they showed me, and they respect it. and so they share it, right? (Ed Jensen 24 January 2019)

At this time, I'm pretty much able to get what I want, or what I need—it's more what I need. *We have a huge trade system, we have quite a large connection and nowadays there's mail and driving and that sort of stuff. But respectfully, if it's for making like a specific type of medicine for an individual we're going to respectfully pass energies over by offering tobacco and, you know, giving something for something as opposed to assuming or being so arrogant that it's ours to take.* So we like to be respectful and we like to go and meet the people or go out on the land ourselves and actually pick that. But if we're stuck in the winter time and we need dandelion root then we'll go, you pretty much can buy everything in the stores now. You shouldn't be able to but you pretty much can. (Rhona Bowe 30 August 2018)

I would *trade medicines for food, or I would find people that I wanted canned fish from and I would say, can we do a traditional trade,* those types of things... So that would be my ideal food system, where I could go back to more of a traditional diet instead of running down the street to Costco or to Walmart to get the milk or staples... to have your own hobby farm to be able to harvest traditional medicine, to be able to fully sustain yourself, and then had your hunting rights and be able to go out on the land to do land-based activities. (Crystal Morris 29 August 2018)

So I guess where I was going with the knowledge of, and access to, traditional plants, is *I've gone to the seven nations of the Interior to gather,* right over to the Ktunaxa, and up to this side of Williams Lake – this, my own territory here, I've been over to Merritt, the Nicola Valley, all around the seven nations, and the Okanagan – so I haven't really missed a nation in the Interior where I've harvested some medicine, all medicines are equally important. (Crystal Morris 29 August 2018)

...ratroot ... It was brought over from Saskatchewan or Manitoba on the northern part of Saskatchewan or Manitoba. And they planted it in two places; one was in Barriere and was in here ... It's been here for—since the early, well, when grandma was just young, that's when it came in. The people from Saskatchewan were coming through, and they had this thing and they dropped it off, and they did plant it close to the lake, so that's what they did is they planted a bunch of them. But they planted a few of them and it ended up spreading all over the place. (Gerry Thomas 27 April 2019)

As Gerry Thomas and other Knowledge Holders describe, food sharing and

reciprocal trade networks can play an important role in the presence and distribution of culturally significant species. As Gerry describes, the introduction of ratroot (*Acorus calamus*) in the Salmon Arm delta may have been from his grandmother's youth, which he described was part of a reciprocal action from other Indigenous people who at the time were travelling through Secwépemc territory.

Wilson (1988, as cited in Turner and Loewen 1998) notes that when considering disjunct populations of plants, especially economically and culturally significant plants, the possibility of cultural dispersal also cannot be overlooked. Turner and Loewen (1998) give several examples from the ethnobotanical literature of culturally and economically valued plants being transplanted and cultivated from extensive trade networks, with over 65 plant species playing a significant role in Secwépemc economies and historical trade networks (Turner and Loewen 1998, 53). In Secwépemc territory, Turner and Loewen (1998, 64) suggest that the occurrence of culturally and economically important, and typically sub-alpine, plants such as Yellow Avalanche Lily (*Erythronium grandiflorum*) in lower elevation meadows such as the Neskonlith Meadows, could be due to intentional and strategic human dispersal, considering proximity to village sites, and subsequent cultivation.



Figure 5 Neskonlith Meadows, with *tsétselq* (Balsamroot/“Sunflower”, *Balsamorhiza sagittata*) and *geyú7* (Chocolate Tips, *Lomatium dissectum*), and Niskonlith Lake (Chisholm 2014)

This example from Turner and Loewen (1998) brings to light the vital consideration of ecological research as inseparable from social and cultural contexts, and situate the potential for patterns in plant ecology within cultural landscapes and social, cultural, historical, relational, colonial, and ecological contexts. Furthermore, they highlight the many ways in which Secwépemc ways of knowing, economies, commerce, and cultivation have the potential to shape landscapes. This context is foundational for understanding the relational contexts Secwépemc plants are embedded in, and the generative nature through which socio-cultural values and ecologies build on and shape one another. However, because many plant management practices mimic natural disturbance regimes, it is sometimes difficult to distinguish whether current plant distributions are due to human-related or natural disturbance (Anderson 2005).

Gibson (2007) uses “routes of interaction” to describe material culture (e.g., roads and pathways) that directs social interaction and movement in landscapes. Routes of

interaction with social and ecological landscapes through everyday activities hold memory, time, and frames of reference for relationships with place (Gibson 2007). Understanding cultural landscapes can bring a fuller picture of the values that direct social movement in landscapes and relationships between humans and beings they share the land with. For example, the presence of culturally significant plants along routes of interaction can potentially be an indicator of past use, as well as give insight to past movement within cultural landscapes. Routes of interaction simultaneously generate contemporary and future meaning through interactively situating memory, movement, social significance, and futurities in land. Rapid social change in Secwépemc territory has in many ways changes the movement and routes of interaction by Secwépemc communities, for example through land privatization, paving over pathways for highways, and ultimately changing the social and ecological frames of reference and interaction between communities.

Rapid social change from settler colonialism and ecological degradation has changed material culture (e.g., roads, trails) and routes of interaction, as well as contemporary movement and place-based relationships. Understanding past and contemporary movement in cultural landscapes can also be important for gaining a deeper understanding of place, and the ways in which these could inform the future of eco-cultural plant restoration. Focusing on living cultural landscapes could also have a significant application within the current Environmental Assessment (“EA”) process and associated archaeological inventory assessments (“AIA”). For example, understanding the presence of trails and culturally significant plant populations (i.e., ethnoecological movement, or interactive access routes for harvesting and land management) could hold important information for understanding historical management and movement within cultural landscapes, as well as their role in informing future eco-cultural restoration, planning, and use.

Some Knowledge Holders also described the importance of interacting with plants in relational ways, through demonstrating respect and taking care of plants and foods throughout harvesting, medicine making, and gifting processes. They described

harvesting “in a good way” as being vital to the process of trusting foods and medicines that are shared. This consent-based process not only reinforces respectful harvesting practices by instilling cultural values of respect and relational accountability, but also recognizes plants as living beings, and reinforces responsibilities to give good medicine through sharing networks by practicing these protocols:

I'm told our strongest, or our most meaningful word means energy, it means one energy. So when we're working with somebody and we're taking something or gifting something, or receiving something or trading or whatever, it's energy in an exchange, and depending on how you're doing that makes a huge difference on the outcome and what you're going to be doing with that... (Rhona Bowe 30 August 2018)

... if I knew I was going to get a piece of deer meat from Kenthen, I would know it's been taken care of in the right way. So it's trusting, I guess, it's trusting the process of the person who offers you the meat, right? That it's not going to be bad, and that they're going to take care of it like you would have taken care of it... *To trust the traditional medicine, I have to trust the person I'm trading with.... I'm brought up in the frame of mind that what you do, and what you're doing when you're harvesting your medicines, much like when you're cooking, goes into your food—goes into your medicine. And that's—I wouldn't want to poison my family with something like that, because I strongly believe that. (Crystal Morris 29 August 2018)*

As Rhona and Crystal describe, “helping each other” includes respecting the process, protocol, and energy that is put into harvesting and maintaining respectful relations with land, family, and community.

Family and community

The process of being out on the land with family and community, helping in gardens or learning to gather food on the land can help build relationships, restore connections to land, and connect to spirituality and knowing how to survive on the land. Certain species and places also motivate memories of harvesting and preparing foods with family, and Knowledge Holders can act as cultural refugia for these values and social, spiritual, and ecological knowledges in times of rapid social change (Garibaldi

2003).

[digging *skwekwine*] “That’s where we used to go up in Skwlax, we used to go in there and they had a big spot in there and there’s all kinds in there... Even up towards Neskonlith Lake... They were a pretty good size, not big, but they were a pretty good size ... And Mom always looked for the easiest spots to dig ... it used to be fun going out. I’d pack a lunch, mom would pack a lunch—oh, and we’d take the girls out picking too, when I had that crew together, we’d go out picking. (Lorna Thomas 17 August 2019)

There was a lot of people that, we always got together. You seen in that pictures, even the young ones were out there. We picked blueberries, Blue River, eh? ... We all gassed up ... from Aunt Mary’s trailer, you know, and all went out picking. And she shared it all out with us ... She made sure that all the families had—she even came and showed me how to can it. So I felt really good about that. (Delores Purdaby 03 September 2018)

...when we were blueberry picking ... she even showed me how to can it. That was like, holy, Aunt Mary [Thomas] was really good at that eh? She never laughed at you or anything eh? Just take you. We had all that huckleberry—what am I supposed to do with it? She said, I’ll show you how to, you know, put it away. (Delores Purdaby 27 April 2019)

Knowledge Holders also spoke about the complexity of their relationships to food given their families experiences of racism related to language and foods, and the importance of culturally significant foods for bringing back good memories and connection to ancestors:

...when we were growing up in my home, the language wasn’t spoken. All I heard from my mother and my grandparents and—some of my grandparents, my auntie and uncles, how they were taught not to talk their language. How they were ashamed of who they were. So that was passed on to us. How to be ashamed. And I’m ashamed to say it now, but that was the truth. *They were teaching us how to be ashamed of ourselves and the food that we ate that was native.* I didn’t learn any of this until I got to be a teenager, and I started tasting it for myself—the native foods, and learning how to say it in my own language. I knew some of my own language because I could hear my grandparents talking, and I learned it that way. By hearing it and by visual, what they were doing, and by sneaking and tasting it, and doing it... We had cow’s milk, goat’s milk, and we ate fish soup, drank fish soup, and most of all *I remember grandma always making some kind of roots—boiling roots on the stove...* [Libby Chisholm: When you think about that

now, learning those words and eating those foods, native foods, does that make you feel connected to your grandparents or your ancestors?] Oh yes, oh yes, very much so. And *even making it, I can still remember—I can almost smell grandma standing next to me. How she smelled. My grandparents.* (Jane Thomas 10 September 2018)

As Jane describes, culturally significant foods connect to memories of her ancestors, identity, language, and culture. The lived experience and engagement of senses (touch, smell, taste) is embedded in layers of collective memory work that connect to knowledges, place, and experiences across time.

Changing values and cumulative change in social-ecological systems

Some Knowledge Holders also spoke about generational changes in values, with less knowledge of the concept of *knucwetwécw* and working together among younger generations, and a loss of connection in community resulting from cumulative food systems transitions.

... we used to dig the Indian potatoes [*Claytonia lanceolata*], boy they were big. And she said people used to all go up there, help each other. She said *now you don't see that. Don't help each other. But used to all get along, eh?* Teaching them younger ones ... *There was a lot of people that, we always got together.* You seen in that pictures, even the young ones were out there. (Delores Purdaby 03 September 2018)

I think another generation is coming in, where people were more dependent—they found it was probably less labour intensive to go to Wal-Mart or go to Demilles [local market in Salmon Arm] or go somewhere to—like *they don't see the value in having their own garden, how much joy there is even from working on the land. And how much it's even, dealing with stress and having your hands in the dirt and working for your own food—I think that value's been asleep for awhile,* and I still see people being hungry, and there's really no need for it at all. (Donna Jules 04 December 2018)

Yeah, we don't sit around at the round table anymore... They don't want to communicate with other people ... Without that circle, you've got nothing ... *Like our values and traditional food and whatever—arts and crafts and all this, people would rather go out on their own and do it. We should be sitting all together and teaching each other. Showing each other how to do stuff.* How to dry meat, how

to dry fish or smoke fish and deer meat or whatever. (Lloyd Charlie 03 September 2018)

We made ... tule mats with the kids... they used to go picking berries and that's where they would take the berries and everything else, and all the potatoes that they got picked, and bring them, send them down, like in the baskets they made them with a cover, with cedar root. They put them in there after they're dry, and ... they had their winter homes, the kekulis, then they would have another little kekuli outside for all the different kind of plants that they wanted inside there ... *everybody picked, it wasn't just—like everybody from two years old they were picking.* Everybody picked ... grandma [Christine Allen] said everybody worked back then. There was no games, there was no phone ... we'd always have to be out picking or doing something, working on the land with everything else—doing gardening or whatever it was. (Gerry Thomas 27 April 2019)

I remember grandma [Dr. Mary Thomas] taking us all out, and when we were youth in this community, everybody was vibrant, and knew plants, and knew—it was a truly amazing scene when grandma had everybody involved ... I try to tell my kids—when we grew up, you know, with grandma Mary—we used to be out in the bush and we'd be digging roots ... and they'd be telling us stories, and they'd have us laughing all day. And I agree, I think technology's changed a lot—I love technology, and I hate it at the same time, because the teachables that you can teach, from technology ... you have to take into account is the age group you're taking your teachings from. From 0-90 right? And what is the teaching capabilities ... *We all have different ways of learning... it's more industrialized it seems like, when you just put [plants] in a field, but if you can try to bring it back, and put it back in its natural habitat, and then, you know, incorporate it back into our lives that would be great. Cause that's what we need. That's part of who we are.* (Pat Thomas 19 January 2019)

Reflecting on technology as being an influential part of life for many youth, Dorothy Christian (2017) also highlights ways in which technology has been used to support land-based learning and storytelling. Christian highlights the potential of technology as an important learning tool, when developed following cultural protocols and guidelines around knowledge sharing. Protocols can support with determining formats and contexts in which knowledges are shared, as well as which audiences certain knowledges are meant to be shared with (e.g., which learning resources and knowledges are only meant to be shared within the Secwépemc Nation, and which are shared more

broadly, as well as respecting the importance of orality¹⁶⁸ in teaching).

Future directions and Secwépemc foods as a collective capacity

I think if we were to get those little teenie weenie gardens then people will come and try to help each other out. I think that would be the best way. (Jane Thomas 10 September 2018)

Culture camps and community gardens were described as important for bringing people together to learn and teach about food, connecting people from different backgrounds who are distanced from community, dealing with dependencies or mental health issues, or experiencing houselessness where they may not have the opportunity to learn traditional skills and knowledge about food. In their lifetimes, Elders spoke about how every house in *Switzmalph* used to have a garden, as well as a community garden and greenhouses facilitated by the late Dr. Mary Thomas that brought people together and did good work for the whole community. Although many of these are no longer running, Knowledge Holders spoke about the importance of having more spaces and programs to bring people together to learn and teach and share about food, and the importance of working together to plan as the school, the community, the individual and the family level for how to support people.

As these conversations describe, the “value” of food extends far beyond only nutritional qualities, and is a vital part of anchoring values, relationships, community, and healing, to land.

... what is it good for? Like, we learned that the soopalalie was good for you—to clean you out. And it has vitamins in it. Vitamin C, Vitamin, oh—it keeps going on. And nowadays you see kids really making faces—they don’t like it. Bitter... There’s something lost... *I think it’s, we don’t get together, we don’t laugh, we don’t have fun together.* The TV’s taken over, the—I don’t ... And to learn all

¹⁶⁸ Oral processes of teaching and learning, for example through story and oral traditions. See Young (2015)’s Cedar Pedagogical Pathways: Gee-zhee-kan’-dug- model, which Christian (2017, 126, 116) describes as very similar to Secwépemc ways of teaching and learning.

the—what do they call it—the *value in the fish*. *What it's good for. I know some of us can't eat it, but we pass it on to someone that loves fish, so that's our way of doing it...* (Delores Purdaby 03 September 2018)

Knowledge Holders also described the “value” of Secwépemc foods in a holistic way that is not reducible only to nutritional qualities, but as vital to bringing together relationships, memory, connections, community, healing, roles and responsibilities (e.g., as *yecwemenulécwu*), as well as important for future generations and relationships to land. Ignace and Ignace (2020, 132) describe this further:

As Secwépemc, we continue to value the plants and animals of our homeland, not only for the nutrition that they provide but also for the connection to the lives of our ancestors that they make possible and for the living reciprocal relationship with our land that harvesting and stewarding them maintain (Ignace and Ignace 2013, 2016, 2017; Peacock, Ignace and Turner 2016).

Food is a central point of connection between people, land, and ancestors. From his work with Anishinaabeg Knowledge Holders, Whyte (2016, 358) similarly describes, "... Indigenous persons are articulating a distinct value for food that is not reducible to scientifically assessable nutritional qualities or the quantities of food produced by or administered to particular populations". Secwépemc foods are embedded in processes and relationships, and are mnemonic devices that anchor stories, laws, values, and memories, to land. For example, Knowledge Holders also shared that Secwépemc plants facilitate the regeneration of value systems, laws related to governance and land cultivation, and self-sufficiency.

I think, to me, that's all about the culture. And I think the value system will come in place with it... And that's why plants are really a part of our culture, and I think we have to strongly look at that, you know, take the value system from that, cause it feeds us, and we've got to implement that value system in with our people. And start harvesting them, go back, say "okay plants, we need you to help us survive again." (Louis Thomas 30 August 2018)

I think strongly I believe in order to have self-governance, we have to have more learning of our culture and who we are. To be able to set it up in a good way... we have ideas, but I think we have to truly understand who we are as people.

Food is part of it, our salmon is a really big part of it... (Louis Thomas 30 August 2018)

... I believe that even though this is a conversation about traditional foods and medicine, that *they help us line up our purpose in life*. That being out here on the land and for us meeting was meant to be. So *that's how much I believe in our medicines, and my responsibilities to foods it all begins to align when you live on purpose*. (Crystal Morris 29 August 2018)

Plants facilitate connection to community and values such as *knucwetwécw* and *yecwemenulécwu*, culture, language, governance, as well as to land. Sharing, cooperating, identity, social connection, and working together are all aspects of *knucwetwécw* (“helping each other”) that are interrelated with Secwépemc foods. Because of the way many Knowledge Holders spoke about plants as facilitating relationships and cultural values, language, connection to ancestors, health and well-being, and roles and responsibilities, I believe (similar to Proverbs 2019, 91 and Kalijur 2020) the sharing or harvesting of Secwépemc plants and other foods could also be described an indicator of social-ecological systems health. For example, harvesting, cultivating, and monitoring the quality, quantity, accessibility, and availability of culturally significant plants is part of understanding ecological health of Secwépemc food systems, and the social and cultural values and food sharing networks connected to them have been described by Knowledge Holders as part of community cohesion and health and well-being.

The fondness with which many people spoke about the taste of Secwépemc plants and the processes through which their parents or grandparents harvested them, the importance they shared of passing on these knowledges to youth, and the continued experimentation with transplanting and growing them at a variety of elevations and settings speaks to the importance of relationship between people and plants. Furthermore, Louis’ description of the eco-cultural restoration of Secwépemc plants such as wapato as a sign of “hope” is telling of the interrelatedness of social, cultural, and relational landscapes in Secwepemcúlecw, and the importance of work that continues to restore Secwépemc food systems and create policy to ensure these relationships continue in the future. As the *skwekwíne* (Spring Beauty) appears each season, the stories and

relationships to them are anchored again to the landscape each spring, as well as the relationships that are cultivated through land-based learning and learning. Important and meaningful theories of change are generated within communities, and are grounded by action, and Secwépemc epistemologies and processes. Secwépemc ways of knowing teach vital lessons about relationality that broaden conceptualizations of social-ecological systems. Secwépemc pedagogy and leadership in eco-cultural restoration is vital for meaningfully restore(y)ing land.

The process of being out on the *tmicw* together, helping in gardens or learning to gather food on the land can help build relationships, restore connections to land, and connect to spirituality and knowing how to survive on the land. Projects such as these need to continue being community based, directed by community voices, concerns, and ideas for revitalizing relationships in a variety of ways, whether through community gardens or restoring backcountry Secwépemc plant harvesting areas.

Understanding the role of Secwépemc foods as a collective capacity sheds light on the many ways food security narratives, which focus on nutritional quality and quantity of foods, fail to capture the intangible aspects of Secwépemc food systems relevant to social-ecological resilience and resistance. Secwépemc narratives, cultural values, principles, and relationships to food bring vital perspectives and guidance to inform future partnerships and pathways towards food systems restoration in Secwepemcúlecw.

Building understanding through working together: Relationships and Multi-scalar governance

Knucwetwécw was described to me as relationship-based, building understanding and community through working together. Some Knowledge Holders also spoke about this in the context of building relationships and understanding between Secwépemc and non-Indigenous communities:

It's all about telling people who we are as people. Cause they've ignored us for so long, they put us on these little reserves and they say okay, we brought you this

far and it's up to you guys what to do with yourselves. But *they forgot about the sharing part*, you know, but *I think Salmon Arm is getting to this really understanding the value of really recognizing us as First Peoples here.* (Louis Thomas 30 August 2018)

I learned that from the other people from up north, how they got along, and *they helped each other*. They did a lot of fishing and hunting, and they brought that back, sort of like to the reserve, and everyone would help cut it up, skin it, cut it up... And they fed everybody... The Elders first, and then the kids... And same with the plants, like they had a huge garden and whatnot eh?... The kids would be out there packing potatoes in sacks and whatnot, and they'd line them all up, for each household ... when there was a lot of haying going on through the whole valley, that was the best part. *Everybody would come and help this farmer ...* Women would get bonfires, cooking all whole table fulls of food. Some of the old people would have contests cooking and barbequing all kinds of wildlife eh? ... *everybody was involved. Not only First Nations, but everybody in that valley... in the meantime everybody would make trades ...* It's just like, you know, *when people work together. How they get along afterwards? It sure does. It really helps.* (Jane Thomas 10 September 2018)

Food is for everyone... don't bring the political into it ... *we only picked what we wanted*. What we can use through the winter. And *we shared it with everybody*. Grandma used to always pick it and share it with us kids ... And if your neighbours are down the road, they're white and they're starving—you don't say oh, this is mine. You go over there and you share it with them... grandparents used to always Indian trade. They loved doing that, with the food ... I think that's great. *That's the only way people get along—they share. They share the food.* (Jane Thomas 10 September 2018)

Relationships can also form a strong basis for working together, and some Knowledge Holders spoke about the importance of building strong and accountable relationships for building understanding, working together, and addressing power imbalances in environmental planning and decision-making. Knowledge Holders and non-Indigenous collaborators described the role of regional multi-scalar governance tables, or in designing new tables and frameworks for collaboration that are Secwépemc-led and grounded in Secwépemc pedagogies.

... if we get into politics too much, you know, politics has a way of hindering a lot of things and I think that process has to be looked at down the road, until we can *establish a relationship first*. Then we can start talking about consultation

and—cause you’ve seen where the government has taken us. Cause they try to impose it on us ... I think *that’s got to be a slow process to understand—you know, we’ve got to get to know each other first... that stuff’s got to be that understanding of how do we work together to change everything? And we’ve got to do that collectively*, not individually. I think that’s what we’ve got to work on, because our people shared a long time ago, otherwise the *Séme7*¹⁶⁹ wouldn’t be here now if it wasn’t for acceptance by our people. (Louis Thomas 30 August 2018)

We’re insisting that we get a spot now, to share. To share duties. Information. You know, how can we help manage this... We need more power, that’s what it is. And title and rights is going to provide that to a certain point I guess, but so is dialogue and, you know, informed decision making. (Ed Jensen 24 January 2019)

These quotes describe the importance of relationship, collaboration, and respectful processes for valuing and bringing together both Secwépemc and western scientific knowledges¹⁷⁰ in environmental planning. Furthermore, they highlight the importance of shared decision-making power in environmental planning. Knowledge Holders also described how working together can help to build respect and understanding for the deep and place-based nature of Secwépemc knowledges and Secwépemc ways of knowing, and kincentricity in fisheries, wildlife, and environmental sectors:

... he knows the water in such a way that he could tell you all of those things, or if it’s going to be a low year, by what standards, how it’s going to affect the fish. He knows all this stuff, and so *he knows a different way of teaching about the*

¹⁶⁹ *Séme7* means white person in *Secwepemctsin*.

¹⁷⁰ As Massey and Kirk (2015) describe, both Indigenous science and Western science are now more commonly recognized in academia as valid notions of science and have been applied together in emergent research practices such as Kaupapa Māori, [and others such as Two Eyed Seeing, see Peltier 2018]. Following Massey and Kirk (2015), I use the term *Western scientific knowledge* to refer to “officially sanctioned knowledge of positivist inquiry, supported and acknowledged by governing bodies.” Following Winkelman (2009, as cited in Massey and Kirk 2015), I use the term *Indigenous scientific knowledges* to refer to: “empirical evidence, gathered over the centuries [by Indigenous peoples] and sustained by oral or codified traditions...” Snively and Williams (2016, 7) write further about braiding Indigenous science and Western science by following Ogawa’s (1995, 588) pluralistic definition of “science” as a “rational perceiving of reality” for the purpose of discussing ways in which science can be taught in culturally responsive ways in education curricula. Snively and Williams (2016, 7) follow Warren et al. (1993)’s description of Indigenous knowledge as local knowledge specific to an Indigenous culture or society, and further add that “Indigenous Knowledge systems correspond to the entire spectrum of philosophy, history, heritage, ethics, flora and fauna, educational processes, and much more.”

water—unlike DFO has never heard before. And those need to be combined so that that respect is taught. And when I go out with a forestry tech, I know the land differently than he knows the land... we don't understand each other's technology and techniques, but if we worked together we would create something that was really beneficial. So for outsiders and those of us who actually work with the land, do need to come together in such a way, and that's that spiral, cause we're going to allow ourselves to grow, but we're still going to keep that connection from where it began... And we're not gonna let go of that piece. (Rhona Bowe 30 August 2018)

I'm going to be working with the Ministry... they're doing research on grazing and wetlands. And it's really kind of a neat thing, because this never happened, you know, before. *They're starting to draw more upon traditional knowledge, because they know it makes sense.* They know that there's answers out there that they can't get. Simply because *they don't have their boots on the ground like we do. They don't have centuries of knowledge to draw upon.* So when I go in there I'm going to talk about those things, those connections, and I'm going to talk about how plants need each other. How we've got to start keeping sensitive areas more exclusive to cows and those sorts of things... (Ed Jensen 24 January 2019)

Power imbalances that decouple Indigenous monitoring from management and decision-making represent a key challenge in effective environmental monitoring with both Indigenous knowledge and western scientific knowledge (Thompson et al. 2020). Walking on Two Legs is one Indigenous review process developed by the Stk'emlúpsenc te Secwépenc Nation, noting the inadequacies of the provincial and federal environmental assessment processes, applied in review of the Ajax copper-gold mine project near Kamloops (Ed Jensen 24 January 2019 interview, see also Ignace and Ignace 2020, 134, 144). This process drew from both Secwépenc knowledge and western scientific knowledge to inform a community-driven decision-making process, which rejected the Ajax mine proposal in 2017. Ignace and Ignace (2020, 144-145) describe the process in greater detail, whereby compiled evidence from the environmental assessment application was brought to the Stk'emlúpsenc te Secwépenc panel for review.

We did a lot of that work with the Ajax project, we called it Walking on Two Legs. We used traditional knowledge on one leg with western science on the other, to balance and to create something suitable for this area... We had a panel review of knowledge keepers presenting evidence to them, as well as western

scientists ... I think there's room for those things—but it needs to be done differently. We need to start influencing in these sorts of ways, where we gather best practices and traditional knowledge to do things right. (Ed Jensen 24 January 2019)

Ignace and Ignace (2020, 144) write about the Walking on Two Legs process as creating a model for recognizing Pípsell, the proposed location for the Ajax mine, as a cultural keystone place of high biocultural salience. This model challenges colonial assumptions that cultural practices and “deep connections to place[s]” like Pípsell can be mitigated through displacement and re-establishing them elsewhere:

As it is used in provincial and federal environmental impact assessments, the concept of *mitigation* (“lessening the harm”) is based on the idea that Indigenous peoples’ cultural and spiritual practices are transportable and thus can be readily separated and alienated from the ancestral sentient places associated with them. (Ignace and Ignace 2020, 134)

We hope that the SSN’s review process can serve as a model for Indigenous peoples who are also pursuing such issues by “walking on two legs” – one comprising the details of scientific enquiry and the other representing engagement with Indigenous peoples’ laws, knowledge, and worldviews. (Ignace and Ignace 2020, 146)

Nicholas et al. (2009, 263) describe similarly how, in western frameworks, tangible and intangible heritage can often be seen as detached from culturally significant places and contexts:

This [Western] way of thinking assumes that cultural items and knowledge associated with them can be detached from the landscapes in which they arise and ignores – or sees as less significant than economic benefit – the link between landscapes, cultural practices, and passage of knowledge between generations (e.g., Barsh 1999; Bell 2001).

Innovative models such as the Walking on Two Legs process have the potential to forefront Secwépemc values within environmental assessment decision making processes in community-driven ways, and center Secwépemc knowledges, processes, and past, present, and future relationships to land. This model also demonstrates an application of the cultural keystone places concept to describe the biocultural salience of certain places,

and their role in anchoring cultural knowledges, stories, laws, identity, and futures.

Diverse Indigenous knowledges and western scientific knowledges are grounded and informed by their own ontologies, epistemologies, methodologies, and processes, and can present diverse strengths and ways of knowing for eliciting meaningful knowledge about the nature of reality and biocultural diversity.

Another example of collaborative environmental planning in the Lakes Division caretaker area of Secwepemcúlecw is through the multi-scalar governance structure of the Shuswap Roundtable. The Shuswap Trail Alliance is the organizational body through which local Secwépemc, municipal, regional, and provincial governments, as well as local stewardship and trail user organizations work together through the Shuswap Roundtable. The Shuswap Roundtable meets annually, as well as has 4 working group meetings throughout the year with representative leadership. The Shuswap Roundtable works to engage collaborative and thoughtful values-based planning with accountable protocols for planning and approvals.

Here's a different way of approach that says everyone that's here needs to be at the table, and collectively ... Hold the ability to analyze and think, and look for solutions together ... *Secwépemc and Okanagan leadership at the table are going, this collaborative approach is what we want to see happening, and these values are important.* We want to keep moving forward if others are interested. (Phil McIntyre-Paul 26 November 2018)

...this has always been a key part of this taking care ... *engaging a wider circle of leadership, and this just being one other way of ... people supporting the traditional caretakers.* And realizing that pathways and trails are... routes of interaction, that's how we engage in our landscape. And now you've got all of these people, all of these recreational groups that are eyes... and at the same time are educating folks. Then there's a greater awareness, and, hopefully, greater care. (Phil McIntyre-Paul 26 November 2018)

At the Shuswap Roundtable, a Communications Protocol was created in 2010 with an acknowledgment of Secwépemc rights and title so that the table began from a place of mutual understanding, intent, and values:

...Secwépemc leadership was very clear right upfront—and “we’re looking to acknowledgement of our inalienable rights, that you’re actually getting it.” That we’re on First Nations territory... *The purpose of this strategy is that we all commit to working together and that part of that working together with these values will be important—yes, we acknowledge that we are in Secwépemc territory...* (Phil McIntyre-Paul 26 November 2018)

This workshop was described as being extremely important for providing a context and history of Secwépemc-settler relationships in Secwepemcúlcw, explaining the significance the Wilfred Laurier Memorial, and establishing a baseline for values, understanding, and communication between Secwépemc and non-Secwépemc leadership to work together. As Phil McIntyre-Paul describes, this context was vital for building new tables for working together that are grounded in Secwépemc values and agendas: “The agenda was not controlled and pre-determined by non-Indigenous leadership ... it was reversed... it’s a different conversation.” (Phil McIntyre-Paul 26 November 2018).

The Shuswap Regional Trails Strategy is an example of relational, multi-scalar governance strategy that guides best practices for recreational planning in the Shuswap Lakes region. The strategy acknowledges the central role of Secwépemc peoples as *yecwemenulecwu*, and is guided by eight central Secwépemc values:

1. Y’icwetsutce (“you take care”);
2. Respect, Cooperation, & Stewardship;
3. Never take more than you need;
4. Reproduction, balance, education & protection;
5. Take care of one another;
6. Respect, harmony, balance—self-worth—self-respect—we all individually have a place & responsibility;
7. We are caretakers of Mother Earth—interconnected with all—small part of the whole Earthly ecosystem—there is no one thing or human being that is more important than the other; and
8. Belief and honoring of the Creator - higher power - spiritual strength is a necessity

(Shuswap Trails Roundtable and Fraser Basin Council 2015)

Phil McIntyre-Paul, Executive Director of the Shuswap Trail Alliance, describes the significance of learning about and understanding these values as a framework for

growing understanding, planning and living in Secwepemcúlecw.

...there's a gentleness to these values, right? ... let's use words like enough. Lets use words like reverence. Let's use words like patience and respect ...
[Councillor] Louis [Thomas] will speak to this ... when he says we all have a responsibility to look after the land ... at the top of the values list was—we need to be looking after the landscape better ... And a secondary value is we'd all like to create opportunity for recreational engagement in this area, as long as it doesn't supersede this other value and First Nations values. Again, those are two filters through which we will filter everything else that we consider. So it really made working together possible... if we all agree to these three values: respect, cooperation, and stewardship. That we're here to look after the land together, that we're going to work together, and that we're going to do that with respect. (Phil McIntyre-Paul 26 November 2018)

So as part of this structured approach then ... there was some discussion around education, and particularly around First Nations values and interests, but the one that wasn't there that really was brought from the Okanagan Nation Tribal Council staff, wildlife staff, was the idea – was the value of [Indigenous] food sovereignty and food security ... Even though our focus is on recreational management, it was still a recognition that ... recreational access, it doesn't matter what we're doing, we're part of the environment, and so we're having an effect ... *every time it would come back to those values you could just feel things kind of anchoring again, because there's agreement there. And now we go back to the steps and say, okay let's be thoughtful, what do we need to know together about those values in this area before we make other decisions that could impact or affect that? (Phil McIntyre-Paul 2018)*

These values create a structured approach that engages primary values as filters for planning, prioritizes early engagement and collaboration, and creates an adaptive decision-making processes grounded in shared social and ecological values. Furthermore, the Shuswap Roundtable provides opportunity for dialogue around the intersection of recreational management with other values, for example Indigenous food sovereignty and food security.

Tmicw-based Education through Trails

Relationships were discussed as central to building understanding between Secwépemc and non-Indigenous communities. As the following discussions highlight,

relationships and *tmicw*-based education are important parts of educating non-Indigenous people about Secwépemc values and responsibilities such as *yecwemenułecwu* and respect:

I had a fellow watching me fish a couple years ago, up in my fishing stream ... And he was very aggressive to me, right? And so I started telling him about what I was doing ... a little bit about my history and how I'd been doing this for my whole life, and how it's important in my diet, and for other people. And by the end of that conversation ... you know, he appreciated what I was doing... I explained to him, we always try to leave it better than when we showed up... I'm here all the time. But I don't leave a mess. I don't disturb things. I try to be as unimpactful as I possibly can. And he appreciated that. And then he started telling me about what he was doing to protect that spot. We had something in common, right... So there's that too, right—*it's developing those relationships based on a common interest...* but I told him in no uncertain terms that I'm going to keep doing it, and I'm going to be very protective of this too. You know? And *it's okay for me to do it, but you can't. you can't do it. you don't have any rights here. I'll let you protect it though.* That's a high level of title. And so when we get backcountry gardens going, we're going to tell people, hey, that's our garden. Keep out of there. (Ed Jensen 24 January 2019)

In Ed Jensen's example, he speaks to the importance of developing relationships based on common interests, as well as communication for building understanding with non-Indigenous people. Furthermore, Ed Jensen emphasizes the importance of recognition that some knowledges and responsibilities remain the exclusive role of Secwépemc people to act on. In this respect, relationships can be key for land-based education about Secwépemc rights, roles, and responsibilities.

Collaborative forums like the Shuswap Roundtable can also create spaces for encouraging understandings of place that center Secwépemc rights, responsibilities, and relationships to land. For example, trail systems that engage people thoughtfully in the landscape can also be a way of educating both locals and visitors about Secwépemc presence and values, as well as building capacity for educating visitors about what it means to live in Secwépemc territory. As described by the quotes below, land-based education can teach values, build relationships, and support with setting up planning systems for Secwépemc governments to monitor harvesting and teach proper protocols:

When we talk about how we're teaching our children to have that connection with land again, I think that's going to be the same with outsiders ... just for an example, if we built a trail all around this lake ... we could educate our tourists on what's there, and we would manage it... I think that's one way we could educate people, the other way is ... the bands are going to say no, and Lilwat is an excellent example of that, where they have all their medicines and stuff in that one area that they like, so anybody who wants to go up there has to learn how to harvest properly, they have to say what they're harvesting, and then they'll teach them how to harvest that, and then allow them to go up there. They can't just go up ... They're in control of the harvesting, and how much is being harvested. I think that's St'at'imc. (Rhona Bowe 30 August 2018)

... I see a big difference ... we're talking about it more and we're getting the idea, hey—we were the first people here. That's something to be proud of, and there's more recognition of it now. *Maybe the timing now is right and having more talks, trail walks like these, just to talk about what is our culture.* Develop the curiosity I think as to who we are. (Louis Thomas 30 August 2018)

Creating measurable outcomes also supports determining whether central values such as food sovereignty and economic prosperity, are being realized in communities. These frameworks are important for being able to measure, reassess and compare the results with values frameworks, remain adaptive and relevant, and inform future planning.

We've got lots of trails, things you can do in the community, the communities are starting to thrive, and like Revelstoke ... still nobody has any sense of where they are, right? There's still not an inkling that they're in Secwépemc territory ... So part of it is to go, okay, *what are some of the outcomes that are important here [for regional trails and recreation planning], to know that we're actually getting somewhere?* ... so if we're saying that one of the outcomes would be greater economic prosperity for Secwépemc communities in the Shuswap Lakes region, and ... the trails, tourism and recreational amenities and engagement would be one of the places that they're realizing that, then that would be a measure to know if this is working ... those values tied to outcomes ... this is what will make the difference. (Phil McIntyre-Paul 26 November 2018)

... the Indigenous plants conversation is there ... the Roundtable is sort of poised and ready to be guided by Secwépemc leadership on a whole number of things, including go-no go areas. Interpretive information, educational signage, design, naming ... but again, it's about patience too right, so we've got Secwépemc leadership saying ... we have consultation with Elders to do, and ... there is a

legitimate capacity conversation ... you can only do what you have time and/or resources to free up your time to do, and the leadership available to do it. Until those are in place, we need to commit to doing some things but going very cautiously... Now it's just a name change, and then the next thing has to happen, which is, actual stewards and guardians and caretakers ... And then the idea of the [Secwépemc] Landmarks Project [and the Secwépemc Lakes Division] ... so there's just visual presence over the landscape ... I do think part of our job is in the process we engage the wider community, is to be making sure we are taking every effort we can to be educating people... that's where I think we need to make sure we're ready, because it's our job to do that, it's not Secwépemc leadership's job to say, oh there's been some racist backlash you guys will need to respond to that. We're responsible." (Phil McIntyre-Paul 26 November 2018)

Eco-cultural restoration is complex and embedded in land tenure and policy landscapes that continue to shape Secwépemc food systems and planning in a variety of ways. As described in Chapter 3, resilience does not happen in isolation, but requires access to capacity-building resources, and social, institutional, and economic support. This includes Secwépemc people continuing to have the resources and ability to practice roles and responsibilities as *yecwemenulecwu*, and to respectfully work together to maintain and reproduce social and ecological relationships and overall social-ecological system health. Relationships and multi-scalar governance tables guided by Secwépemc leadership and articulations of Secwépemc values such as *knucwetwécw* can be one pathway towards building opportunities for accountable dialogue that recognize the important role of Secwépemc communities and knowledge systems in management, and the importance of shared power over management and decision-making processes.

Yecwemenulecwu

The third primary value that emerged from interviews is *yecwemenulecwu*, described to me as both the action of looking after or taking care of (*yecwemínte*), as well as a role and responsibility as a caretaker of land (*yecwemenulecwu*).

Cultivating Secwépemc plants for eco-cultural restoration

Knowledge Holders in *Switzmalph* have experimented with growing culturally significant plants in a variety of settings, sometimes extending the ranges of select native plants to different habitats, latitudes, and elevations. This is especially visible in the cultivation of typically higher-elevation species such as *scwicw* (Avalanche Lily, *Erythronium grandiflorum*) and *skwekwine* (Spring Beauty, *Claytonia lanceolata*) in home and community gardens. In Neskonlith's Switzmalph community, the Switzmalph Cultural Society is a native plant nursery founded in the memory of late Neskonlith Elder Dr. Mary Thomas, dedicated to the restoration of culturally significant ecosystems such as the Salmon River delta, and cultural programming grounded in Secwépemc knowledge (Switzmalph Cultural Society 2020). The Switzmalph Cultural Society (SCS) continues to propagate various culturally significant plants in their greenhouses for a variety of ethnoecological restoration projects (Switzmalph Cultural Society 2020). Other community members have also experimented with propagating other culturally significant plants in basements and yards.

Many Knowledge Holders talked about the importance of growing Secwépemc plants in home and community gardens for education, accessibility, and in response to declines in quality and quantity of culturally significant plants in the landscape:

[re: Switzmalph Cultural Society greenhouses] *We tried transplanting some Indian potatoes [skwekwine, Claytonia lanceolata] to see what happened... we had it in there like, for three years... And they started getting bigger and bigger. Worked real good... we had everything all in the greenhouse, and then everything came to shut down so I just moved it into the house here... they're hard to find, and they're starting to get choked out by everything else... highbush cranberries, they used to be all over the place down here, now you just find them in some spots. And hazelnuts... used to be all over down in the reserve there, there's hardly any. (Lorna Thomas 17 August 2018)*

I want to see it [the community garden] bigger ... more people being involved ... for educational purposes ... I want to see people try to eat some of the Indian potatoes, the rhubarb, the wapato, and the berries ... A lot of people are never going to go out and gather all that stuff themselves, bring it home and cook it and try it themselves. But if we can facilitate that ... I think that will help change. Also, getting into more of the science of it ... Propagating seeds ... the space between the plants, what plants can grow beside each other, what can't,

female/male plants ... And then people might be inclined to grow more plants at their own home. (Kenth Thomas 12 September 2018)

Growing culturally significant plants is part of a wider effort and vision from many Knowledge Holders in Neskonlith to create spaces for sharing knowledge between Elders and Knowledge Holders and youth, and respond to cumulative impacts on native plants by restoring harvesting areas and the health of ecological and cultural food systems. Despite challenges securing sustainable funding for many of these projects, this remains a clear value in Switzmalph. This is demonstrated through the many ways in which many Knowledge Holders continue building new multi-scalar partnerships to support culturally significant plant restoration, growing culturally significant plants in homes and gardens, and harvesting.

Many Knowledge Holders also spoke about the importance of gardening and agriculture *alongside* the restoration of Secwépemc food systems for health, local control over food systems, building relationships, and teaching values related to growing and sharing food. Some community consultants spoke fondly about the extensive market and community gardens and orchard trees that used to be cultivated at *Switzmalph*, and the positive social and health effects future garden and eco-cultural restoration projects could have as well as their role in mitigating rising food costs and food insecurity.

We need more... something to inspire them to have a greenhouse in their own—at their own place, and get them going early in the spring. And inspire them to have their own little garden, and teach them the values of how to have your own little garden at home, you know, cause they have their own children, their own grandchildren to raise, and *how much cheaper it is to have your own garden ...* At least you know *it's not sprayed with insecticide or anything like that ...* And it will make you happy too, it will make them happy. They can grow their own ... *It's because the kind of sickness each family member has. There's somebody with diabetes, somebody with high blood pressure, maybe going through cancer, recovering ...* And so if you grow your own, you know what to grow—at least you know what each family member will eat. (Jane Thomas 10 September 2018)

... things can't come back, you know, fish and stuff like that. It's all gone... Can't feed our people. So, the stores have it—but who can afford to buy stuff like that? It's discouraging you know, so that's why I pushed for those plant bins ...

Planting potatoes, more carrots and stuff like that. Things that would last all year round... And the other thing is cellars. Something to store our foods away in. (Jane Thomas 10 September 2018)

I think both [community gardens, as well as harvesting areas on the land]. I like the regular you know, potatoes, carrots, everything like that eh? Cause those are healthy too – you don't spray all those chemicals in it, and then ... your traditional food, I like learning more about ... that's what the younger ones should learn too ... because of all the hungry people out there. (Delores Purdaby 2018)

I really didn't give it much thought until recently, *I was diagnosed with diabetes*... I always tried to eat as healthy as I could but I knew I wasn't eating very healthy because I'd only eat maybe once a day, so to me food was kind of an afterthought until I guess my body put my own health front and center. *So now, I consider food all the time*. I consider where it comes from, what I'm putting into my mouth, digestion, sugar levels, like, carbohydrates, how long will it take to process, how long will it take to digest, I think of where it comes from, how—who grew it even... I think, food is something that I'm going to need to take more seriously, just for my general health and well-being. (Kenth Thomas 12 September 2018)

Mary Thomas used to talk about going up in the mountains and not finding the plants, or the plants were getting smaller and smaller ... We go into the grocery store and some of the foods that we eat are unhealthy ... we have different chronic illnesses like diabetes, we have heart disease ... I think as a nation we need to work together to save our plants ... I know that was Mary's dream ... was to have a place down the road ... she wanted to preserve the culture like that, with the plants ... that's something I would really like to see come back... something to come together, and let's work on it. (Ethel Thomas 27 April 2019)

One Knowledge Holder we spoke with also referred to her Auntie Flo and late Uncle Wolverine's garden, and its importance for building community control over local foods, and supporting grassroots movements:

...they loved to support groups of people around what they would call the front lines, and today it's the [grassroots organizers currently protesting the TransMountain pipeline expansion by] Kinder Morgan ... so that's where most of the food from her garden went this year ... it's front line work they call it, it's people movement ... Wolverine would always send food to them ... a lot of people from that movement, who believe in that movement, came and did her garden ... and they canned all the food this year ... non-GMO, or GMO free ...

they don't want to be dependent on anybody for seed, and they even tried to grow tobacco for ceremonial purposes. (Donna Jules 04 December 2018)

The late Arthur Manuel also wrote about Wolverine's garden, and barriers that existed at the time for selling at the local farmers' market:

...Secwépemc warrior, Wolverine (William Jones Ignace), who recently passed away, was an important Elder in our nation. As an old man he single-handedly ran an eight-acre organic farm and gave his produce away to the needy in the community. But he was not allowed to sell it at the local non-Indigenous farmers' market. It is important to note that our poverty is not a by-product of our domination but an essential element of it. (Manuel and Derrickson 2017, 68)

Vegetable gardening and agriculture with introduced plant species, applying a combination of traditional and introduced methods, has been part of Secwépemc food systems and economies since the early 1900s (Ignace and Ignace 2017, 461, see also Chapter 2)¹⁷¹. In *Switzmalph* specifically, oral histories from Dr. Mary Thomas (Thomas et al. 2016) and her daughter Jane Thomas (2018) describe the recent agricultural food system transitions in Mary's parents' lifetime. As Dr. Mary Thomas described,

...my father and mother, I guess they were willing learners; they were really busy clearing land, which was not traditional with us, cutting down trees—you can imagine what they had to go through, because of their connection to Mother Nature. I often heard my mother talk about this, that it wasn't their way of life, but they had no choice, they had to accept the way they were taught, how to survive, was to chop down all these trees and cultivate it into European way of living. I guess that's where we began to lose a lot of the traditional foods. And it was hard work going out and getting that stuff, and I guess it's equally as hard to put in a garden and keep it weeded and everything but the sad part is losing the traditional values (interview with NT, June 1994 as cited in Thomas et al. 2016, 374)

Most Knowledge Holders spoke about the prominence of agriculture, gardening and orchards in *Switzmalph* in their youth, and the subsequent decline in community and

¹⁷¹ This contrasts with Secwépemc plant cultivation, which has a deeper history of landscape and population level management.

family agriculture within the past generation.

...my grandparents, they had Clydesdale horses... Those are the ones they cleared the lands with, eh? Cleared the trees with... Plowing the fields by hand. They traded their—whatever they could, for the farm equipment... But now that the computers and stuff have come in, no more [farming]. Nobody does. That's where I think our downfall is now. And years ago, that's how it was when I was growing up ... and as we got older things started—like electricity and running water all started coming in, and next thing you know, we had TVs and nobody ever does that anymore. Nobody wants to. They want to go to the store, buy all their food, don't want to plant. (Jane Thomas 10 September 2018)

...some older people had gardens, old people, some of the older ones. They'd hand out wild gooseberries and blackberries and um, black caps and different things like that... So there was some older—elder people who had beautiful gardens, hey. They had horse plows... 80, 100 years ago. (Nuxnuxskaxa ct's717élt [Julianna Alexander] 14 August 2018)

The two food systems highlighted by Knowledge Holders (1. Gardening, agriculture and globalized food production/supply chains; and 2. Secwépemc plant cultivation and food systems) describe the dual and moditional¹⁷² food system that many people navigate and access today. Switzmalph Elder Lorna Thomas talks about the intersections between these food systems in restoration projects in Switzmalph where, in one case, her *skwekwine* (*Claytonia lanceolata*) garden was tilled over to create a community vegetable garden:

Well, a lot of it is rocky now, and also in cattle fields, and they're [*skwekwine*] really hard to dig up, and the ground is so hard they're not taking to size... *Where we had them planted ... it was ... half sand and half soil, or clay, and it seemed to grow real good there. Because they were starting to take size again... Like, they got plowed up. Nobody knew what they were and they plowed it up for a community garden... So they ruined my little garden.* (Lorna Thomas 17 August 2018)

The tension between these two food systems came through in conversations with

¹⁷² See Lutz 2009

Knowledge Holders, both due to the impact agriculture has had on Secwépemc food systems as well as the assimilative Department of Indian Affairs policies behind agricultural transitions. For example, many traditional Secwépemc foods are no longer accessible because their habitats have been damaged by agriculture. Furthermore, Gerry Thomas described how expansion of agriculture in the Salmon River valley also cut off trade routes where Secwépemc people used to travel by canoe down the Salmon River (fieldnotes, May 2019). These historical contexts situate novel adaptations to food systems, that are still in accordance with many of the values and principles in Neskonlith, however also situate contemporary overlapping constraints to the practice of cultural rights, roles, and responsibilities to land as a result of colonial policy and legislation, such as decreased land base, the reserve system, schools, and practicalities of participation in cash economy. Furthermore, as described by Knowledge Holders, these changes have also resulted in compromised habitats and noticeable declines in culturally significant plants and other species of overlapping significance that anchor many relationships, values, responsibilities, and memories. Knowledge Holders are also finding novel ways to address this through a combination of cultural education and community gardening, as well as engaging in multi-scalar relationships to create pathways for reclaiming jurisdiction over territory and restoring harvesting areas more broadly. For example, Neskonlith recently began a research partnership with Agriculture and Agri-Foods Canada and Parks Canada to research effects of climate change and other variables on the growth of *skwekwíne* (Spring Beauty, *Claytonia lanceolata*) and *scwicw* (Avalanche Lily, *Erythronium grandiflorum*) to inform the future eco-cultural restoration of these plants and their habitats.

Protecting ecosystems and addressing cumulative effects:

Knowledge Holders emphasized that while gardening projects can be beneficial in many ways, ecosystem-based approaches that consider kincentricity and interrelatedness of complex ecosystems and the agency of animals, plants and other relatives, are vital to

the restoration of Secwépemc food systems:

We can't just transplant a plant and think we're doing great... We're not feeding those other things, creatures, that are supposed to do their job... Everything is connected ... So even if we did have hot houses, it's not going to be the same ... You might get half of the value, but never the full value of a plant. Or the berries, or whatever else the animals—everybody—needs. (Nuxnuxskaxa ctś7l7élt [Julianna Alexander] 21 August 2018)

Everything is connected in a good way, you know—everything needs each other. Plants and trees and shrubs—they coexist with one another, you know, they require things from one another in order to thrive. You can have survival, and I think our people have shown that through how we've managed to make it to today ... But we're not thriving yet and there's a reason for it. It's because we're missing a lot of things. And the plants are no different—I've seen, I remember when I was a kid, seeing things so differently than I see them now. Going out into forests and seeing monocultures, heavily overgrazed areas that have fir trees in them and grass. No other understory species, like no shrubs, no berry shrubs, no anything else—just grass and trees—like it doesn't—it's not natural. And so now you can go into some of those areas and you see the trees are getting sick ... They're getting infested with insects. You know, that's the other part of it too. Certain plants attract and repel certain species of insects. They all need each other ... all of those flowers that we use for medicines as well, right? They're disappearing, all because of logging practices that are wiping out understories ... There's a lot of things to be said about the way we need to approach cultivation and to approach propagation, and we need to be very careful about those things. And we need to start learning more about who depends on who. (Ed Jensen 24 January 2019)

As Ed Jensen describes in this quote, there are many important considerations for revitalizing culturally significant plants, including the value of their interrelatedness with other plants and parts of their ecosystems. He describes the difference between surviving and thriving to situate the dual experiences of his people, and culturally significant plants and the ecosystems they are embedded in. Several Knowledge Holders also spoke about the importance of water as connecting everything in the system, and protection of water as central to eco-cultural restoration of culturally significant plants along with the ecosystems that support them:

...what I need people to understand is the cycle—right from the top of the mountain to the valley. And if you're working at prevention or revitalizing some of our lost indigenous plants or food ... the water cycle is really important from the top of the mountain down ... when the forest up here is damaged by logging and everything up there, RVs, recreation, skiing, you name it, they take out the trees and different little plants—right from the trees to the little shrubs and plants and bugs, and everything plays a role and each thing has a cycle, so when it gets to the plant you get poor plant value. Like say if I go picking huckleberries way up in the mountain and they're dry and small and no good, that's because they haven't got water and I think the value of the food, like the nourishment that it needs ... (Nuxnuxskaxa ctś7l7élt [Julianna Alexander] 2018)

...it's like trees as well, how they're transplanting trees, but they're transplanting them to grow too fast, because it usually took a hundred years to grow a perfect, beautiful big tree, you know, and the birch. And the fir and the pine and different, you know, different, like *cottonwood is really important*. People think they're just a nuisance, but *they all play a role, because they hold water*. And *same as willow, they hold water in the ground*. Lots of water. Lots and lots of water. *And the moss, it covers the ground to keep the water, especially high up in the mountains*, to keep it wet and damp. But right now if you go up there it's arid, really dry, no food for the animals, no food for the bugs and the hummingbirds. No flowers, no, nothing. So that's why we're having these forest fires, cause they're really opening it up, and they're really opening it up to, you know, fire in this world. And so I think *we need to do all of that restoring with the food somehow*, like you wanted to, *but we need to think about those things and how to protect our water, especially*. (Nuxnuxskaxa ctś7l7élt [Julianna Alexander] 2018)

...Mount Ida... There were some places in there that were really, really rich. But at the base of the hill there was nothing but roads and trails and quads. And then when you went on top it was really rich with plant material. And I kept thinking in the back of my mind, if all that machinery gets to go to the top, they contaminate the top with whatever they're bringing up that goes in the dirt, on those wheels and stuff, and then that really rich area wouldn't be so rich anymore. It would start getting overpopulated with say, invasive species right ... *if the rain comes down on the top and it begins to cleanse stuff, and it, everything will flow down. So all the plants, the seeds and stuff, would flow downhill and it would replenish this*. But then at the base of the hill where *the quads and stuff* were—*they should only be allowed to go so far*, and then not be allowed to go up any further than that. And then maybe hiking so far with pets, but then after that no more, and only hiking only, you don't pick and touch stuff. That way the tops of our Chiefs, which is our mountains, could be used for us to harvest what was needed. There's enough lakes on the top that we could landlock some of the species that are in danger. Because automatically they'll go back to where they

belong once you put them back in the waters when it's safe. (Rhona Bowe 30 August 2018)

Many Knowledge Holders also spoke about effects of climate change and increases in wildfires, along with other cumulative effects from settler-colonialism (e.g., removal of Secwépemc peoples and cultivation practices, land tenure landscape change leading to ranching and overgrazing, railway contamination), on the quality and quantity of culturally significant plants, as well as changes in timing and seasonal budding. Several conversations highlighted the need for further research on species interactions and relationships to inform ethnoecological food systems restoration.

... today is not what it used to be. That things have changed—*climatization, colonization, fires, everything that has changed the landscape and has affected our medicines, has changed the size, the amounts—decreased the amounts* ... I know as a medicine gatherer that I can find medicines where they used to be found, but I know there's certain medicines that have become rarer, probably from my great-granny's time here in this community, to even my grannies time, mom's time and my time. That *in four generations we've seen a decrease in the amount of medicines (food) and where we have to go to find this medicine.* (Crystal Morris 19 January 2019)

I think with climate change it seems that some things have changed. Like the seasons ... some of the trees, some of the bushes are already starting to bud up at Jackpine ... *because of the changes in the seasons, we never know when to pick.* We used to harvest birch bark at the end of May or beginning of June, and now it's either April, or later in June ... we don't even have any snow, hardly any snow. *Everything is being affected by climate change — our foods, our everything.* (Ethel Thomas 19 January 2019)

I really believe in our plants ... our medicine. *Our foods, those are becoming scarce ... we have to go in far even to find those plants.* Scwicw [Avalanche Lily, *Erythronium grandiflorum*] was something people used to go digging. And our *skwekwine* [Spring Beauty, *Claytonia lanceolata*], we don't have it anymore—cows got into it... (Ethel Thomas 19 January 2019)

...the salmon. Like *they rely on signs or whatever, when to come up. Like when the water is too warm they won't come up.* Like say they won't come up on the Fraser, they'll have a hard time coming up if the water is too warm, a lot of them will die or whatever. And same when they're going to the spawning, like from the lakes to the rivers and creeks, well they know when the leaves are falling, like the

fall. But *this year there was none of the signs or anything, so people were waiting and waiting for some of the salmon, and even the coho came up really late. And people think oh, there's no more coho—but they came up really late. The water was almost freezing.* (Nuxnuxskaxa ctś717élt [Julianna Alexander] 19 January 2019)

... you know *in Enderby, we have a harder time harvesting* for what they do, because there's hardly any cedar trees in our area. It's all farmers and then, you know, by the town, we have to go what, maybe 80 miles. *It's because of the no-trespassing signs, the farmers, the cattle, every—and then when there's more cattle out there, they're the ones that are ruining all these plants* that we're talking about. And *when we go harvesting a lot of them are really small. They're not—they shouldn't be like that. They should really be pretty big, like one inch—Indian potatoes, different, you know, edible roots—but they're not, they're really tiny, and that's because the cattle are stomping the grounds.* (Nuxnuxskaxa ctś717élt [Julianna Alexander] 27 April 2019)

The cumulative impact of forestry practices on key ecosystem processes, structure, function, and plant diversity was a concern for many Knowledge Holders we spoke with. Harvesters spoke about cumulative impacts to harvesting areas as a result of forestry practices, and the emotional and cultural impacts of this along with the resulting increase in distance to access other areas with culturally significant plants. Nuxnuxskaxa ctś717élt [Julianna Alexander], an Elder and Knowledge Holder from Splantsín, spoke about how different value systems can impact the way land is understood, interacted with, and planned for. When money is centered as the primary value, she describes the negative ecosystem impacts that result:

People have to travel a long ways now, because nothing's close by anymore, the habitat is ruined, they overlogged all over the place so the animals are moving and there's no food for them. When I went to drive up this summer, just not too far from here, maybe 100 kilometers, I noticed the aridness. The trees that are supposed to hold the water up there are all dry. All the medicine plants, they're dry. All the little critters and animals, all the swamps are dry, because they plowed them out or covered them up. And to me that's really damaging... every time they fill up the swamp they cover all these critters and all these plants that purify the water, so we don't get good oxygen, we don't have pure water, and everything has a job to do—right from the little critter to the big animals, to the human beings—we're supposed to be responsible for everything ... [non-native people] they're damaging our clean waters because they want tourism, they want

houseboats on the water, they want speedboats on the water, they want this recreation—they just want everything. It's all about money. It's not about protecting the water or looking after the fish that are coming up. And they're damaging the spawning grounds because of that, because every time the speed boat goes up our river, it goes like this, so everywhere the salmon spawn, the eggs get ruined, all kinds of different fish. And so, and erosion happens to the land, it falls in, and so you've got mudslides from you know, top to bottom from being overlogged ... (Nuxnuxskaxa ctś717élt [Julianna Alexander] 14 August 2018)

Rod and I had medicine trails before where we could just pick and pick all the things that we needed, because there would be a trail of it, and I'm almost positive that they were planted at one time like that. They clear cut that. And so nobody knew, because you don't go around bragging about... *if there was a way to protect it I'm sure that we would have, but by our silence we thought we were.* So anyways, the following year we went up to collect medicines, it was clear cut, and so we found another place, same thing happened, and then fires came and then we realized, look. *If we don't put into place something that protects our system—if you don't use it, you lose it.* And in the old way when they did the fires and stuff, it was to maintain areas so that they wouldn't you know, burn up and the way they are right now. *So our grasslands, the roots go down like six feet. They're not like this little grass that they throw out in forestry—that's one of the mistakes that they make.* So a grass that grow this far isn't going to bring up a lot of nutrient value. A grass that's going to grow you know, is going to bring up loads of minerals, so our deer and stuff get really strong horns and hooves and bones and stuff. Well, now they're getting sick. Because they're throwing this silliness out there and expecting it to grow, and killing all the deciduous trees, which is actually food for them ... They leave the, all the logging roads open, so quads go through there, whoever wants to goes through there like crazy, and the predators easily run down there, big game. They kill them lots and unnecessarily because they can. Because those roads are open, and it's in their instinct to do so. *So it's disrupting nature—the areas for us to harvest. When we say harvest, that's our food, our medicine—that's the same as our food. It's not different. And so yeah, there's a problem there.* And that's one of the ways I see, is that *those [mountain] tops should be protected for people to collect and harvest them and, like, somehow that has to be managed.* (Rhona Bowe 2018)

... if I want to go pick huckleberries I have to go a hundred miles or something ... to try to find a decent place to find—or birch bark for making baskets. We haven't been able to find any good basket making stuff, or roots even, from the tree ... and all the places we went are just logged right out. (Nuxnuxskaxa ctś717élt [Julianna Alexander] 14 August 2018)

I feel so good out there. One person told me I'm not going to cut that tree [harvesting cedar roots]—I said why. Because this is public land, you know, or whatever they call it, no trespassing... and I said—so be it... You know, and well—if they fine me, they fine me. But I think we—we should be allowed, you know, to feel really good, we're Shuswap people. We've been here. I don't see why we have to beg or ask somebody's permission to go dig roots. Wherever we were digging roots, they clear cut it... When I seen that, I cried. I held on to that tree and I really cried. And you know what he said? 'There's a different spot.' (Delores Purdaby 03 September 2018)

Current forestry practices were described as altering the landscape and water systems at a rapid pace. Rhona Bowe describes how, with the additional absence of traditional burning and cumulative buildup of ground and surface fuels, ecosystems do not have time to adapt to rapid rates of change in order to maintain their ecosystem functions, becoming susceptible to wildfires and contamination:

We used to have manageable burning... the villages were huge ... so it really didn't get a chance to get ugly the way it is right now. And because of logging, if logging comes through and it goes through this water and it changes that waterway, then that spot that had the water going through it, and it was like a wetland, becomes a dry area, and it doesn't have enough time to adapt to that and it dries out. And there's no mushrooms under the trees. What that means is that that forest is in danger. And it needs help, because trees use us and we use them, right? So. If there's no mushrooms, there's nothing to attract the flies, there's nothing to attract the birds, and nothing to attract the squirrels or anything—nothing's going to grow there. It's a dead forest, literally. And it's basically kindling, one little strike and that's it ... So it's dangerous for us—for everything it's dangerous. And we're getting less and less places that are available for us to pick, because all the city is sprayed for mosquitos, um, all the powerlines and ... optic fibre ... is sprayed ... all the roadways out in the bush ... so that's an issue, that's a huge issue ... Anywhere where the railway is ... they treat those, those posts that are ... for the telephone poles and for the ties, with really toxic stuff, and it leeches out for a long distance. So, because the railways are built by our waters, because of the old steam trains, steam engines, that means all the water gets contaminated, so you can't pick anywhere near a railway. It's all contaminated. You can't touch the water plants there, so. And you've got these people spraying the deciduous trees because they want their conifers to grow so they can log them, and they're growing them super fast, that's why the trees are bending, because the cones are picked from a different environment and they're not made for this environment, nor are they growing with their trees that strengthen them. So, the whole thing is a mess ... The trees cool the ground and

they clean the air, and they cool the air, and without that you get hot water—you get hot water and your fish die, and so does everything else in there, and the weeds thrive and the water loses its oxygen. (Rhona Bowe 30 August 2018)

As Rhona describes, this rapid change impacts and decreases the number of areas for Secwépemc harvesters to collect plants, in addition to community concerns about contamination in plants.

What do we do to protect? How do we voice ourselves so they can know maybe that we're really really worried about these things and that—because it's our lifestyle. You know, it's not like we want to live another way, but that this *is the bottom line is that it's our lifestyle, it's how we live, and that's what we need—our body needs all those things*. We don't need canned food and we don't need all those other things that are making us sick because it's got too much chemicals in it and everything. So, you know, *we want to go back to our traditional foods, but it's even hard to do that when it's contaminated*. (Nuxnuxskaxa ctś717élt [Julianna Alexander] 19 January 2019)

Knowledge Holders spoke about the agency of animals, plants and other nonhuman beings, as well as the role of humans within this cyclical context: to take care of each other (*knucwetwécw*), and to take care of every living thing (*yecwemenulecwu*). For example, Nuxnuxskaxa ctś717élt [Julianna Alexander] describes the importance of protecting these cycles and systems, because of they are the foundation of habitat, relationships, and all of life:

...if you wanted to do restoring plants and everything, you have to think about ... How they're connected ... *Our purpose for taking care of each other. Or taking care of everything. Everything, every living thing*. (Nuxnuxskaxa ctś717élt [Julianna Alexander] 21 August 2018)

... *when we talk about protection that means everything. Not just the plants*. It's the fish, it's the trees along the river bank, cause it's shade for the fish and different animals right, to eat. But they take it out, like the poplar and different things that the beavers need, and other animals that are supposed to make dams and purify the water. Like, all the critters that go—all the little water bugs, and all the different ... *So the cycles are damaged, our habitats are damaged—just like we are*. (Nuxnuxskaxa ctś717élt [Julianna Alexander] 14 August 2018)

My grandma said that *everything on this earth has life*. For example ... the stones—before I came home I never thought that they had life, until I started really getting back into the culture, the tradition, finding out these things—even the plants. When I started this course with Dr. Jeannie Paul, about medicinal and edible plants, I was reminded about what my grandma used to talk about, that every time I walk out of the door there's a plant that's edible or medicine ... (Ethel Thomas 27 April 2019)

What I was taught from a young age is that *everything in the world around us is connected*. There's no gaps—*everything has a reason why it's here*, besides invasive species of course, they're trouble, and everything needs each other in order to survive. Plants need each other for support, they need each other for medicines, animals need plants for medicines and food, and we need the animals and the plants for medicines and food and for making tools and implements. (Ed Jensen 24 January 2019)

Knowledge Holders cautioned against isolating components of ecosystems, and highlighted the importance of understanding the ways in which they are interrelated with one another. One important outcome from our conversations focused on the importance of acknowledging and respecting the inherent rights and agency of ecosystems, and planning that considers inherent rights and interests beyond solely humans and industry.

There is an international movement moving towards recognizing the rights of nature and ecosystems, and the roles and responsibilities of Indigenous peoples as caretakers. This is described further in Chapter 3 of this study with the example of the Whanganui River in Aotearoa (New Zealand), recognized both as the ancestor of the Whanganui Iwi and as a legal entity, Te Awa Tupua. Boyd (2017, xxix, xxviii) is an environmental lawyer who writes about the anthropocentric nature of Western legal systems, and wildlife and resource laws classifying nature as property. He also highlights new and important international legal cases recognizing the rights of ecosystems and responsibilities of humans. However, Sarah Hunt (2018) also questions whether Canadian justice frameworks can result in meaningful change, given the reality, and recent reminders from the Stanley trial in 2018 for the murder of Colton Boushie, that access to justice remains out of reach for many Indigenous people:

...granting legal personhood to our waters, our lands, would not seem to open up new possibilities for rights or protections here, but instead possibly impose another layer of myth that all is well in reconciled Canada – to find new solutions to impasses and expressions of colonial justice, we have to be willing to ask different questions, and to open ourselves up to decolonial or Indigenous ontologies or frameworks of thinking about what law is, what justice is, and what it can be. And that the questions that we should be asking are ones rooted in place.

Dr. Sarah Hunt (2018) describes the vital importance of Indigenous legal systems rooted in place for justice related to Indigenous lands and lives.

Secwépemc plant cultivation

Knowledge Holders explained the variety of methods used for “looking after” the plants on population levels, habitat levels, and landscape levels (Peacock and Turner 2000; Turner et al. 2000) to increase their growth and productivity. These include practices such as plant propagation, controlled burning, pruning, coppicing, transplanting, and thinning. Ed Jensen and Julianna Alexander also highlight the inter-generational nature of caretaking, and the responsibility of caretakers to plan with future generations in mind:

We always have to think about these things in an inter-generational sense ... our ancestors did that, they did that for us. They did things like burning. Burning to cleanse the land, to clean it up you know, to make sure that it remained healthy, that there's enough carbon in the soils and so that a deep undergrowth isn't creeping up on us to create the fire events that we're seeing now ... *also inter-generationally is that pruning aspect of things. Where I would go out and my responsibility is to think of my great-grandchildren ... the ancestors would go out into a stand of juniper or maple or other bow woods, and they would prune those areas so that there would be lengths of wood that were suitable without knots, without twists and those sorts of things. Grow nice straight wood for future generations.* We know that trees grow slowly, especially juniper. So that work is so important for like two generations past or moving forward I should say ... also, looking after things like rose bush patches ... arrow shafts need to be a certain size, they need to be a certain length. So we need to prune those areas to create that. Rosewood's a bit different, we can do it annually, so in two years or three years we'll have nice straight wood. (Ed Jensen 24 January 2019)

...when you pick it, you're picking it for the next year, it becomes better. The more you use it, the better that plant nourishes every year. Because it'll have new growth, new space to grow ... but if you don't—they get thinner and nothing. *So our job as people, and animals that ate them, we're doing our job of spacing and picking and thinning.* Same as edible celery, onion, Indian potato—it's the more you utilize it ... So when you do all of those things, you know, the animals do their job—the bees do their job. The bugs do their job, the birds do their job ... Transplanting. So does the bear... everybody has a job to do ... Making things better. (Nuxnuxskaxa ctś717élt [Julianna Alexander] 14 August 2018)

What Mary said too was more, we go out and pick huckleberries, blueberries, raspberries and all that—*the more we harvest them, next year they're better ... [and the roots] just by digging them and putting it back, you loosen them for the dirt to grow properly.* And like Gerry [Thomas] said, you dig out the roots and you loosen up the soil, and it gives the chance for another new root to go through. (Nuxnuxskaxa ctś717élt [Julianna Alexander] 27 April 2019)

I was taught from an Elder here, she brought me out to a potato patch, and she taught me such a basic lesson, and it's all about cultivation and how important it is to keep doing it so that those potatoes would grow bigger, and they'd be easier to dig. Because the area she took me to was an area that she used a lot as a child, and the story she told me was that when she was a kid *they would go in there with their digging sticks, and the potato [Claytonia lanceolata] digging would be really easy because the soil would be nice and loose, and it would be sort of fluffier, right. So the potatoes get to grow bigger, and they're easier to dig.* Because that day we were in there and we were digging out these potatoes, it was like trying to dig them out of concrete. The ground was very compact, the grass roots were very thick, and the potatoes weren't very big. And she was complaining about that—she was saying, *we used to get potatoes that were, you know, bigger than a golf ball, you know, bigger than that. And the ones we were getting were like marbles, right?* So really, those areas that we've been ignoring, you know, the berry patches too—they're the same way. We know they used to burn those areas out so that the fire would take care of all that dead stuff that was choking everything year in and year out. (Ed Jensen 24 January 2019)

Louis Thomas spoke similarly about the softness of the soil in Secwépemc potato harvesting areas he visited with his mother Dr. Mary Thomas as they were tilled, weeded, and selectively harvested over generations. One day Louis and I travelled to Skunk Hollow in Chase, BC where he showed me the divots in the ground from where him and his mother had harvested *skwekwíne* (Spring Beauty, *Claytonia lanceolata*) in his youth.

Progressively, over years of rapid social-ecological change and distancing from these landscapes, Louis described how the soil became hard “like concrete”, the potatoes [*C. lanceolata*] became smaller in size, and there was a steady increase in invasive species. The late Dr. Mary Thomas also described the impact of soil compaction from cattle ranching on root plants, describing similar patterns at the mouth of the Salmon River:

The mouth of the Salmon River used to have a lot of *etsmáts*’ [water-parsnip], *ckwalkwalul’s* [wapato], bulrush, mint—now is covered in couchgrass and the cattle have trampled it, so that even the bulrush has disappeared. (Mary Thomas, interview with NT, 1995, as cited in Thomas et al. 2016, 368)

Everything is deteriorating—the surface of the soil where we used to gather our food, there’s about 4–6 inches of thick, thick sod and all introduced [weeds and grasses]. And on top of that the cattle walk on it, and it’s packing it to the point where there’s very little air goes into the ground, very little rain, and it’s choking out all the natural foods, and it’s going deeper and deeper, and the deeper they go the smaller they’re getting. (Mary Thomas, interview with N. Turner, 1994, as cited in Thomas et al. 2016, 368)

Lil’wat Elder Baptiste Ritchie also described the decline of controlled burns and cultivation practices, and resulting impacts on the size of *Claytonia lanceolata* corms:

When they used to burn that grass above timberline they used to say the Indian Potatoes [*Claytonia lanceolata*] were as big as your fist. Now they are only that big [i.e., small], because they are not cultivated. They would burn every five or six years. The ground can only support so much. Now it’s only timber grows... (Baptiste Ritchie, transcription from taped interview with Dorothy Kennedy, May 1977; as cited in Peacock et al. 2016, 198).

These illustrate impacts from cumulative change resulting from settler-colonialism and the removal of Secwépemc peoples and management practices, as well as land use change resulting from colonial policy and legislation (e.g., ranching, water diversions, forestry practices). Councillor Louis Thomas is working to understand how to loosen the soils and restore these ecosystems so that Secwépemc people can continue to cultivate culturally significant root plants here, through recent multi-scalar partnerships with Agriculture and Agri-Foods Canada and Parks Canada.

Harvesting protocols

Protocols such as respect, reciprocal accountability, and consent-based harvesting are based on generations of monitoring responses to plant cultivation and reinforce sustainable harvesting regimes. Harvesting protocols are another important way of maintaining plant populations for future generations. Knowledge Holders taught me some of these protocols during our conversations both one-on-one as well as when we were in group settings out on the land. Some of these protocols include taking only what you need, offering tobacco, consent-based harvesting (e.g., respecting the agency and life of the plant by asking permission to harvest, reverence), understanding the life stages of plants to ensure they are harvested at the appropriate time of their life cycle, learning and understanding the proper ways to harvest each plant, spreading seeds, and ensuring there is more than enough left for all of the other animals that also depend on the plant as a food source.

It's something that I'd always done as a kid, *we'd always prepare ourselves ... thank each animal individually for giving its life ... we remember the hunt, we pray for those animals*, and then we put that all behind us and we cleanse ourselves, we cleanse all of our hunting gear, and then *we pray for the animals that are going to come to us for the next year ... very important protocol for us right.* (Ed Jensen 24 January 2019)

So when you offer your tobacco, you ask the plant permission to be moved, and ask it if it will accept that—where you move it. And you put your tobacco in the ground. And you take the dirt with that plant, where it is, to help it be stable over here, and ask it to forgive you for moving it. *It's a prayer, everything you do.* No matter what it is you do, you offer, but you also ask permission, and you ask forgiveness for—and you'd like very much if it can provide you with—as it did over here. (Nuxnuxskaxa ctś717élt [Julianna Alexander] 14 August 2018)

...you always offer tobacco before you start picking. Before you step on the land, even. *You respect mother earth because that's our ancestors who are buried and dead or whatever, because they turn back to earth.* So whenever you're in a ... different place you offer your tobacco and ask for acceptance cause you're there, and also that you're going to pick and only take what you need. And also my understanding with bitterroot, and if they're the well-developed bitterroot, there's

a difference between that one and a young one. Each one of them have what they call a heart, and if they have a heart that's an older plant. And if you're going to take it, you take that heart out and replant it, so it's reseeding the plant. So if you don't know that, and you don't take the hearts out of those plants and bury them, then there's going to be nothing left there. That's my understanding about bitterroot. (Nuxnuxskaxa ctś717élt [Julianna Alexander] 19 January 2019)

Over the past five years, my whole world focussed around plants and studying the components of plants, the part of the plant to the use for traditional medicines, the process of turning a plant into traditional medicines, the ecosystem plants are found ... *the respect you give to the plant for giving its life to you starts before the harvesting, giving an offering to the land that provided the traditional plan to turning it into a tincture and finally medicine.*

It is respecting all processes and steps after taking the medicine plants to process. It includes such things as the menstruum used and includes use of the tincture as a medicine whether I'm going to ingest or use in lotion as end products for the user, it is all about respect and protocols... (Crystal Morris 29 August 2018)

...the protocols of thanking the medicines... from the time that you get up on harvest days, to the time you're turning it into medicines 30 days later, if you're not in a good frame of mind, then your medicine's can go bad some where in the processes... I look at this and believe in it, if I follow protocols in medicine and harvesting food and protecting the land and where we harvest at -- good and powerful medicines come from following protocols and being in a good frame of mind. (Crystal Morris 29 August 2018)

...I think about the way I use medicines, and how I pray to it, you know? You can't just rip it from its roots and take it in an improper way where it's damaging the rest of the family, or it's damaging its ability to procreate, you know? You have to do it right. And the stories will tell us that too. They tell us how to properly pick a certain root, you know—how you've got to be there at the right time of the year ... You've got to wait for it to become ready. Timing is everything. Otherwise, I mean, you can go out and know half the story—okay, I know this is a medicine. I know I need it, and then go pick it at the wrong time of the year. It's useless, right. And it could be damaging to the plant, you know? So the way we cultivate, but also knowing when, where, how much—right? Always that one in four kind of mentality. See four, take one. Right? (Ed Jensen 24 January 2019)

... the way our traditional people did it is ... they only used what they needed. Same with the berries, you only picked what you want and you left the rest for the animals. You only took what you needed. Same with the fish—we only fished what we needed. We didn't kill all the females. We only took the males, and men

knew how to get the males and leave the females. Enough males to do the spawning. And the deer are the same, the moose are the same—everything, they use the same way. Only took what you wanted, you didn't just shoot them and took the head and left the carcass. Which they're doing right now because of trophy hunting. That's—that's insane. And um, same with the trees—*it needs more controlling, and you know, you have to have a law in place to protect everything, and they have to abide by it, because it's not about money. It's about survival.* And without survival, without the water, without the plants and all those other things we're going to be living in like, on moon. (Nuxnuxskaxa ctś717élt [Julianna Alexander] 14 August 2018)

If you're digging the roots, *I usually just put back what I've taken off, that way mother earth can run another shoot through there so that the smaller ones can start growing again through there, and it will be easier the next time you go back digging*, like two or three years from now, the root will be ready to be picked through there again. Cause you can keep rotating around on the hill, and there's a big area up there, like I like to make sure that place gets red flagged for any kind of digging or falling the trees and stuff like that—they should have—get some kind of a memorial so that nobody can take any kind of trees out of there. Because I see people going up there, cutting the trees down just for cedar boughs. You know, just the cedar boughs are gone and the trees are still there, like that's not cool. Just something that I always get kind of choked on. Like *when you're picking cedar boughs for a funeral, you never take off of an old tree—you only take off of the young ones. And you just clip them so that way they're right close to the thing, to the trunk*, so that way the tree will grow nice yet. So when our people, like when they send somebody out and I see them taking off an old tree, then I get after them—no. we were taught to take from the young, because they are the ones that are gonna be growing. (Gerry Thomas 27 April 2019)

... the way grandma taught me how to dig and stuff like that, that's where I've learnt it from. They're nice, straight and they're good to work with... the bark, I go a little bit further because there's so much carbon going through the air right now so the [birch] trees are so black that you can't get them around here. You have to go further and further back, up in the bush ... I usually choose ones that are about eight inches in width [for digging cedar roots]. I get about four feet away from it, and then I usually dig in the old stumps and stuff like that, and I backfill it the way my grandma told me, so that way the roots won't go back through there again. When you're doing it the proper way, then, like when I take classes up there I show them how to do it, and I tell them that I've been digging here for quite a while, and every time I go up I always come back with a big handful ... I don't think I'll ever out-dig that. (Gerry Thomas 27 April 2019)

...growing up as a child, I remember going up in the hills digging *skwekwine* ... *I was taught ... when you dig the roots, that you have to take care of it.* The first thing my grandma used to say was to *pray before you start digging*... When you dig the root ... there's some small ones that are growing around it, you put it back in the ground — carefully. I say this because *it is important for young people to be taught how to care for the plants.* For example, there were just some young people who didn't have the education for how to treat the plant, that went up digging roots and actually our mentor, she was saying she ... felt heartbroken, because the kids just dug and just left the roots uprooted and not cared for. And I was saying ... that was *one of the things that our grandma taught us—if you take some, you always have to replace it with something ... that we have to take care...* Young people must know that to take something out, to be careful. And to bury the roots not just leaving it out in the open. And I think that's why a lot of our plants are becoming depleted ... we take too much. We were supposed to go from here and not just take a whole bunch here. You move around to take care of that area. Take only what you need. (Ethel Thomas 19 January 2019)

As these Knowledge Holders describe, these harvesting protocols are important for practicing respect, and fulfilling cultural responsibilities to take care of culturally significant plants and the ecosystems they are nested within. These harvesting protocols also highlight the importance of entering into relationships with plants: once tobacco is offered, there is a process of respect and protocol for each plant that Knowledge Holders are responsible for following through with. Furthermore, harvesting protocols are shaped across temporal scales through generations of experimentation, observation, and interaction between people, plants, and place. They are methods of upholding relational and kincentric social-ecological systems health, and practicing respectful harvests through changing annual, seasonal, and elevational dynamics.

Characteristics of ecozones that enhance medicinal plant values

Knowledge holders described the importance of the unique characteristics of certain places or ecozones, and the effect of various factors such as precipitation, soil types, elevation, hydrology, and aspect on the nutritional and medicinal value of plants, and in turn the health of animals browsing in these places. As they describe, cumulative impacts from agriculture, ranching, and development in these areas can impact both the

quality and quantity of culturally significant plants:

The grasslands in our areas were so important to the Secwépmc peoples survival. So important. The things that happened in grasslands and on the borders, the transition zones on the top and bottoms of the grasslands, is where we find our most powerful medicines. Its those areas that plants struggle to survive but they've adapted to it, makes them so much stronger in terms of what we can get from them. But what have we done? You know, the gold rush brought a whole bunch of people in. they were followed by ranching and grazing cattle and sheep, and they just devastated everything. You know, I heard stories about ... bitterroot. You know, it used to grow here, it's gone. You can't find it anywhere here. And that was simply because of overgrazing and things like that, right. So, what do we do? How do we get that back, you know? It's going to take probably hundreds of years if we start now. (Ed Jensen 24 January 2019)

There are certain areas, certain elevations, certain amounts of rainfall and sunlight aspect is so important to those plant communities. And we all know that there's plants you can find on one side of the mountain that you won't find on the other. And there's plants you'll find down on the river you'll never find up on the mountain. And being cognizant of the things they need in order to live—and they need each other, that's so important. (Ed Jensen 24 January 2019)

...look at all these plants around here, our people must have had a use for all of them. But according to my Kye7e, you know what she said? The medicine people never just gathered any medicine around. *Usually the medicine people went way up in the hills where there was less contact with humans. They said the medicine would be more powerful then.* So they went up in the mountains and they gathered it where there was less contact with people. (Louis Thomas 30 August 2018)

...some of the plants that people just pick and assume that they have the same medicinal properties as they would in certain areas—they don't. I'm positive they don't. like the one plant that grows in the alkaline soil that's used for the cancer—if I pick that plant say in the Rockies, it's not going to have the same medicinal properties ... if they were grown in a pot as opposed to the nature where they would get a certain different type of nutrients and minerals ... I don't think they would be the same quality ... and it wouldn't carry the same energy either. (Rhona Bowe 30 August 2018)

...of course, *if you've got a plant in one area, it will not be the same or as medicinal as another area.* The soil and the place makes a difference. A plant from the swamp will not be the same if taken out of their environment. You can transplant a plant into your garden, but it is still not as medicinal as it is in Ashcroft, where they grow... *place is so important. To not acknowledge the place*

where a plant belongs is like denying someone their background—like looking at you as not being from Ontario, being Anishinabe, having any background. Like not caring and just thinking you're here to do something for me. It's kind of arrogant right? That's what we do with plants. We don't acknowledge their background, the place they're from, the place they thrive. (Rhona Bowe 30 August 2018)

Plant habitat is directly related to levels and types of medicinal compounds plants contain, for example higher levels of sunlight or altitude can increase antioxidant levels; harvesting and cultivation practices can also encourage juvenile plant forms that can also affect their chemical or textural makeup (McCune and Cuerrier 2020, 153). One Knowledge Holder spoke about certain harvesting areas as being like “a cupboard”, and described the importance of continuing to harvest and looked after these areas:

*My other aunt used to call it a cupboard—it was always there. The more you looked after it, the more you offered to the Creator to ask for more food, we knew where they were, we knew where to harvest it ... it was going to be there the next year. So I think it was because that's where there was plenty of it, and I don't remember anyone ever wanting to take it from there and plant it in their garden... Because we knew we were going to go out and get scwicw [*Erythronium grandiflorum*], and we knew we were going to do that every year. (Donna Jules 04 December 2018)*

The ecological characteristics of certain areas are valued by many Knowledge Holders for their ability to support important medicinal and spiritual quality of plants that grow there. Rhona Bowe further describes the importance of relational accountability and respect for the agency and interrelatedness between plants and the ecological characteristics of places where they grow. Grasslands are valuable for biodiversity, and as Ed Jensen (24 January, 2019) describes, are important areas for culturally significant plants that he notes are in decline. Today, grasslands are one of the most endangered ecosystems in Canada (Iverson 2004). In the southern interior of British Columbia, Iverson (2004) describes

40 percent of grasslands [as] privately owned, 10 percent are within Indian Reserves, and less than half are on Crown land. Of publicly owned grasslands,

about 90 percent are under grazing tenures. Just over three-quarters of private land grasslands lie within the Agricultural Land Reserve.”

With only a small percentage of grasslands in protected areas, and cumulative effects since the gold rush from water diversions, ranching, and urban development, culturally significant grassland ecosystems are at disproportionate risk. Historic patterns of protected area establishment in areas of low economic interest and higher tourism result in higher protections in subalpine and alpine ecosystems, leaving grassland ecosystems in the Ponderosa Pine zone under-protected and with higher human economic interest¹⁷³:

Undisturbed grasslands, wetlands, and riparian ecosystems in the PP zone are rare and under-protected. This situation may worsen as the climate warms and development, fire suppression, invasive species, and recreational impacts in the area continue or intensify. On average, only 5% of the land in PP zone is protected by less than 40 protected areas, only a quarter of which larger than 250 ha. (University of British Columbia Faculty of Forestry: Centre for Forest Conservation Genetics n.d.)

Monitoring, restoration, and environmental planning:

Cumulative effects assessment and environmental planning were highlighted as vital to protecting these areas, and restoring Secwépemc food systems. Specifically, Knowledge Holders highlighted the need for ecosystem-based planning to adaptively manage cumulative effects (e.g., industry, motorized recreation, over-hunting as a result of increased access via logging roads) and protect ecosystems. This includes recommendations for better forestry restoration practices, such as planting native species in place of the non-native fescues typically used in forestry restoration, protecting high-elevation harvesting areas and grasslands, as well as setting aside important areas for community-led restoration.

¹⁷³ CPAWS (2015, 27); University of British Columbia Faculty of Forestry: Centre for Forest Conservation Genetics (n.d.).

Archaeological work that takes cultural landscapes and ethnoecological perspectives of trails and their placement in relation to medicines, archaeological sites, and other eco-cultural values was also highlighted as a vital and necessary perspective within Environmental Assessment processes and the referral system. As Ed Jensen describes, these lenses are important for considering historical ways in which people moved within and interacted with landscapes, as well as future ethnoecological restoration planning. Providing resourcing and training for Secwépemc people to do this work is important for recognizing the importance of being on the land for the continuity of Secwépemc knowledges:

... Archaeological, environmental ... more training needs to happen, and a more diverse look at how things are being presented, because there's things that a lot of the field workers don't know, right? ... I think that just knowing a little bit more about what title and rights actually means, and how deep it can go in terms of the things we look for. You know, a simple thing as a trail, right? Identifying what that trail could, how significant it could be. What's using the trail? You know, why is it being used? What's it here for? What's along the trail? What medicines are in here, what species are in here that could be used for making stuff, or whatever, right? But also extending that search area—you've got to have access to kilometers around it. Providing the resources to do that ... The old days are over. Bobbles and beads ain't gonna do it anymore. You know—*we have a responsibility to look after it, give us the resources to be able to do that*. Don't nickel and dime us. Let's train our people, let's get them out there, right? Let's get those gardens in ... The bottom line is just, how do we get the resources to do it? how do we give opportunity? How do we make people comfortable? Because, you know, paying me \$10/hour to go out and tend the garden—it ain't happening ... There's tremendous wealth, tremendous wealth out there. And the government knows it. industry knows it ... They don't go out there so they can live at the poverty line, right? ... well, you better fork some of that over then. We want our people out there. (Ed Jensen 24 January 2019)

For eco-cultural restoration projects, Knowledge Holders also highlighted the importance of employment that enables Secwépemc people to be the “boots on the ground”; monitoring, restoring, tending to community-led harvesting areas, and engaging youth in the process:

... I think there's going to be ranges of elevation where [backcountry gardens are] going to be okay ... Like there needs to be that annual cycle to think about, and knowing where these certain groups are going to flourish in certain stretches of time... we need a fence around it to keep the frickin cows out. That's the way it needs to happen—we can't go around that, you know. There's—with access to the backcountry today, it can happen, right. We can bring all of those plants in from all around that area into whatever a five acre plot or whatever. Have a nice happy garden that way... And the key is to use the kids—right? Those of us—and the people who fall through the cracks. *We underutilize a lot of people in our communities who have so much knowledge, but they're not suited to work a 9-5 job, or they're restricted because they don't have a drivers licence. You know? All of those barriers that people have.* Like I have people living right around me who, you know, I've never seen them hold a full time job. *But get them in charge of taking care of a back country garden, have them be the caretaker of that—where they don't have 9-5 commitments, they'd probably excel, you know? And it's got to—it has to be community based.* Any of these projects, *you need to draw from the community, but also put it in the hands of the young ones.* But also ensure they have some success. Plan it, stay simple at first, right, and then build on it. (Ed Jensen 24 January 2019)

Knowledge Holders highlighted the importance of Secwépemc people having the resources and power to govern and manage their own lands. As Rhona Bowe describes, Secwépemc people have roles and responsibilities as *yecwemenulecwu*, and need the power and resources to be able to do this job:

...I do believe that *protecting the tops of a lot of the mountains, where the medicines are the most purest, and managing it—like us managing our own land—I think that it's necessary.* It's absolutely necessary, I believe we need our water protection in place, and our own people reinforcing that. We need forestry laws and our own people reinforcing that because at this point forestry makes up those laws, and they reinforce their own laws, and they do not even practice best practices... *they're just ignoring the fact that we have a job to do and we're not being allowed to do the job that we've been asked to do. And that's take care of the land. That's an insult, that's like—you can be born, but you can't live, you know what I mean? It's like your purpose has been removed from you.* And that's not okay—we need to re-establish that and take care of, because we love it ... If you don't love something you're not going to look after it, right. If you don't have that connection. And like I said before, *our foods and our lands and our medicines and ourselves are not separable—we're one in the same. So if our land is dying, we're dying, and that's a fact.* (Rhona Bowe 30 August 2018)

Knowledge Holders spoke about the revitalization of Secwépemc laws and having them enforced by Secwépemc people to plan for, protect, and manage water and ecosystems Secwepemcúlecw:

We need to be very conscious of our future plans, to *develop protection and policies and laws, real views and guidance for our Nation's future*. Ways of producing and protecting and replenishing our forest and fish and plants and water. (Nuxnuxskaxa ctś717élt [Julianna Alexander] 21 August 2018)

...our people, the Secwépemc people, are working really hard to become self-government, because we ... want to protect everything. Not just the food, everything that we stand for. Cause everything that we do is our lifestyle—you know, getting ready for the winter. Getting ready for the summer, getting ready for the spring. Getting ready—You know? Each season has something we have to do. Like right from now in the fall time, we're right now, just in the process of getting ready, of collecting the meats, the food for the winter—that's fish, deer, moose, whatever. (Nuxnuxskaxa ctś717élt [Julianna Alexander] 14 August 2018)

... when they [salmon] reach the nesting place where they drop their eggs, they're healthy, but then they die ... But that's what they give for the future to survive, and the trees do the same. When they fall over and they rot and they look like they're dead, they're still giving and they're giving until they're back to soil. And you'll see it in everything, it's a spiral. It's not a circle, if it was a circle it would go stagnant and it would just go round and round and it wouldn't grow. It's a spiral, and a spiral is our universal law, you see it in everything. When the birds leave in the winter, they go into a spiral, they gather, they meet, and they fly out—some hitch hiking, whatever. In the spring they do the same thing, the waters will do that, when they're draining, the wind does that—everything will teach you that. So, with us we have to look at that, if we're going to grow, we do have to expand out from our little, what knowledge that we know, and that means adapting some of those modern day protection methods. Which means *we need to become the law that we hate so much. We need to become that law and manage those areas like how the outsiders do, and re-teach them how these laws need to be followed now*. (Rhona Bowe 30th August 2018)

The restoration and recognition of Secwépemc legal systems can provide important guidance for protection measures related to environmental planning that center Secwépemc relationships to land, and the maintenance of relational social, cultural and ecological systems.

Aboriginal rights and title, and Secwépemc roles and responsibilities

Aboriginal rights refer to inherent Aboriginal rights and treaty rights¹⁷⁴, while title¹⁷⁵ is an inherent property right stemming from the occupation, use, and control of ancestral lands prior to contact (McNeil 1997, 119-125; Irwin 2018). The nature and scope of Aboriginal rights and title are further shaped and defined by case law in the Supreme Court of Canada¹⁷⁶, which outlines a series of tests, which can be very problematic on many fronts, to define the nature and scope of Aboriginal rights and title. While the Supreme Court has outlined the importance of Indigenous perspectives on defining Aboriginal rights and title, definitions of their nature and scope have largely been interpreted by Supreme Court judges (Thom 2001b, 3-4, 10)¹⁷⁷. The acknowledgement of traditional Indigenous practices as management has proved vital in setting precedents for Aboriginal title in the Supreme Court (cf. Tsilhqot'in Nation v. British Columbia 2007, SCC 44 2014, as cited in Bhattacharyya and Slocombe 2017, 12).

In conversations with Knowledge Holders, we asked whether they thought land-

¹⁷⁴ E.g., can refer to non site-specific hunting and fishing rights. See McNeil (1997) for Supreme Court cases defining the nature and scope of Aboriginal rights and title.

¹⁷⁵ Aboriginal title has been defined as *sui generis* ownership of land, and was first recognized by the Crown in the Royal Proclamation of 1763, subsequently recognized in common law and affirmed by Section 35(1) of the *Constitution Act, 1982* (Irwin 2018; Thom 2001a, 5; Thom 2001b, 3; and McNeil 1997, 129). With respect to Aboriginal title, the Secwépemc Nation, like most Indigenous Nations in British Columbia, some of Québec, and the Northwest Territories, have never ceded title to their lands through treaty agreements with the Crown (McNeil 1997, 134; Thom 2001a, 1).

¹⁷⁶ E.g., *R. v. Côté*. [1996], *R. v. Van der Peet* [1996], *R. v. Sparrow* [1990], *R. v. Adams* [1996], see McNeil (1997); *Delgamuukw v. British Columbia* [1997], see Thom (2001a). While Aboriginal rights to hunt and fish, which are protected in section 35(1) of the *Constitution Act* (1982), are not necessarily site-specific or require Aboriginal title to be practiced (See *R. v. Côté*. [1996] and *R. v. Adams* [1996] in McNeil 1997, 119), they are currently assessed on a basis of whether they were practiced prior to contact with Europeans and central to the cultural identity of Indigenous communities. Aboriginal title however has a different test defined by the Supreme court cases, requiring proof of (occupation, continuity, exclusivity) for title claims.

¹⁷⁷ Many scholars have questioned the capacity of Supreme Court judges to interpret and fully comprehend the multidimensional and layered nature of Indigenous stories as oral histories, Indigenous legal orders, and their codifying of roles and responsibilities to nonhuman relatives, lands, and each other, within a Eurocentric constitutional and legal order (e.g., Borrows 1998, 52 and Asch and Macklem 1991, 501 as cited in Thom 2001b, 11).

based learning and harvesting were expressions of Aboriginal rights and title. Many responses describe conceptualizations of Aboriginal rights and title outside of colonial property ownership frameworks, and grounded instead in Secwépemc laws where rights were defined as the ability to practice roles and responsibilities as *yecwemenú'ecwu* (caretakers) and maintain relationships with land. I learned that this encompasses caretaking and protecting plant and animal relatives and homelands in an inter-generational sense, for the well-being of future generations. For example, Duane Manuel describes how rights are not limited to exercising a right to take something, but rather are about having the resources to exercise the responsibility to look after them for future generations (fieldnotes, August 2019).

Me going out there and utilizing those things is the highest level of my rights on the land. Me looking after those things is a statement of title. When I go out there and look after my fishing territory, I'm telling everybody that's mine, I have title to it. I'm looking after it. (Ed Jensen 24 January 2019)

... our plants and our medicines and our land sovereignty and our title and rights all ties together... we need to practice our inherent rights and being land-based. (Crystal Morris 29 August 2018)

[on harvesting being an expression of title and rights]: Yes. We need the food to eat, *we need to protect it, we need to harvest it, we need to make sure it's going to be there for our great-grandchildren.* (Donna Jules 04 December 2018)

[... when you go out and harvest, do you feel like that's an expression of your title and rights and governance?] ... It's exactly that. It's me practicing my traditions... I think as being the First Peoples, we have that inherent right to practice that, and to do it in the way that we were—that we should have been taught. You know? A lot of it has been lost, so I think we should be given the opportunity to reclaim that ... To me, in my heart, I feel like I should, and even if I'm not collecting or harvesting, but just being there all amongst that food and nutrition and knowledge that has been lost is a powerful thing as well, so. Yeah. I feel like *it is our right—it is—and not only in some cases, it's not only our right, but it's our duty to find out what happened to that knowledge, and to reclaim it.* (Kenth Thomas 2019)

Kenth's quote describes knowledge reclamation and access to land as an inherent right, but with nuance that stretches beyond colonial rights-based frameworks as

a cultural duty, or responsibility. I understand his statement as describing the powerful role of land in supporting the practice of cultural responsibilities and reclamation of land-based knowledges. Other Knowledge Holders described land-based education opportunities as an important part of facilitating the practice of cultural roles and responsibilities, and providing a context for knowledge transmission between Elders and youth. For example, Knowledge Holders spoke about the process of learning to be caretakers and revitalizing older systems of protocol and Secwépemc law that governed relationships between neighbouring communities and Indigenous nations, which are not limited to reserve boundaries but encompasses the entire territory of Secwepemcúlecw:

I don't think of that all the time, but what I do is nothing but [an expression of title and rights]. *My territory is Secwepemcúlecw—it's not the reserve. I'm respectful of others' place and caretakers of those places... when I go into others territories, I observe protocol. And I'm working really hard to bring that back—proper protocol.* (Ed Jensen 24 January 2019)

... we need to bring those [protocols] back. Those are powerful, powerful things. They enhance our title and our rights to the resources around us. It tells the world that hey—if you want to come here and benefit from what we have, you have to do it in a good way. You can't just come in and do your own thing—that's what these mining companies do, that's what these forestry companies do, that's what these ranching companies do, when they turn their cows out to wreck our back country gardens and they're trampling all over our title and rights. (Ed Jensen 24 January 2019)

... So when we talk about title and rights, and us being land-based ... we need to start supporting these [culture camp] projects—because this gets people back out on the land. *Yes, we're doing medicine, but it's also claiming our territory ... there's medicines there, let us go gather and collect.* (Crystal Morris 29 August 2018)

Ed Jensen's quote describes how principles of Secwépemc protocol, governance, and law continue to be maintained and revitalized in many contexts through relationships between communities, neighbouring Indigenous nations, land, and nonhuman beings sharing the land. As Thom and Morales (2020, 122) describe with reference to Hul'qumi'num legal orders, “conventional Canadian property law casts a strong shadow

on the legal landscape and makes it difficult for these principles to be seen and exercised”. The late Arthur Manuel (2015, 11-12) spoke similarly of the shadow of the doctrine of discovery, and the potential beyond this for diverse groups of people to work together, cooperate, and seek justice for Indigenous peoples:

The land retains its power and beauty. All we have to do is rethink our place on it. Simply by removing the shadow of the doctrine of discovery, you find a rich tapestry of peoples who need to sit down to speak to each other as equals and build a new mechanism to co-operate with each other, to satisfy each other’s needs and aspirations in the modern world.

Colonial property ownership frameworks and top-down management processes contrast sharply with Indigenous conceptualizations of caretaking, and the legal frameworks of intergenerational respect and relational responsibility that sometimes characterize Indigenous legal frameworks (Bhattacharyya and Slocombe 2017, 12; Indigenous Law Research Unit at the University of Victoria and the Shuswap Nation Tribal Council 2016, 6). Legal struggles related to Aboriginal rights and title within colonial state frameworks are often grounded in Indigenous communities fighting for the right to be responsible for their communities and lands (Bhattacharyya and Slocombe 2017, 11). For many Indigenous people, traditional diets are inherently connected to constitutionally and internationally¹⁷⁸ protected Indigenous rights to teach youth about bio-cultural heritage and food knowledge; accessing and caretaking for healthy harvesting places and ecologies; harvesting healthy and sustainable culturally significant foods; and exercising the political and cultural aspects of food activities, including food production and distribution (Satterfield et al. 2017, 402; Desmarais & Wittman, 2014 in Smith 2018; Young 2015).

Places are also significant for embodying Indigenous legal orders, stories, ancestors, and collective memories; the experiences of being in places can evoke the practice, teaching, and learning of legal tradition (Thom and Morales 2020, 124; Ignace

¹⁷⁸ See the United Nations (2007).

and Ignace 2020, 133, 143). Thom and Morales (2020, 124) describe places as “the ‘living’ legal scholars”, and Ignace and Ignace (2020, 143) describe the significance of places like Písell for reminding of Secwépemc rights, roles, and responsibilities to land:

... Like many of our landmarks throughout Secwepemcúlecw that speak to the deeds of our ancestors, *Kécúsem*, the prayer tree connected to the *Stsptekwll* known as “The Trout Children and Their Grandparents,” is now destroyed, although its story remains. Písell and its surroundings, still in existence and reasonably intact, continue to remind us of our obligation to protect the deeds of our ancestors. As Secwépemc Indigenous law, these deeds that emanate from particular places give us guidance on how to address resource extraction developments that will involve long-term alteration of cultural keystone places and potential irreversible harm to our traditional resources and our collective memories of place. (Ignace and Ignace 2020, 143)

Ignace and Ignace (2020, 143) further describe a collective obligation and moral responsibility to look after land for future generations as being, from a Secwépemc perspective, a representation of Secwépemc law:

... Indigenous knowledge anchors ... in moral teachings and lays out the consequences of reckless and irresponsible human conduct. We have characterized these interactions and interrelations as based on reciprocal or relational accountability (*eyemstwécw*) and on the moral obligation to show respect (*xyemstwécw*) to the animate beings on the land and to all future generations. The phrase *xwexwéyt ren kwséseltkten* (“all my relations”) expresses this relationship of reciprocal accountability and moral obligation to the sentient landscape and its beings in their many dimensions and manifestations... All parts of the Secwépemc land and environment are thus thought of as a sentient landscape (Cruikshak 2005, 76ff; Ignace and Ignace 2017, 382-3)... *X7ensq̓t* thus expresses the negative consequences of breaching the norms of reciprocal accountability, caretakership, and stewardship of land, water, and atmosphere. Put positively, **it expresses our collective obligation as Secwépemc to protect and conserve our land for the benefit of future generations. *X7ensq̓t* embodies an environmental ethic** (Armstrong 2009; see also chapter 2, this volume), **and from a Secwépemc perspective, it represents our Secwépemc law, *stsq̓éys-kucw*.**” [emphasis added]

This section specifically describes conceptualizations of rights, and title, that are grounded in Secwépemc Knowledge Holders fundamental and important perspectives on inherent roles and responsibilities as *yecwemenulecw*. They describe how contemporary

land tenure and policy landscapes are entangled with ancestors, plants and other nonhuman relatives, and the ability of Secwépemc people to practice a fuller scope and nature of roles and responsibilities to uphold respectful relations¹⁷⁹ through processes of eco-cultural restoration and resurgence. Colonial land tenure landscapes can inhibit the practice of Secwépemc rights, roles, and responsibilities (e.g., Pípsell, Ignace and Ignace 2020, 133). Impacts to culturally significant foods and harvesting areas may also be understood as impacts to Secwépemc rights, as it impacts the ability of Secwépemc people to practice their specific roles and responsibilities as *yecwemenu'ecwu*¹⁸⁰. Importantly, they also point more deeply to the grounding of these perspectives in Secwépemc law¹⁸¹, and the limitations of colonial frameworks for capturing more fully Secwépemc relationships, roles, and responsibilities to land, and relationships and protocols with other neighbouring Indigenous nations. As Secwépemc scholar Dorothy Christian describes, Aboriginal rights and title frameworks are rooted in colonial law and do not capture the nature and scope of Secwépemc roles and responsibilities to land, and nonhuman beings they share the land with. It is Secwépemc laws and legal systems that guide the practice of these inherent roles and responsibilities of Secwépemc people (Dorothy Christian, personal communication, December 4th 2020). While this thesis describes Secwépemc Knowledge Holders descriptions of their roles and responsibilities and the values that guide their practice, codifying legal systems can only be done through the processes and accountable governance institutions of the Secwépemc people (see also Thom and Morales 2020, 122).

¹⁷⁹ Thom (2017, 156). See also Julianna Alexander's description of roles and responsibilities in this chapter.

¹⁸⁰ See Whyte (2018, 137), referring to wild rice habitats as networks of interrelated responsibilities; and Whyte (2016, 357) discussing the connection between Anishinaabe treaty rights and the intrinsic value of wild rice ecosystems and the network of responsibilities and values they encompass that cannot easily be replaced.

¹⁸¹ See Indigenous Law Research Unit at the University of Victoria, and Shuswap Nation Tribal Council (2016, 1), which outlines general Secwépemc reinstatements of law and rights, roles, and responsibilities between communities, land, water, and non-human beings sharing these.

Implications of Secwépemc roles and responsibilities on how Canadian legal concepts such as Aboriginal rights and title may be understood

Given the acknowledged importance of Indigenous perspectives in defining the nature and scope of Aboriginal rights and title¹⁸², the perspectives shared by Secwépemc Knowledge Holders in this chapter may provide important guidance for how these Canadian legal concepts are understood. Paskternak and King (2019, 9) also outline several principles in a spectrum of Indigenous consent that can provide important guidance here, as well as in building on the notion of Free, Prior and Informed consent. Their description of epistemic consent is relevant here, which includes a recognition of Indigenous frameworks for understanding, and acting upon roles, responsibilities, and relationships to land (Pasternak and King 2019, 9):

This may include Indigenous science, land management customs, obligations to the land and waters, or recognizing the land as having agency. This knowledge can be embedded in Indigenous law and governance.

On one hand, renewed recognition frameworks may carve important space for Indigenous interpretation of the nature and scope of Aboriginal title and rights, as well as for the recognition of Indigenous legal orders alongside Canadian law. For example, the renewed approach in the Recognition and Reconciliation of Rights Policy for Treaty Negotiations in British Columbia (2019), guided by principles outlined in the *United Nations Declaration on the Rights of Indigenous Peoples* [UNDRIP] (2007)¹⁸³ and the *Truth and Reconciliation Commission* (2015), recognizes inherent Aboriginal rights and

¹⁸² Thom (2001b, 3-4, 10).

¹⁸³ The *United Nations Declaration on the Rights of Indigenous Peoples* (2007) has been adopted in principle by the Province of British Columbia through the *Declaration on the Rights of Indigenous Peoples Act*, SBC 2019, c 44 [DRIPA], as well as federally through Government Bill (House of Commons) C-15 (43-2) – First Reading – United Nations Declaration on the Rights of Indigenous Peoples Act – Parliament of Canada [Bill C-15], which supports the implementation of Free, Prior, and Informed Consent (FPIC). However, in Bill C-15 there remains uncertainty in how FPIC will be interpreted and applied (Fasken 2020). Furthermore, unlike DRIPA, Bill C-15 does not provide for shared decision-making with Indigenous governments (Fasken 2020).

title as not contingent on state recognition¹⁸⁴, as well as recognizes the continued existence of Indigenous laws and legal systems. A common and significant critique of the previous BC Treaty Commission process lay in its non-recognition of Aboriginal title (Gunn and McIvor 2019). This renewed policy makes an important shift towards opening ground for legal pluralism and co-existence of distinct Indigenous legal system and laws, political systems and institutions, jurisdiction, and decision making alongside Canadian law; as well as a more expansive recognition of inherent Aboriginal rights and title. A resurgence in Indigenous legal systems and laws, and culturally-grounded conceptualizations of inherent rights and title, could provide important guidance for the interpretation and application of this recognition framework.

State recognition frameworks generally have been rejected and critiqued by several Indigenous scholars¹⁸⁵ as a “colonial entanglement” that upholds colonial power, and narrowly frames concepts within the institutional construct of the state instead of outside of it (Coulthard 2014, as cited in Tran et al. 2020, 936; Alfred and Corntassel 2015, 598¹⁸⁶). This renewed approach for the Recognition and Reconciliation of Rights Policy for Treaty Negotiations in British Columbia (2019) does take vital steps to make space for legal pluralism and recognition of the continuation of Indigenous legal orders on their own terms. However, the interpretation of UNDRIP in provincial legislation (DRIPA¹⁸⁷) and federal legislation (Bill C-15¹⁸⁸) is currently developing, and it remains to be seen how their implementation will support Indigenous self-determination and

¹⁸⁴ Province of British Columbia et al. (2019).

¹⁸⁵ Coulthard (2014), as cited in Tran et al. (2020, 936); see also Alfred and Corntassel (2005, 598); Penehira et al. (2014).

¹⁸⁶ Alfred and Corntassel (2005, 598) and Penehira et al. (2014) specifically critique state recognition frameworks of state-imposed conceptualisations of Indigenous identity, and how these narrow colonial boxes detract from Indigenous self-determination in terms of defining identity, relationship, membership, and nationhood.

¹⁸⁷ *Declaration on the Rights of Indigenous Peoples Act*, SBC 2019, c 44 [DRIPA].

¹⁸⁸ Government Bill (House of Commons) C-15 (43-2) – First Reading – United Nations Declaration on the Rights of Indigenous Peoples Act – Parliament of Canada [Bill C-15].

principles of Free, Prior, and Informed Consent [FPIC]. Specific to the new Recognition and Reconciliation of Rights Policy for Treaty Negotiations in British Columbia (2019), Gunn and McIvor (2019) also raise critiques that, although there are important changes, it still relies on the doctrine of discovery, and provides no clear mechanisms for addressing overlapping claims¹⁸⁹.

Renewed recognition frameworks can bring an important recognition of the authority and jurisdiction of Indigenous legal systems in their territories, as well as Indigenous perspectives on defining the nature and scope of Aboriginal rights and title in Canadian law. Furthermore, they can create important space for renewed relationships that take seriously the agency of ancestors, nonhuman beings, and places that factor deeply into the multiple layers of Indigenous relationships with land (Thom 2017, 156). This includes recognition of the ways in which ancestors, plants, and places maintain, inform, and guide the practice of Secwépemc legal systems, law, and governance. However, it is also vital to recognize that different Indigenous groups may have different paths to resolving land and territorial issues, and it is paramount that the inherent rights, roles, and responsibilities of all Indigenous nations be respected, not only those participating in Treaty processes (Gunn and McIvor 2019).

Secwépemc food economies

Addressing food insecurity as well as increasing access to culturally significant foods were two central priorities highlighted in conversations with Knowledge Holders. Following this, conversations discussed the potential for revitalizing Secwépemc food

¹⁸⁹ The *Gamlaxyeltxw v. British Columbia (2018)* case outlines that “the Crown’s duties and responsibilities flowing from a modern treaty will take precedence over rights which have not yet been recognized by the Crown or courts and which are not subject to treaty” (Gunn and McIvor 2019). As Gunn and McIvor (2019) describe, this leaves gaping issues where First Nations participating in the new treaty process will have inherent rights privileged over those First Nations with overlapping territories who do not. Without clear measures to address this, this new process will continue to aggravate many concerns raised with the original process regarding shared territory. However, this case in particular has not yet gone to the Supreme Court, so there is no definitive answer yet as to whether inherent rights recognized in modern treaties will be privileged over those inherent rights of Indigenous nations not participating in the modern treaty process.

economies through bringing together *tmicw*-based education, community harvesting and co-operative structures, and restaurants. For example, some Knowledge Holders suggested Secwépemc-led restaurants could highlight the diversity of foods from Secwépemcúlecw, support community economies, and create sustainable employment for community harvesters and chefs. Furthermore, traditional food cooperatives managed by Secwépemc caretakers were discussed as ways to promote accessibility to medicines and culturally significant foods while creating learning environments for youth:

*...that sovereignty could be spread amongst the communities, if we did sort of co-op work, where you have the people responsible who get something out of it in the end. Have a harvest where, there's a big saskatoon patch and you have five people that are in charge of it ... the kids come in and they learn ... but the five, at the end of the season they do a harvest and then they go make a bunch of jam, and then it could be sold in a co-op, and that's how they make their annual wage. I think getting our people rich that way, where other community members are also going to benefit in a healthy way, they're going to be the ones consuming it. And like the annual seasonal round—imagine if we had a grocery store in our community where that's all we sold? You could go down the aisle and oh! I'm going to have some elk steak, and go over here and get some *skwenkwínem* and *sxúsem* and fish ... And then building on that knowledge base too. Having all of that stuff that we look after so that it's a sustainable way of being, too. Because it was before. (Ed Jensen 24 January 2019)*

I'm thinking that maybe it could sustain us in other ways, with the new way, cause we've got to mix the old with the new, and we could either package it and sell it to grocery stores you know as specialty foods, you know, some of the root crops ... *Cause when you go into a native restaurant and they say, we've got some native food, and what do they offer? It's usually salmon and bannock. We don't have anything else, and the salmon is disappearing too—not only our plants, but you've gotta look at the salmon too, that's disappearing ... So maybe we've gotta start looking maybe at our traditional plants, and put that on their menu ... and our people somehow or another get the market on that and start marketing that too ... the idea is to get back to our traditional foods is what I'm thinking, you know, and you know it's going to be a struggle ... So we've got to look at a system where we can bring it back too, you know, all the other plants. Not only the wapato, the—everything. And start developing that traditional food. (Louis Thomas 30 August 2018)*

...the population is growing, and where is the food gonna come from to feed them? That's the way I see it is you know, it's going to cost more and more for

our people to feed ourselves. So *we've got to look at other ways and means of feeding our people. And what other ways than our traditional foods?* (Louis Thomas 30 August 2018)

Several Indigenous-led projects demonstrate innovative ways for supporting Indigenous culinary entrepreneurship. For example, Māori Hua Parakori is a labelling and verification process for mahinga kai (food and product production) following Māori principles through the Te Waka Kai Ora (National Māori Organics Authority of Aotearoa) (Hutchings et al. 2012). Oglala Lakota Chef Sherman also describes opportunities to support Indigenous culinary entrepreneurship and broader education through designing urban foodscapes with culturally significant plants to increase Indigenous food access and discourage over-pressuring native ecosystems (Thomas 2019). As Sean Sherman describes, in urban contexts cultural resurgence and reconnection with traditional plants has been a large part of his own work to cultivate urban ecosystems and educate on Indigenous food systems with culturally important plants given cumulative changes from urban development and land use on Indigenous food systems. Regional Indigenous food hubs (e.g., the Sioux Chef 2020), trade networks and conferences (WELRP 2019) are also focused on revitalizing Indigenous foods and traditional and nutritional knowledge sharing between communities, as well as sourcing from Indigenous producers to support Indigenous communities and economies (e.g., Sean Sherman and Ben Jacobs as cited in Hoover 2019).

The perseverance of Secwépemc plant species despite cumulative effects that have reduced many of their ranges, and the community-led movements to protect and restore them, is reflective of the interconnectedness between ecological and cultural resurgence during periods of rapid social change. Eco-cultural restoration in Switzmalph, and Secwépemc territory more broadly, is part of a process of restore(y)ing land, and relationships and responsibilities as *yecwemenulecwu*. This is demonstrated by the many stories of encouragement and hope from Knowledge Holders, motivated by the eco-cultural restoration of culturally significant plant species in areas where they have disappeared or decreased, and the motivation this brings for future Secwépemc food

systems restoration:

Like I said, they [wapato] were tall and spindly ... But now you look at the size of the leaves on some of them ... So, to me that was encouraging you know, maybe there is hope. There is hope that we can go back to some of our traditional foods... You know, maybe not all the way, but maybe all the way for some people, but maybe for some people part-ways. At least they can have a taste of what it's—what our people were eating a long time ago. Getting a better understanding of who we are. To me, that's what it's all about. It's not about just eating for health's sake, but the idea—just think about our people a long time ago, eating this ... Even a hundred years ago. *Eating this stuff, we're eating part of our history.* That's what this is about to me, you know, there is hope. There is hope. *Maybe each plant is a little bit of a hope for our people.* (Louis Thomas 30 August 2018)

...a lot of our valuable food, eh? We've got to work so hard on it to get it all back. That was a good start, eh? With that wapato, and the highbush cranberry. I'd like to see more of our saskatoons, you know, stuff like that that grew wild around here. I'd like to see more of it down the roads, everywhere. And I remember when I used to walk around with my grandmother, all around the hillsides around the town there used to be lots of huckleberries. Blueberries, those little blueberries. There used to be lots of them. Now, there's nothing. I'd like to see more of it growing somewhere around here. (Jane Thomas 10 September 2018)

... we're hard pressed to find areas that are pristine and untouched, you know... *The reach of cows and grazing, it's devastating to what goes on.* You can't go from river bottom to mountain top and not find evidence of cows, right? ... *we've done some work up here on our reserve on wetland restoration.* We fenced them out ... *now those areas are full of water again, the plants are starting to come back, the ducks are coming back, frogs and turtles and snakes and all of those water birds ...* Their influence is far reaching. The cumulative effect of what they do in that area—it spreads, because they spread good things out of those areas right. Like those birds they'll eat certain plants, and the seeds need the poo that they poo out in order to grow again. Right? Like the interconnectedness of everything is important ... *we need to set aside more areas that can become natural again. You know? The grasslands.* (Ed Jensen 24 January 2019)

Louis Thomas describes planning and protection of Secwépemc plants as a vital part of protecting Secwépemc culture. Several Knowledge Holders and harvesters spoke about concerns with wildcrafting, and he further poses the question of how to collectively

and cooperatively protect Secwépemc plants and the cultural systems that are deeply entwined with them. This includes proactive planning to address concerns with commercializing and overharvesting of plants that are deeply embedded in Secwépemc culture and foodways:

To me, wildcrafting [by non-Indigenous people] is a way of life now, but it's the ownership I think that I really want to maybe talk about. Who actually owns it. Because *the way society is now is they see an opportunity to really make lots of money in it—they'll go in there and take it over* and look what they're doing to the trees and the salmon and everything else that is part of our culture. Are they going to devastate that too just for the sake of the almighty dollar? I think *there's got to be a system in place where we've got to protect that, because that's our culture ... It sustained our people for centuries ...* it's not about you know, what's mine is mine and what's yours is mine if I can get a hold of it. I think *it's about that sharing, and that protection of part of our culture that needs to be looked at ...* (Louis Thomas 30 August 2018)

As Louis describes, the focus on increasing access to culturally significant foods isn't necessarily grounded solely in economic frameworks or Euro-western conceptualizations of ownership, but rather in the significance of the plants to Secwépemc culture, health and sustenance, and relationship. He highlights the value of sharing, while highlighting the inherent tension that emerges from capitalist economic structures that can irreparably damage plant populations through overharvesting. Globally, overexploitation is one of the biggest drivers of biodiversity decline (Maxwell et al. 2016). As Louis describes, it is important to designing systems capable of protecting culturally significant plants from commercial overharvesting, as integral parts of Secwépemc biocultural heritage.

Growing interest in Indigenous cuisines can have significant social and environmental consequences without recognition of Indigenous rights to culturally significant plants and the place where they grow (McCune and Cuerrier 2020, 152). As Cuerrier et al (2012, 252) describe, recent calls from the World Health Organization (2009) for the promotion and integration of traditional medicines in healthcare systems can also have severe impacts on culturally significant plant populations without

recognition of Indigenous cultural rights to accessing and caretaking for culturally significant plants and their habitats; and without further recognition of the role of Indigenous legal orders and governance in regulation. Increased demand for Indigenous foods and medicines can result in the displacement and overharvesting of many culturally significant plants and foods from their ecological niches, as well as from the Indigenous communities who rely on them and have cultivated them since time immemorial (Grey and Newman 2018). While Indigenous cuisine remains marginal and largely absent in the literature and culinary scene in Canada, Indigenous foods such as salmon, saskatoon berries, maple syrup, and wild rice have been marketed widely as quintessential “Canadian foods” (Grey and Newman 2018). Often these food narratives erase politics of land access and Indigenous rights, and the vital role of culturally significant foods, often understood as relatives, and their ecosystems in Indigenous health and well-being (Grey and Newman 2018):

Food sovereignty for Indigenous Peoples asserts the imperative of and both the right and responsibility to cultivate/hunt/gather traditional foods on traditional lands, to nurture Indigenous cultural practices around food preparation, consumption, and storage, and to decolonize the local and national food culture to augment both Indigenous health outcomes and cultural resurgence (Grey and Patel 2015). This is a call that cannot be answered via a multicultural mode of engagement. In fact, gastronomic multiculturalism is not only unhelpful here, it is the conduit by which Indigenous cuisine is commodified and sold to the wider society.

Food systems discourse needs to push beyond “making space” for Indigenous foods, into critically understanding and restructuring colonial contexts of dispossession and ecological degradation (Grey and Newman 2018). This includes creating policies to support the decolonization of Indigenous foodways education, literacy, and action, and recognizing decision-making authority of Indigenous communities over the cultivation and marketing of culturally significant plants (Grey and Newman 2018). Furthermore, the restaurant and culinary world needs to recognize the importance of control and representation of cultural foods by the Indigenous communities they come from, as well as recognizing the often “inaccessibility of the ingredients, made available for

mainstream dining, to the groups for whom they have multiple, overlapping significances” (Grey and Newman 2018). Furthermore, biocultural heritage and Indigenous legal systems can be deeply interrelated with and evoked through land, place, and relationships with nonhuman relations, including culturally significant plants who share the land. Protection of biocultural heritage requires policy environments with secure and adequate supports for Indigenous communities in decision making positions in relation to their food systems (Grey and Newman 2018, 721). This includes shaping wildlife, land use, and conservation planning processes to be grounded in and respective of Indigenous ways of knowing, responsibilities, and kincentricity (Bhattacharyya and Slocombe 2017), and material supports for building capacity for the restoration of culturally significant plant cultivation and management of “wildcrafting”. Although “wildcrafting” and “foraging” movements are a reflection of one way in which settlers are looking to connect with land, it is also vital that these movements consider reciprocity towards the Indigenous communities whose territories they are harvesting within, harvesting protocols or availability of culturally significant plants to local Indigenous communities, and potential negative impacts to local ecosystems and plant populations (Joseph 2020). As Syilx scholar Jeanette Armstrong (2020, 48) describes,

Beyond the concept of allowing open “foraging” for aquatic and land foods, leading to examples like the unmanaged and devastating “commercialization” of huckleberries, we need a new public framework that prioritizes reconciliation with Indigenous peoples based on the preservation of the lands they need, use, and protect in very specific ways... It is an exciting area of change, one in which actualizing reconciliation will transform society as creative thinking and new collaborations are achieved. As Indigenous peoples, we are committed to our own food sovereignty, which ultimately requires collaboration and reconciliation with our surrounding tribal relatives and with our non-Indigenous settler relatives. ... Indigenous food sovereignty is good for the whole earth. It is a proactive way to implement article 8J of the *United Nations Convention on Biological Diversity* (1992) and to actualize the *United Nations Declaration on the Rights of Indigenous Peoples* (2007) here in Canada.

McCune and Cuerrier (2020, 151) describe how, in conjunction with other federal and constitutional legislation, the implementation of the *United Nations Declaration on*

the Rights of Indigenous Peoples (2007)¹⁹⁰ and specifically the role of Article 31, can support Indigenous peoples' rights to have control over, and access, particular sites with medicinal or culturally significant plants:

Article 31 of the declaration specifically states that Indigenous peoples have the right to maintain, control, protect, and develop, among other things, their medicines – and therefore traditional plant medicines.

The *United Nations Declaration on the Rights of Indigenous Peoples* (2007) also emphasizes Indigenous peoples rights to “maintain and strengthen their institutions, cultures and traditions and to pursue their well-being in keeping with their own needs and aspirations” (Kakutai and Taylor 2016, 5). Though grounded in ownership frameworks, beneficial ownership is a key element of the legal definition of Aboriginal title, which amount to “the right to benefits associated with the land” that could also be of significance here with regards to Secwépemc food economies (McNeil 2018, 285).

One example of a multi-scalar co-management partnership took place following the 2017 Elephant Hill wildfire in Secwépemc territory, where the Province of British Columbia and local Secwépemc bands partnered to restore burnt areas and create a permitting process in anticipation of spring influxes in morel mushroom harvesters and commercial buyers (FLNRORD and Tk'emlúps te Secwépemc 2018). The permitting process involved supplying individual harvesting permits for \$20 and \$500 commercial buyer permits, and harvesting areas were serviced with outhouses, toilets, and information on active forestry hauling (FLNRORD and Tk'emlúps te Secwépemc 2018; Wallace 2018). This partnership created a model for managing harvesting and asserting Secwépemc jurisdiction as *yecwemenúlecwu*. In the joint news release between the Province of British Columbia Ministry of Forests, Lands, Natural Resource Operations and Rural Developments, and the Tk'emlúps te Secwépemc Nation, Skeetchestn

¹⁹⁰ Legislation was introduced both federally (*Declaration on the Rights of Indigenous Peoples Act* 2020) and provincially (*Declaration on the Rights of Indigenous Peoples Act* 2019) to advance implementation of *UNDRIP* (2007).

Kukpi7/Dr. Ron Ignace described:

Te m-sq7es re syecwmíns-kucw re tmicws-kucw ell re séwllkwe n Secwepemcúlecw, ell wellnewi7s-kucw re syecwmíntem-kucw. Me7 re syecwmíntem-kucw me7 re syecwmíntels-kucw ell wel me7 yews. (We have been managing and using the forests since time immemorial),” said Kukpi7 Ron Ignace of the Secwepemc Nation. “Our sacred role as *Yucwminmen*— caretakers of the land — means that our first responsibility is to the health and care of the land. If you look after the land, the land will look after you. (FLNRORD and Tk’emlúps te Secwépemc 2018) [emphasis added]

The Province of British Columbia described its support through this partnership as a demonstration of its commitment to the Province’s implementation of the *United Nations Declaration on the Rights of Indigenous Peoples* (2007) (FLNRORD and Tk’emlúps te Secwépemc 2018).

Grey and Newman (2018, 721) offer another important example where Quechua law has been applied to repatriate stolen landraces stored in potato gene banks in Lima, Peru, grounded in the “novel proposition that Indigenous territories, peoples, and practices form a seamless whole, and that this ‘bioculture’ merits multilateral protection from disembedding, commodification, and alienation.” (Grey and Newman 2017, 721).

Importantly, beyond Canadian legal frameworks, recognition of the legal authority of Secwépemc laws in outlining territorial and harvesting protocols, practices, and procedures and the specific caretaker duties, responsibilities, and rights of Secwépemc people can provide important guidance for the protection of Secwépemc biocultural heritage, such as culturally significant plants. As outlined in the ILRU and SNTC (2016, 11), general restatements of Secwépemc law concerning to responsibilities to land include:

iii. Responsibility to Not Seek More or Other Resources When There Is No Need: People should not over-harvest resources or waste resources already in their control.

iv. Responsibility to Protect the Land and Ensure that Animals and Other Resources Can Sustain Themselves and Reproduce: People should protect the

land from unnecessary harms and consider the future of the land, resources and non-human beings in their use of the land.

a) To protect the land; and

b) To ensure that animals and other natural resources can sustain themselves and reproduce

Furthermore, the revitalization of Secwépemc legal systems may in the future provide important guidance as to whether, and under what conditions, culturally significant plants are included in gastronomy and culinary or cultural tourism contexts (ILRU and SNTC 2016, 6; Grey and Newman 2018, 721).

Conclusion

Secwépemc foods have been described earlier as a collective capacity, motivating social and cultural institutions and practices, governance, identity, and many other values. Some Knowledge Holders described the importance of both food systems as presenting two important directions for restoring community based food systems: creating and maintaining more community gardens to grow both garden vegetables and orchards can also create space for experimenting further with growing culturally significant foods in these areas. Furthermore, access to Secwépemc harvesting areas and resourcing the ecological and cultural restoration of Secwépemc food systems is a vital part of practicing roles and responsibilities as *yecwemenu'ecwu* in an intergenerational sense. These Secwépemc food systems restoration projects are part of a process of ecological and cultural resurgence, maintaining and revitalizing Secwépemc knowledge systems and relationships to land, and importantly are community driven. The dedication many community members have towards revitalizing culturally significant plants is clearly a value that drives many of these projects.

As described in Chapter 2 of this thesis as well as by several Knowledge Holders in this chapter, land tenure and policy landscapes continue to create ongoing barriers to access, Secwépemc jurisdiction over, and restoration of Secwépemc food systems. Frameworks for sustainable harvesting need to be grounded in cultural protocols, and work within social-ecological and culturally safe values based planning frameworks.

Policy and protection planning environments need to recognize decision making positions of Secwépemc communities and cultural rights and responsibilities interrelated with Secwépemc food systems.

Stsptékwle and Slexexéye

Knowledge Holders spoke about the significant role of *stsptékwle* and *slexexéye* as methods and contexts for teaching and learning about laws, protocols, and cultural concepts such as those described in previous sections of this chapter. Place is shaped through interactions between land, people, and nonhuman beings who share the land. Land is a mnemonic device for language, toponyms (place names), memories, and *stsptékwle* and *slexexéye* which teach about deep histories of relationship between Secwépemc people and place, and the moral codes, laws, and lessons for living well (Ignace and Ignace 2017, 234). Several *stsptékwle* were shared through our conversations with Knowledge Holders as a context for teaching me about each of the cultural concepts described in this thesis. I will not include the *stsptékwle* themselves in this thesis to respect cultural knowledge protocols and the collective ownership of *stsptékwle*, however the following section illustrates how they were applied by Knowledge Holders in this study as a method of teaching about each value.

Stsptékwle teaching about tmicw-based learning

In this study, Knowledge Holders used *slexexéye* (personal stories), or *stsptékwle* as methods or contexts for guiding experiential *tmicw*-based learning. I learned that *stsptékwle* communicate lessons, values, cultural concepts, and relationships, as well as teach about roles and responsibilities of humans in the maintenance of relational ecologies:

It seems like the real cultural way almost, cause that's how we tell our stories, right? I mean that's how I remember growing up, we'd be sitting down by the river, or you're up in the Rocky Mountains somewhere, and all of a sudden

grandma would be pulling out a story, telling you, the relationship while you're here and while you're doing it. (Pat Thomas January 19 2019)

As Secwépemc-Syilx scholar Dorothy Christian (2019) writes, “cultural stories are embedded and written into the land by braiding together the language, the oral stories, and geographical locations on the land...”. According to Palmer (1975, 35), there are Secwépemc names for at least 135 species of plants, with at least 16 plant species featuring in *stsptékwle*. *Stsptékwle* are culturally grounded contexts for teaching and learning generated over thousands of years that teach about place-based knowledges, ecological values, biogeoclimatic zones, and indicator species to explain what is happening at different times of the year. For example, Ignace and Ignace (2017, 148-152) also describe the importance of *stsptékwle* for teaching about biogeoclimatic zones, microclimates, and indicator species associated with different elevations, such as in “Coyote Juggles His Eyes”. Kenthen Thomas describes this story similarly:

To talk about the stories and how they relate to the plants, the story that I always think about it how *Coyote Juggles his Eyeballs*. He juggles his eyeballs and he loses his eyeballs to the two crows, and then he starts going to look for them, and he goes up into the high alpine. *And that's one of the stories that teaches the lessons of what kind of trees you're going to find if you're up high, the high alpine, the sub-alpine shrubs and trees, as you come down into the mid alpine and you start finding more of the firs and the cedars, and you come even further down and you find more of the water based trees, the cottonwood and those are the kinds of stories I was thinking that would help kids when they pick these up, especially the elementary age students, right?* They make the connection—the pictures and stories, they go oh, okay, this story talks about the pictures and plants on these three cards right here. And this is where I can find them, because that's what happened to coyote when he lost his eyeballs. (Kenthen Thomas January 19 2019)

Indicator species are so important. We need to pay attention to them. My mom used to say, when those black ants would fly—oh! The fishing's good. We better get out there. And sure enough, the fishing would be good. Or when they saw froth on the water, a certain kind of froth on the water, right, it told us when certain things were ready. When the snow got a certain level on the mountain, you know, I think that needs to be a part of that too, and the stories probably tell us that right? *The stories tell us about biogeoclimatic zones, and what's happening*

there at a certain time of the year. All of that type of knowledge ... (Ed Jensen 24 January 2019)

Knowledge Holders expressed the importance of balancing both Secwépemc and Western scientific methods of teaching and learning in educational settings. However, it is important to consider also that Indigenous knowledges have a long history of being decontextualized and extracted from cultural processes and pedagogies (Simpson 2001). Parker (2008) describes the challenges of teaching Indigenous values through western paradigms and pedagogies, and the necessary practice of language and land-based learning being contextualized within their unique Indigenous nation's pedagogies and processes. Christian (2017)'s work importantly raises considerations around the further development of clear guidelines for protocol concerning developing educational resources with cultural knowledge or stories.

... the way that they absorb their information, if we could have a way that those stories are told in the traditional way, but on the other side of the page it explains what's between the lines. The millennials are going to go—oh, okay. It makes sense, right? And they'll be more receptive to it. (Ed Jensen 24 January 2019)

I learned that *stsptékwle* are one Secwépemc method of teaching about land and ecological systems, while contextualizing these within cultural frameworks and pedagogies. I also learned that *stsptékwle* are contexts and methods for teaching lessons and values for how to live responsibly in Secwepemcúlecw. Louis Thomas describes the importance of *stsptékwle* as educational contexts for teaching Secwépemc values and cultural concepts in school settings:

[on needing more Secwépemc values taught in school]: *Where's our stsptékwle, and where's our values and lives? You know, these are not talked about. How do we respect one another? How do we work together as people? These are things that are not taught, you know. We do a little bit of basket work or something that's related to Secwépemc—but the values that are in place, there—see, Ken teaches values in his stsptékwle, and that's what stsptékwle all about, teaching the value system to the younger people and to anybody. Because that's a lesson to all the people, of how to live in Secwepemcúlecw. That's the values that I'm talking about.* (Louis Thomas 2019)

[re: The Chief and the Flies *stsptékwle*] Sharing those little stories, *once you hear them and you learn them, you don't get to unlearn them. And so that teaches our children that everyone has a voice. It teaches them that everyone should be considerate. They need to give, but you know when they're taking something, give something back so that they're not being selfish.* And that story has huge teachings around it. *So that's what our people out there need, and that's the importance of bringing that land-based teaching back and giving the value back—like showing them how important that land is, that it's actually their self that they're looking after. Not just the body, but they're looking after themselves, and everybody around them in the next generations ahead.* It's huge—it's um, it's a simple teaching, but ... once you start going into that mythology and you start realizing how intense and humongous and connected it is, it's simple, but it's complex... (Rhona Bowe 30 August 2018)

As Rhona Bowe describes in this quote, storytelling is accompanied by witnessing, responsibility, and reciprocity, and she highlights the importance of *stsptékwle* being accompanied by land-based learning and a responsibility to caretake for land, self, and community. She also highlights the significance of *tmicw* as borrowed, and the importance of looking after it for the generations to come. Storytelling engages both the storyteller and listener in an active process of interpretation and understanding the intent and lesson of the story based on personal experiences and context it is told in. Knowledge Holders play an important role collectively in interpreting, understanding, and using *stsptékwle* as a teaching method.

Applicable law, right? How it pertains to my way of life, it's important, and I always interpret things *when I hear a traditional story, I pick those things out right away.* But I think that if *I was learning something new and I was told a story around it, I would need to put on my thinking cap. It would probably have to be explained to me, right. That's the way that goes.* (Ed Jensen 24 January 2019)

Stsptékwle also have the potential to be adapted into different formats for teaching younger learners. Secwépemc scholars Janice E. Billy (2015), Katherine Michel (2012), Ronald Ignace (2008, 2017), and Janice R. Billy (2003) write about the importance of *stsptékwle* as a method of teaching that is interconnected with cultural identity and land. They teach about identity, protocol, legal orders, kincentricity and the agency of

nonhuman beings, roles and responsibilities, and ecologies. Furthermore, they teach about the role of place in shaping languages, laws, and ways of knowing. Ecological integrity and the physical presence of culturally valued plants and animals that figure into *stsptékwle*. *Stsptékwle* also situate stories, lessons, and values in place, and in the social and ecological landscapes where the plants grow.

Stsptékwle teaching about knucwetwécw

Stsptékwle are deeply embedded in, and shaped by, the ecosystems of Secwepemcúlecw. Louis Thomas describes animals and plants as being important parts of *stsptékwle* because they taught Secwepemc people how to survive over thousands of years of watching and learning from them. He describes how Secwepemc people continue to show them respect by talking about them in the *stsptékwle*, which continue to teach these lessons, moral codes, cultural values and concepts, and outline the roles and responsibilities of people in Secwepemcúlecw (fieldnotes, August 2020). Martin and William (2019, 68), from the Secwépemc community *T'exelc* also describe the importance of animals in Secwépemc stories recorded through pictographs and petroglyphs, and their presence in landforms such as through the Coyote rocks. As they describe,

It is *stsq'ey'ulecw ne tmicws-kucw* and there is no way to describe it in English. The land is marked because our markings are on the land... In legal terms, *stsq'ey's-kucw* are our rights written in stone or rock.

Louis Thomas describes the importance of *stsptékwle* for teaching values of respect and reciprocity towards nonhuman relations, and the importance of working together to build understanding:

...we are the first people here. But we have to I think, *I think our Secwépemc people or Qelmucw have to understand too is how do we honour the real first people here—the animals. You know? We honour them through our stsptékwle. And that's the part that we always seem to forget too. How do we honour the real first being here? We done it through our stsptékwle, all our stories ... they're*

slowly disappearing too—cause we place that fear in them ... And I see that feeling it transfers over to people, too. Because when you fear something, what do you want to do with it? You either kill it or move it to another place ... (Louis Thomas 30 August 2018)

Friedland et al. (2018, 190) describe how the Secwépemc “Story of Porcupine” also teaches about the importance of *knucwetwécw*, and in the context of Friedland et al. (2018)’s work can teach important lessons about legal pluralism. Louis Thomas describes how the *stsptékwle* “Porcupine and the Beaver” teaches about the importance of working together in friendship, and cautions against greediness:

...I think the way I look at Secwepemcúlecw, it’s not Shuswap people. That word really means sharing... *when our people came to this land, they obeyed the laws of the land.* See that’s telling us that we observed, we followed, the ways of the animals. We ate what they ate, you know, we existed that way. Cause we fully understand that connection to the land ... *when the white man came, they took their laws with them, and they took over the land...* See when our people were here a long time ago, *we declared an area that was ours, you had to get permission to come in and either hunt or gather in there...* if they just came in and tried taking over and just caused a war... You took away our land through trickery and guile... that’s why there’s always that problem with title and rights... They came in and they used their government laws to say okay, well, we’re settling here and we’re taking this piece. We’re taking that piece, we’re taking that. Next thing you know they take it all over. Even our forests, they took it over, the government took it over, because they seen an opportunity to make money on it. *It’s all about money, and greed. And there goes the friendship ...* Because remember *when the porcupine and the beaver were together all the time, they lived together in harmony. They were real brothers, but the porcupine got a little bit too greedy so beaver got mad and he left them.* From now on he’ll stay up on the hill and I’ll go down here by the rivers and the lakes. See, that’s telling people that *when you get greedy you end up losing your friendship* maybe, or you lose a lot of things that go with it. This is the story I keep telling people, you know, and that’s the same with our talks of unity now—we talk about, you know, sharing, working together, but yet we act like the beaver and the porcupine because of, mom used to say, the almighty dollar. We argue about that too much. *We don’t know about sharing anymore. Because that disappeared from our value system, how to live together.*” (Louis Thomas 30 August 2018)

When Louis speaks to the importance of understanding and following “the laws of the land” above, he also highlights the significance and place-based nature of certain

aspects of Secwépemc legal systems, and contrasts this with the mobile nature of English common law. He describes *stsptékwle* as communicating important moral codes for working and living together in Secwepemcúlecw that is grounded in relationship rather than solely economic incentives frameworks. Louis highlights *stsptékwle* as a source for teaching and learning about culturally grounded values and law, and how they continue to guide relationships between people, with land, and in contemporary governance settings.

Storyteller and educator Kenthen Thomas also describes how *stsptékwle* teach about *knucwetwécw* in a kincentric way, referring to relationship and cooperation between people as well as the wider system of nonhuman relations they are embedded in. As Kenthen (fieldnotes, October 2019) describes, humans have a small role and responsibility to look after relationships between each other and the land so that the other plants and animals can continue to do their jobs. *Knucwetwécw* describes the importance of relationship in maintaining respect, understanding, and community support that builds capacity to care for *all relations* (fieldnotes, October 2019). In the *stsptékwle* “Coyote and Salmon” as told to me by Kenthen Thomas, he ends by saying that if the people looked after each other, the salmon would always return. He describes the people looking after each other (*knucwetwécw*) as both a role and responsibility that is part of an agreement with the salmon. In this respect, the concept of *knucwetwécw* is not isolated in a vacuum to human relationships with each other, but is situated in a larger context of relationships and responsibilities to nonhuman beings as well, and recognizes their agency and personhood:

...we needed to take care of them [the plants], and in return they'd take care of us. Because that's why they [the plants] ate us, was because that's the only way they could take care of themselves. But just like the trees need us, we need them... We need plants to eat, to help ourselves heal. We need the water to nourish ourselves. But we mistreat everything, and we're not taking care of everything, at the end of Coyote's story when he brings the salmon up the Thompson—or the Fraser and then the Thompson Rivers, and he deposits them all over the Secwepemcúlecw. The last thing that he said before he retired, when he was sitting at the top of the Salmon River, he flipped over his canoe, and he said as long as humans take care of each other, and the salmon, the salmon will return here every single year to feed them. And now we're starting in this year where

none come up to Adams Lake—even Adams Lake, we don't even have any more—maybe one or two in the Salmon River now. Whereas a long time ago it was just teeming with them. Yeah, so what does that say right? *We're not taking care of each other any more. We're not taking care of ourselves, we're not taking care of the salmon.* (Kenthen Thomas 2019)

I just came back from a salmon festival down in the Kootenays—down in Invermere, and for years and years and years they never had salmon there. They never had salmon in the Okanagan, for years, and the salmon are starting to come home. And a lot of people think it's because we're starting to take better care of ourselves and each other. And that's how the stories go, is that—coyote when he brought the salmon up into the Secwepemcúlecw, *the salmon and coyote said that as long as we take care of the salmon, or take care of ourselves and each other, the salmon will keep returning every year.* And I thought, ah—I think a large reason that they didn't return to here and there was because we weren't taking care of ourselves. And—but also the dams, but yeah—that's part of not taking care of each other too. So things like that—that kind of resurgence in our traditions are the supports that I see. (Kenthen Thomas 12 September 2018)

Kenthen's quotes describe how Secwépemc plants, and nonhuman beings such as the salmon, can facilitate connection to culture, legal and governance systems, and to roles and responsibilities in relation to land and community. Within the “Coyote and the Salmon” *stsptékwle*, salmon teach and remind humans of their roles and responsibilities to help one another (*knucwetwécw*), and to “look after the land” (*yecwemenuécwu*) so that the foods still agree to give themselves to the humans. Currently, many wild salmon populations in British Columbia have collapsed, whereas “less than a century ago, sockeye salmon were so plentiful in the Adams River near Kamloops that Secwepemc Elder Mary Thomas recalled seeing people run across the water on their shiny backs” (Cox 2020). Cox (2020) describes the limited protection for endangered species in British Columbia and the need for endangered species legislation to conserve biodiversity, endangered species, and their habitats.

In one of the *stsptékwle* told by Kenthen Thomas titled “How Coyote Taught the Trees to Love”, he describes these reciprocal relationships further:

... I always think about *Senúxwlecw* asking the trees to love us *Qelmucw*, and telling them we're going to trade breaths with the trees, they're going to give us

their breath, and we'll give them theirs, and how awesome is that? Just knowing that that's what's happening every time you breathe, we're trading breath, they're going to give us a breath, we're going to give them back one. And it's going to be a mutual growth, a mutual ability to live together. It's just incredible. (Kenthen Thomas 12 September 2018)

Kenthen shared several values connected to this *stsptékwle*: plants as sovereign non-human persons that have their own rights, the reciprocal relationship and responsibilities of humans to look after plants in exchange for giving them breath, understanding where one source of oxygen comes from and the ecological importance of trees, and understanding that these stories are part of the foundation and the laws that govern relations in this territory (fieldnotes, August 2018).

Stsptékwle teaching about yecwemenulécwu

Yecwemenulécwu is interconnected with *knucwetwécw* in Kenthen's telling of the Coyote and the Salmon *stsptékwle*, describing the responsibilities of the *Qelmucw* (people) to look after each other and the land in exchange for their life here. The concept of *yecwemenulécwu* (roles and responsibilities as caretakers of land) is further illustrated in the *stsptékwle* of Kelasc7en (Mount Ida) in Salmon Arm that Louis Thomas shared at the Shuswap Roundtable, which describes a period of famine in the Salmon River valley as a consequence of taking from the land without giving anything in return. Louis applies this *stsptékwle* to create a broader context for thinking about contemporary forestry and fisheries management practices, as well as teaches about how *stsptékwle* are integrated into ways of life and told often in the winter:

It was all about preservation—you take what you need. Cause the story of Mount Ida is like that ... you keep taking and taking, and what happens, you know? In a way it might create famine, you know, if you keep taking ... So that's the idea about the legend of Mt. Ida ... you look what they're doing to the forestry, you know, they keep taking and taking, they're not giving back. And our salmon, they keep taking and taking and nothing is going back ... So you know, these are things that the value system of our stsptékwle is what it's about ... knowing the difference between right and wrong. And every night when the children went to sleep in the pit houses and summer lodges, you know, they were taught all these

stsptékwle. You know, this kind of like story time before you go to bed, but there was always a lesson to every one of them—even to the Elders, you know, because I think now, I think all of our Elders need those stories too, cause we don't follow them anymore. That's another part of our culture that disappeared. (Louis Thomas 30 August 2018)

Cultural resurgence is an important part of reconnecting and learning about the roles and responsibilities of humans in maintaining social-ecological systems. As Ed Jensen describes, listening to the stories and reclaiming the lessons in them is also part of a multi-generational process of resurgence in Secwépemc knowledge and education systems. He describes how the responsibility Secwépemc people have as *yecwemenulecwu* is part of an agreement with the animals, and the *stsptékwle* are part of a growing cultural resurgence to return honouring this agreement through the reclamation of Secwépemc roles as *yecwemenulecwu*. Humans were described by several Knowledge Holders as “pitiful creatures”, who were only given life because of their agreement to the plants and animals that they would continue to “take care of” through roles and responsibilities as *yecwemenulecwu*. In this respect, humans are not at the center of social-ecological systems as managers, but part of a kincentric network in which every living thing has a role:

...that agreement we had with the animal kingdom at the beginning of time, you know, we're so pitiful. We were just the weakest thing on the face of this earth, and the animals pitied us, so they gave to us all the things we needed to live. And all we had to do was look after the land. That's all they asked of us was to take care of everything. And we failed. You know? So I think that the work we're doing today, we're starting to get away from the things we were taught in residential school and you know, we know, we're starting to realize that going back to the old ways is the right way. So, you know? I just hope we can get there one day. We can honour that agreement and start doing our part. (Ed Jensen 24 January 2019)

Kenthen Thomas similarly describes how *stsptékwle* teach about humans being given their life here on earth by animals and plants because of their ability to see into the future and plan, and in exchange were given the responsibility to take care of everything:

There were transformers and plants, and I don't know those stories as well as I should, but yeah at one time there were many – *speqpequ'wi* [Saskatoon, *Amelanchier alnifolia*] was one of them, was one of the people eaters, red willow was a people eater, and they literally ate people. And there was coyote and some of the animal people that fought with them and tricked them in to becoming who they are now. Yeah, and there's stories from all over the place that speak of the same things. The Okanagans have some. The St'at'imc ... every nation has those stories where the People Eaters were something we needed to fear, and then after a while they became food for us. They gave themselves to us, because I don't know, I guess they saw the importance in us [the ability to see into the future, and plan]. (Kenthen Thomas 12 September 2018)

Ed Jensen also spoke to the more subtle messages within the stories that teach about harvesting protocols, respect, ceremony, and values:

She told me the story about how that skink will follow you, and it will crawl up your pant leg and crawl in your spooop, right? ... now it makes sense right? There's a reason why we don't mess with those animals. It might not be because they're going to come and follow you home, but it might be because you're taking it from something that's important. There's a reason why they're there. And a reason why we need to leave them there and not bother them. So the stories and the connection it has to the things that we do, and the way we think about plants, right? ... *There's a reason why we have that story—the story about tobacco, right? You know, the tobacco tree that grows somewhere out there and when it was given to us, and how we need to do those ceremonies around it, and how we need to pick it properly and do the things right, you know? We need to listen to them.* (Ed Jensen 24 January 2019)

Splatsín Elder Nuxnuxskaxa ct's717élt [Julianna Alexander] shared “the Worm” *stsptékwle* to explain this concept of how every living being has a value, a role, and associated responsibilities:

[the Worm] *he didn't boast, or—he accepted his job and he did what he was supposed to do ...* Whereas the rest overdone and got self centered and ruined everything. Whereas he didn't—he just kept everything going. So Mother Earth is still rich and everything. Kept him moving and growing so new plants could grow. Did his job. He accepted his position, and just kept, you know, eating everybody's leftovers and turning and doing his job. *So new life could start.* (Nuxnuxskaxa ct's717élt [Julianna Alexander] 14 August 2018, Explaining “the Worm” *stsptékwle*)

Phil McIntyre-Paul also speaks to the importance of Knowledge Holders' use of *stsptékwle* and *slexlexé'y'e* to communicate these values at the Shuswap Roundtable Working Group meetings:

...Louis Thomas ... every time we meet, he'll share a story from the tradition that speaks to these values... the structure of the working group... the Secwépemc learning... I hear people say it's too hard to pronounce, to figure out the language. It's like, exactly. That's why it's frightening going to a new country and you don't know the language and you have to take the time to pay attention and learn it. And you feel, what? You feel displaced, you feel awkward, you feel like—oh wait a minute, that is not only a fraction of what Secwépemc and First Nations people are feeling like in their—in the land they have grown up in, and their ancestors have grown up in ... so that, for me, all of a sudden I hear that, I'm like, it's working! ... that is the idea of all of this, right?" (Phil McIntyre-Paul 26 November 2018)

“Water does not care about jurisdictional boundaries, and neither do trails. And Louis Thomas and Elder Mary Thomas, really, they were two of the voices at the table that were strongest on this. Or they use storytelling to explain it ... I'm pretty sure it was Mary who told the story, because the question came up, well where do these trails still exist? And I think Louis humorously went, well yeah, yeah... you slapped concrete over them. You're driving trucks over them. Like basically if it's an obvious route for a highway or a road, it's a trail ... stories ... were being told, and shared, to teach the rest of us ... it was kind of just this growing awareness.” (Phil McIntyre-Paul 26 November 2018)

The importance of engaging *stsptékwle* as a method of teaching in contexts such as the Shuswap Roundtable, as Phil McIntyre-Paul describes, can lead to expanded understandings and respect for Secwépemc relationships to place, and recognizing our own presence as settlers and visitors, and our responsibilities as guests in Secwépemc territory.

Some initiatives such the Secwépemc Nation Tribal Council's Lands and Resources Law Analysis are taking direction from lessons in *stsptékwle* and from the land to revitalize and restore Secwépemc legal and governance systems. Under direction from the Secwépemc Elders Council, this project describes Secwépemc law as being expressed through the *stsptékwle*:

Secwépemc law is founded upon, inspired by, and responsible for Secwépemcúl'ecw. It is expressed, among other ways, through the wisdom and teachings of oral histories and stories that have been learned, lived, and passed down through generations. (ILRU and SNTC 2016)

Hadley Friedland, Bonnie Leonard (Tribal Director of Secwépemc Nation Tribal Council), Jessica Asch and Kelly Mortimer co-authored a paper in 2018 that further highlights current work within the Secwépemc Nation Tribal Council that draws on *stsptékwle* as one foundational source for revitalizing Secwépemc legal orders (Friedland et al. 2018, 160). As Friedland et al. (2018, 160) describe,

The goal of the Secwépemc is to move beyond the Indian Act and return to their traditional ways of governing themselves. Just as it took decades for Secwépemc governance structures to be stripped away, it will take time to rebuild what has been broken. Moving forward, the Secwépemc are drawing on the wisdom of their ancestors and teachings of their elders to guide the national reconstruction of the Secwépemc Nation and revitalization of their legal orders. They are using stories that have been passed down for thousands of years, from generation to generation, as foundation from which to embark upon this work.

Ed Jensen also describes the significance of *stsptékwle* for codifying Secwépemc law:

Our law is embedded in our stories—that's our law books, right. You know, and—interpretation of law, it's just like common law. The way that you interpret laws in Secwépemc stories is—it's all up to interpretation in terms of how it's applicable locally or on a broader scale. And you'd have to argue those points right? Through the argument and all the discussion that goes around it, you'll come to a common conclusion in the end—peeling apart stories layer by layer. But those stories too, they were told to specific audiences in certain ways. Like the same story told to an adult would be told differently to a child. And it would have a meaning specific to that age group, or that application... your roots are important, and your identity is so important. You know, so the context of the storytelling is important. Your audience is important, and what you're trying to portray—which laws you're trying to get out, right? Secwépemc law is—it's based on survival. Plain and simple. So if you look at those stories in that sense, you know, how does it pertain to survival, because you need a lot of things to survive. Not only do you need food and warmth, you know, and those sorts of things—cover, and all of those things, but you need to be able to get along with each other, right? Can you imagine being in a pithouse for four months with

people you don't get along with? Right? You'd kill each other! So *we had laws that allowed us to survive—the ways of conduct are deeply embedded in the stories. So we have stories that say always respect our Elders. Always look after one another. They're told over and over again, and it's to embed that into our psyche, into our way of being, and to normalcy right?* And so you're acting up in the pithouse and it's the middle of January and you've still got a couple months to go—grandma's going to pull you aside and tell you that story that's applicable to what you're behaving like. Right? So it's all about timing too, right, and we think—*we kind of have those commandment laws, right—like thou shalt not. And they're—you'll find a little bit of that in every story, right—it's there.* And I think too it's like being aware of who you're talking to. (Ed Jensen 24 January 2019)

Stsptékwle contain the pedagogical tools that, when interpreted by Elders and Knowledge Holders collectively, teach about foundational concepts and values that are iteratively generated from interactions between humans and *xwexwéyt ren kwséseltkten* (“All relations”) in place.

“Elders are people who carry wisdom and are knowledge keepers. So if you've been given a gift from an Elder, that's part of a knowledge, part of a puzzle. Not everybody has the answer, but when we're sitting like this we put it together and we get a picture.” (Nuxnuxskaxa ctś717élt [Julianna Alexander] 27 April 2019)

As Kenthen Thomas explains, *stsptékwle* are a link that anchors the past, the present, and the future in land, teaching lessons through the actions of their characters, and providing guidance on how decisions made will shape the landscape for the *Tellqelmúcw* (People to Come). They are also a reminder that humans are interconnected and interdependent with ecosystems and landscape processes in Secwepemcúlecw, and recognize the responsibility of Secwépemc people as caretakers of land (fieldnotes, August 2018). In this process, I learned that to study ecological systems in Secwépemc territory, I must also consider their interconnection with social institutions and their inseparability from Secwépemc stories and laws.

Discussion

This chapter aimed to answer the following question: How do community values, principles, and relationships to food in Switzmalph, and Secwépemc territory more

broadly, inform the processes of existing and emerging land-based education initiatives, and future pathways towards food systems restoration? To answer this question, this chapter outlines two cultural concepts described by Secwépemc Knowledge Holders related to Secwépemc food systems and *tmicw* based education (*knucwetwécw* and *yecwemenul'ecwu*), as well as the role of *stsptékwle* and *slexexé'ye* as methods of teaching about these values. I learned that these values become active and alive when they are applied in *tmicw*-based settings, and are generated through experiential learning on the *tmicw*, community, and are shaped further by younger generations and changing contexts.

Key Findings

***Stsptékwle* and *slexexé'ye* (stories) are methodologies applied in land-based learning settings by Secwépemc Elders and Knowledge Holders to teach about cultural values such as *knucwetwécw* (working together, cooperation) and *yecwemenul'ecwu* (caretaking or looking after land).**

Stsptékwle were described by Knowledge Holders as methods and contexts for teaching and learning about cultural concepts, values, protocols, moral codes, and land, as well as the revitalization and restoration of Secwépemc legal and governance systems (Friedland et al. 2018). Place is shaped through interactions between social and ecological landscapes since time immemorial, and this cumulative knowledge is communicated through language (*Secwepemctsin*), *stsptékwle* and associated toponyms (place names), social and ecological lessons, and laws (Ignace and Ignace 2017, 234). This fourth value of *stsptékwle* and *slexexé'ye* as contexts or methods for teaching and learning speaks to the importance of Secwépemc processes for teaching cultural concepts, and supporting the maintenance and revitalization of land-based knowledges. It is important for cultural knowledges and *tmicw*-based learning to be grounded and contextualized within Secwépemc pedagogies, processes, values, and frameworks, and for Secwépemc voices to be central in guiding these processes.

Cultural concepts such as *knucwetwécw* and *yecwemenulécwu*, and *stsptékwle* and *slexexéye* as methods for teaching and learning in land based learning settings, guide future pathways for Secwépemc land-based education and food systems restoration.

The two cultural concepts discussed in this chapter, *knucwetwécw* and *yecwemenulécwu*, and the role of *stsptékwle* and *slexexéye* as contexts for teaching and learning about these values in *tmicw*-based contexts, were described by Knowledge Holders in future-focused ways. For example, Knowledge Holders described future pathways for land-based education and Secwépemc food systems restoration guided by these cultural concepts, values, and contexts, such as the expansion of community gardens and food programming, restoration of harvesting areas, culture camps, Secwépemc traditional food restaurants and markets, and monitoring programs with Secwépemc people as boots on the ground. Years of policy and legislation cut many Secwépemc communities off from land-based activities. Recognition of Secwépemc legal systems and jurisdiction, and more expansive understandings of Canadian legal concepts such as Aboriginal rights and title informed by Secwépemc perspectives on roles and responsibilities to land, are important for the maintenance and revitalization of Secwépemc land-based education and food systems restoration. Employment opportunities involving community-based monitoring and restoration programs are vital not only for social and environmental planning and protection, but also for Secwépemc-led policy changes and community-driven restoration of Secwépemc values-based education, governance, and legal systems.

Both Louis Thomas and Ed Jensen also describe the significance of accessing, cultivating, and restoring culturally significant plant populations in “backcountry gardens” (Ed Jensen, this chapter, 24 January 2019) or “harvesting areas” (Louis Thomas, this chapter, 30 August 2019). Leveraging multi-scalar partnerships was also discussed as one way of supporting this, as well as the restoration of Secwépemc legal systems. This chapter demonstrates the ways in which Secwépemc values and human-plant relationships continue to shape planning and governance in contemporary contexts in Secwépemc territory. An important outcome from our conversations focused on the

importance of relational ontologies, and policy and planning environments that recognize the inherent rights and agency of ecosystems, and considers these inherent rights and interests beyond solely humans and profit-driven corporations. The integrity of culturally significant ecosystems also facilitates networks of intangible cultural heritage, such as relationships between Secwépemc people, place, and non-human beings who share the land, as well as *stsptékwle* and the layers of cultural concepts and lessons they teach. In this respect, it is vital that planning and food systems restoration strategies, as well as decisions for whether and how to design culinary Secwépemc economies around these plants, are driven and informed by Secwépemc communities and values.

Importance of access to land for Secwépemc land-based learning, education systems, health and wellbeing, language, and way of life.

This chapter describes the importance of experiential *tmicw*-based learning led by Secwépemc Elders and Knowledge Holders for the maintenance and restoration of land-based knowledges, as well as the significance of land to way of life, spirituality, relationships, identity, and survival. As described in Chapter 2, land tenure and policy landscapes in the Interior of British Columbia continue to create systemic barriers for the practice of Secwépemc roles and responsibilities as *yecwemenulécwu*. Many aspects of Secwépemc *tmicw*-based education systems are tied to culturally significant foodways, and knowledges of how to cultivate, harvest, process, cook, and store foods. As was described in this chapter, Secwépemc plants can facilitate connection to culture, legal and governance systems, and to roles and responsibilities in relation to land and community. For example, we read Knowledge Holder Louis Thomas's description about how a resurgence in Secwépemc foods is important not only for restoring ecosystems, but for restoring the cultural, social, legal, and values-based systems that are deeply interrelated with them.

Tmicw-based education is also tied to learning about protocols, moral codes, or laws that regenerate relationships between communities, families, and land in the process. Restoration of Secwépemc *tmicw*-based education systems, access to mentorship and

Knowledge Holders, and multi-scalar partnerships and policy environments that support meaningful employment and capacity building for land-based monitoring and restoration programs have each been described in this chapter as important for the maintenance and revitalization of Secwépemc land-based knowledges, and interrelated roles and responsibilities as *yecwemenulecwu*.

Importance of bringing Western and Secwépemc scientific knowledges together in community-driven frameworks

In this study, Knowledge Holders spoke about the need for increased adaptive environmental planning and protection and community based models that are grounded in experiential knowledge from community hunters, harvesters, Knowledge Holders, Elders and youth. Bringing together Secwépemc and Western scientific knowledges in community-based frameworks is important for building strong and complementary research that values Secwépemc methodologies, ways of knowing, knowledge frameworks, and active presence on the land. Furthermore, increased formal partnerships with academic institutions, organizations, and Secwépemc communities that prioritizes high degrees of community participation¹⁹¹, collaborative work, and ethical frameworks in alignment with Indigenous worldviews¹⁹², can have potential for strengthening relationships and contributing to community-led research connecting social and ecological systems (Turner and Turner 2017; Turner and Turner 2008; Smith 2018; Martens 2015).

Conclusion

The two cultural concepts, or values, described in this chapter, and the role of *stsptékwle* and *slexexé'ye* as methods of teaching about them in land-based contexts, are shaped from thousands of years of interaction between people and place in Secwepemcúlecw, and continue to inform existing *tmicw*-based education and food systems restoration initiatives in Switzmalph, and Secwépemc territory more broadly. These values are not new concepts but old ones that are shaped through the process of being on the land, and expressed in contemporary contexts in action-based and tangible

¹⁹¹ Thompson (2018, 28)

¹⁹² Peltier (2018).

ways. This research demonstrates how community-led projects and partnerships continue to draw on to them to inform and build culturally relevant and meaningful futurities.

The two values described in this chapter, and the role of *stsptékwle* and *slexexéye* as methods and contexts for teaching and learning about them in land-based contexts, answer the question of how values, principles, and relationships to food in Switzmalph and Secwépemc territory more broadly both inform processes of existing and emerging land-based education initiatives, as well as future pathways to food systems restoration. Some pathways proposed in this study include the importance of Secwépemc values in creating frameworks for relational environmental planning, generating increased capacity for food systems restoration through building multi-scalar relationships, and sourcing sustainable employment for Secwépemc monitors and caretakers to lead eco-cultural restoration of harvesting areas and Secwépemc *tmicw*-based education initiatives.

Indigenous biocultural knowledge is important for long-term food security, and multi-scalar partnerships (e.g., the Shuswap Roundtable), Indigenous community governance, and supportive policy environments for the maintenance of Indigenous biocultural heritage and food security may support these goals in the face of climate change (Argumedo 2008, 47, 54). Furthermore, protected areas and Indigenous community conserved areas, when developed around Indigenous community governance, needs, and priorities, could be promising models to support sustainable community management, facilitate access to land, and the maintenance and restoration of Indigenous biocultural heritage (Argumedo 2008, 47).

When food systems are understood as a collective capacity that supports the overall adaptive capacity of a social-ecological system, then it is also clear that Indigenous food systems restoration is also a vital part of reconciliation. We are currently in a time of restoration and cultural resurgence, but community-based food restoration initiatives need commitment and support of resources and partnerships to support community priorities as well. Material support to build capacity for Indigenous communities and organizations to manage foodscapes and create Indigenous-led and controlled marketing opportunities for Indigenous foods and cuisines is necessary, as well

as respecting the choice and agency of Indigenous nations to either include or exclude these foods from markets (Grey and Newman 2018). The narrow focus on western intellectual property frameworks and western conceptions of ownership (e.g., patenting) that characterize agricultural and culinary fields also need to expand or transition to ethical frameworks grounded in recognition of Indigenous rights and responsibilities to their lands and biocultural heritage.

Secwépemc harvesters have consistently noted cumulative environmental change and decreases in both quality and quantity of “root” plants (Thomas et al. 2016; Ignace and Ignace, with contributions from Nancy Turner 2017, 188). Long-term studies on the relationship between these declines with reduction of First Nations management (Anderson 2003); whether a resurgence in eco-cultural restoration practices can mitigate the effects of climate change on culturally significant species; and predictive climate change modelling on projected ranges of culturally significant plant species, would be very useful both within the food sovereignty literature as well as for informing practical land use management and restoration strategies for First Nations around culturally significant foods.

Challenges and further research

One challenge in this thesis is the limitation of English language translations for capturing the multidimensional and place-based nature of Indigenous languages. Indigenous languages are deeply interrelated with place, and communicate layers of social, cultural, ecological, historical, and place-based relationships and worldviews that are not always directly translatable to English. As Peltier (2018) describes, working respectfully with Indigenous languages involves not only translating the word, but looking more deeply into the meaning and philosophy of the word and how it was described to me. The meaning attached in quotations to the *Secwepemctsin* words in this thesis were explained to me either by Knowledge Holders primarily from the Switzmalph community, as well as from Splantsín, Tkemlúps, and Skatsín who participated in this

study. These definitions were verified with Chief Atahm *Secwepemctsin* language teacher Lucy William after a draft of the thesis had been compiled. However, there are many parts of the philosophy behind the words used that may not be captured in this thesis. For additional learning, it is recommended to contact a *Secwepemctsin* language speaker and Knowledge Holder.

This chapter also describes *my interpretation* of these Secwépemc values as they were shared with me by Knowledge Holders, and describing through my own lens how they guided my process of learning. This thesis is not intended as a representation of Secwépemc ways of knowing or as a representation of other Secwépemc communities. I am also not, nor will ever be, an expert on Secwépemc cultural knowledge—the experts on this knowledge are the Knowledge Holders and Secwépemc community members themselves. These stories are living and connected to land and people in community, who will always be the holders of this knowledge and must also be the directors and interpreters. Indigenous communities have their own processes for interpreting stories collectively and meaning making through collective discussion. There remain many valid concerns about “expert syndrome” (Absolon 2011, 158), including representations by academics outside of communities that build on outsider ideas and theories of communities instead of community voices representing themselves and their own narratives.

Chapter 6: Process-oriented Approaches to Research

Introduction

Following a history of adverse experiences with research in Indigenous communities, Peltier (2018) describes a necessary transformation in research to answer calls from Indigenous peoples for ethical, meaningful, and accountable research in alignment with Indigenous worldviews and priorities. Process-oriented approaches can provide practical lessons for community-engaged researchers by demonstrating how Indigenous ways of knowing can guide data collection, analysis and dissemination processes, and the ongoing and embodied¹⁹³ application of ethical frameworks. They also highlight the importance of reflexivity and emergent process, and the foundational nature of relationships (both social and ecological) in Indigenous community-based research. This chapter describes how engaging with Indigenous pedagogies through the application of critical place inquiry methods can guide meaningful and respectful research, and shed light on the significance of place in knowledge generation.

Specifically, the objective of this chapter is to situate my positionality and process of learning guided by Indigenous ethical frameworks that foreground Indigenous epistemologies and relationships to land. This chapter describes my process of engaging with Archibald's (2008) storywork principles¹⁹⁴, in conjunction with local Secwépemc values and protocols, as a guiding framework for working with cultural knowledges. This chapter engages with these aspects of process-oriented approaches through answering the following question: *How does a process-oriented approach that foregrounds Indigenous relationships, ethics, and epistemologies give insight into how critical place inquiry and*

¹⁹³ See Bannister (2018).

¹⁹⁴ The storywork principles, defined by Archibald (2008) from her work with Coast Salish and Stó:lō Elders, are respect, responsibility, reverence, reciprocity, holism, interrelatedness, and synergy. For other examples of how they are applied in research contexts, see Peltier (2018); Young (2015); Christian (2017, 2019); Davidson (2019).

Indigenous ways of knowing can guide the development of Indigenous food systems restoration projects and monitoring tools?

This chapter concludes with a discussion of the importance of culturally significant plants for generating knowledge and relationships; my process of understanding relational accountability; the importance of engaging in food systems research actively led by or alongside the priorities of Indigenous peoples and communities; and challenges and suggestions for future research.

Importance of process: applying an Indigenous research methodology

Many Indigenous academics and Knowledge Holders describe the importance of culturally grounded approaches for bringing together Indigenous and Western ways of knowing to participate in accountable research that benefits and represents Indigenous communities in meaningful ways (Peltier 2018; Colbourne et al. 2019; Bartlett et al. 2012; Absolon 2011). As Wilson (2008, 15) describes, research is changing to be more useful to Indigenous communities, with Indigenous people deciding what needs to be studied, and how. Where methodology involves a systematic application of methods and theoretical lens that guides analysis, process can shift focus onto the deeper, slower, and more relational aspects of research and engagement with ethics. Relationality and culturally specific understanding of ethics are a larger context within which sharing and gathering knowledges is situated. It is also very important that process does not unduly focus on the intention of the researcher, because regardless of intention harm can be caused. Rather, process can focus on deepening engagement with relational accountability and ethics beyond standard Western ethical research training¹⁹⁵, for example through learning about culturally-specific understandings of ethics, including ethics relating to non-human relations (e.g., plants, animals). As researchers, process is important to pay attention to because it highlights the active nature of learning and the

¹⁹⁵ Reo (2020, 67).

responsibility of the researcher to consider what motion will occur as a result of their research: How does action from learning/research shape place? How are we as researchers shaped through this process? How can community-based theories of change direct researchers in terms of reflexively responding to expectations and guidelines for doing research “in a good and kind way”? How do theories of social/environmental/relational change¹⁹⁶ emerge through this process, and whose voices and pedagogies do they privilege?

Many Indigenous scholars describe guidelines for accountable and meaningful research using Indigenous Research Methodologies (Archibald 2008; Absolon 2011; Kovach 2010; Wilson 2008; Young 2015; Christian 2017, 2019; Peltier 2018)¹⁹⁷. Each of these authors also writes about the importance of learning from these guidelines as a framework, and applying these guidelines in conjunction with local protocols, ethics, and ways of knowing. My intent in this chapter is not to apply Anishinaabe (Absolon 2011) or Indigenous principles from other intellectual and cultural traditions inappropriately within Secwépemc territory, but following these scholars to apply relevant guiding principles from Indigenous research methodologies under the guidance of local Secwépemc protocols and ethical frameworks as described to me by Knowledge Holders.

The two guiding Secwépemc values introduced in the previous chapter that inform the processes of existing and emerging land-based education initiatives and future pathways towards Secwépemc food systems restoration are *knucwetwécw* and *yecwemenulecwu*, with *stsptékwle* and *slexexéye* as methods and contexts for teaching and learning about these, and other cultural concepts, in land-based learning settings. This chapter is organized around these values and contexts for teaching and learning, and describes how I engage with Archibald’s (2008) storywork principles as relative to each,

¹⁹⁶ See Tuck (2009a); and Tuck and Yang (2013) on theories of change.

¹⁹⁷ For example, Peltier (2018) discusses Mi’kmaq Elder Albert Marshall’s “Two Eyed Seeing” framework as a guiding approach to applying Anishinabek values and ways of knowing alongside Participatory Action Research (Western) in health and wellness research.

for the purpose of learning more about my responsibilities as a researcher¹⁹⁸. Following Christian (2017), I have bolded Archibald's (2008) storywork principles **respect, reciprocity, responsibility, reverence, holism, interrelatedness, and synergy**, as I engage with them in this chapter to indicate how and where these principles were applied.

Knucwetwécw

Knucwetwécw (“Helping one another”) is a guiding value that emerged from interviews with Knowledge Holders that taught me the foundational nature of relationships to working together in accountable, respectful, and meaningful ways. I understood my engagement with *knucwetwécw* as asking the important question of how I would exercise **reciprocity** and give back to contribute to community priorities in meaningful and helpful ways, and how I would build relational accountability. Reo (2019) discusses relational accountability through an Anishinaabe epistemological lens of *inawendiwin* to communicate important teachings about ethics in research, that I think are very relevant here:

Relational accountability, an ethical guideline for conducting research with Indigenous nation partners, references the kincentric beliefs among many Indigenous Peoples. It implies that researchers are responsible for nurturing honorable relationships with community collaborators and are accountable to the entirety of the community in which they work, potentially including collaborators' more-than-human network of relations... (Reo 2019, 65)

Anishnaabe *inawendiwin* is a way of relating to spirit and to one another that honors the interconnectedness of all our relations—*kina enwemgik*. Relationships based in *inawendiwin* teachings are respectful of the individual, as well as the integrity of the collective. Such relationships are “personal, honest, caring, responsive and sharing, and, built upon our identity with and connection to spirit, land, environment and all of creation” (Seven Generations Education Institute 2015). (Reo 2019, 68)

¹⁹⁸ I drew inspiration for this section from Peltier's (2018) application of Elder Albert Marshall's “Two Eyed Seeing” framework in Anishinaabek territory; and Young (2015) and Christian's (2017) application of Archibald's (2008) storywork principles for visual storytelling/filmmaking analysis.

Research as a relational process can build capacity for trust, responsibility, accountability, and respectful relationships between researcher and participants. Wilson (2008) describes the process of research as ceremony because of its grounding in building relationships:

“Research is a ceremony... The purpose of any ceremony is to build stronger relationships or bridge the distance between our cosmos and us. The research that we do as Indigenous people is a ceremony that allows us a raised level of consciousness and insight into our world. Through going forward together with open minds and good hearts we have uncovered the nature of this ceremony.” (Wilson p 137)

When I first began working on this thesis, I was aware of a rough structure and process that I needed to fulfill as a graduate student. My understanding of process when I began was more prescriptive, and tailored to the Human Research Ethics Board (HREB) ethics applications I would need to complete, the initial community consultations I would need for direction on this work, and literature I would need to read to become familiar with historical contexts and place, for example. In my initial journals reflecting on this process, many of them were panicked and expressed my own anxiety and unfamiliarity with this process and what was expected of me to do this work in “a good and kind way”—an accountable way.

Upon completing this project I’ve come to understand that deep learning does not always happen in prescriptive spaces where a clear process with succinct steps is established, but through inquiring into the grey spaces beyond these steps by following guidelines of ongoing accountability grounded in relationship. When I began writing this chapter, I focused on these principles more prescriptively and as a framework for doing this work “right” or in a good way. I understand upon reflecting on this process that these principles are not about outlining a prescriptive process for doing this “right”, but are rather about engaging more deeply with understanding what each of these values and principles mean, and the continued and ongoing engagement required for understanding how they can also be vantage points for guiding my own process of learning. I’ve been taught that this includes the responsibility as a researcher to approach this process with

“an open mind and an open heart”, requiring an engagement not only mentally, but through engaging with my other senses and emotional responses as well. These principles brought me to reflect on how truly engaging with them also involves an open process of accountability and messiness, and in listening with an open heart and mind when I made mistakes and was called to engage in these principles more deeply. Being answerable to my mistakes involves a deeper process of returning to these principles and respecting the guidance and direction of community members and Knowledge Holders who corrected me, and gave me the responsibility to be accountable and respectful in our relationships.

This includes understanding my responsibility not to do harm. As Reo (2019, 69) describes,

Indigenous communities are the only entities that can assess the potential for harm in a research proposal involving those communities (Tallbear 2014). As such, relational accountability begins first and foremost with the people of the nation or community with whom I am working. I am accountable to everyone and need to ensure no harm is done to any individuals or the community in its entirety.

These relationships were the signposts that gave me direction for how to continue. These relationships in community demand an active process of accountability, including asking questions to gain clarity in these unfamiliar spaces on what my responsibilities are, learning how to engage respectfully with land, and working together to co-create a process that is accountable, respectful, and reciprocal.

This thesis is as much of my own personal experience of coming to know place, thinking critically about my positionality as an uninvited guest and visitor in Secwépemc territory striving to be a good relative to the communities and all beings on Secwépemc lands where I am living, and inquiring into how my role as an active participant in this collective story of research changes me as a person and influences the outcome of this thesis. Cruikshank (1998) challenges researchers to welcome messy processes of learning that engage reflexivity, to listen to emergent directions and priorities that interrupt and challenge our narratives, and truly value Indigenous ways of knowing as vital methodologies of meaning making in relationship to place:

“Unless we put ourselves in interactive situations where we are exposed and vulnerable, where these norms [scholarly] are interrupted and challenged, we can never recognize the limitations to our own descriptions. It is these dialogues that are most productive, because they prevent us from becoming overconfident about our own interpretations.” (Cruikshank 1998, 165)

As Wilson (2008, 135) writes, “If research doesn’t change you as a person, then you haven’t done it right”. The process-oriented nature of learning is just as important as the outcome of research for understanding the relational and reflexive processes in which collective theorizing and pedagogies are grounded. Research processes are grounded in often messy and transformative processes of learning; confronting privilege, representation and colonialism; and navigating and responding both respectfully and adaptively to the ongoing and living nature of relationship, process, and accountability. Furthermore, respect includes recognizing the subtle forms of violence that continue institutional histories of harm, which can come along with continuing to ask questions when greeted with silence. Some refusals and shared silences are generative within communities (Tuck and Yang 2014b, 812), however outside of this context they can also not be understood, respected, or ignored to push outside agendas.

Tuck and McKenzie (2015a, 19, 157; 2015b) propose relational validity as a measurement of legitimacy in critical place research that is both grounded in relationship and impels meaningful motion and future action, as well as for establishing legitimacy and “its grounding and implications for relations to land, to social context, and to future generations”. Centering relationship as a measurement of validity in research involves centering relational accountability (Wilson 2008), Indigenous ways of knowing, and incremental action that is accountable to local protocols, communities, and ecologies (Tuck and McKenzie 2015a, 158). By deliberately centralizing relationships as a way of measuring validity, this engages a responsibility to work towards measuring action that occurs as a result of research in terms of its benefits to Indigenous communities and non-human beings and ecosystems that make up the places where we work. This actively recognizes movement and action as a result of research, and prioritizes action that centers

Indigenous futurities and place (Tuck and McKenzie 2015b, 636).

Furthermore, Tuck and McKenzie (2015a, 165) describe how a relational ethics to future generations also involves action with and on community terms to ensure futurities of land, water, and nonhuman relations who also live here. As they describe, this encompasses:

... not only research on and with Indigenous communities, but also on Indigenous human remains and human tissue; our sacred places, flora, and fauna; our stories, histories, literature and art; our knowledge and knowledge systems; and data, including test scores, graduation rates, birth and mortality rates, employment rates, and other life outcomes. This extends to breaking down disciplinary and Cartesian binaries between humans and nature through expressing ethics in “ecological considerations of mutual benefit, honoring, recognition, and the long view” (Tuck and McKenzie 2015a, 163)

To me, relational validity (Tuck and McKenzie 2015a, b) and relational accountability (Wilson 2008) involves **respecting** Secwépemc ways of knowing, the role of Elders and Knowledge Holders as experts of their cultural knowledge and as my teachers, and demonstrating ongoing **responsibility** and accountability to the relationships developed through this research process. Kenthen Thomas illustrates the central role of the spiral in Secwépemc ways of knowing, in teaching both about knowledge generation as well as respect for, and accountability to, every person in community:

“Now, when you look at Indigenous ways of knowing- Indigenous ways of knowing ... could be considered a spiral. And in that circle, everyone is considered equal. The Kukpi7 is considered no more important than the youngest member, which could be a skúye, a little baby. The little baby is no more important than the Elder. The Elder is no more important than the regular guy who just stands in the circle with him—they’re all equally important. So saying that, when you look at the knowledge that has to be passed, all the knowledge that has to be passed, or education that has to be transmitted through that circle, needs to be done with great respect and care. So that you ensure that that person that’s taking that knowledge will respect it and utilize that knowledge to the best of their ability. So that goes all the way around that whole circle...” (Kenthen Thomas 12 September 2018)

I understand researcher **responsibility** includes following protocol; ensuring respectful representation of cultural knowledges and ways of knowing¹⁹⁹ and seeking guidance from Knowledge Holders to determine which cultural knowledges should not be shared outside of community settings; enacting **reciprocity** through following cultural protocols for giving back; respecting cultural roles and **responsibilities**; and following a process with clear communication that **respects** ongoing consent. This process includes returning transcripts and audio recordings to community consultants and parents/guardians to review and allowing sufficient time for them to review for accuracy, sending a copy of completed chapters with community quotes so participants have the opportunity to see how their words are included in context, and hosting a community sharing circle to co-create, review, and verify the values and models used in this thesis (November 2019, see Appendix C: Community newsletter). Ongoing informal visits are also important for spending time with Knowledge Holders, and engaging in a reflexive process of collaborative design and knowledge gathering that was shaped by community ideas. This involved sharing power in research design and implementation, and focusing research on topics relevant and tangible to the Switzmalph community. These check-ins also helped me to understand and **respect** that some shared with me were only shared to support my understanding and not meant to be in the academy or published.

I also understand that part of my **responsibility** as a university researcher is to understand the complex societal and historical factors affecting trust and relationships between university institutions and Indigenous communities. I have a **responsibility** to reflect on my own positionality as a researcher working within this institution and the added responsibility of making myself known, accountable, and be answerable to these histories, contexts, and the mistrust resulting from them.

I understand my **responsibility** and role in this work as a student is to learn a process of generating **respectful** and accountable relationships, to learn and **respect**

¹⁹⁹ See Kovach (2010, 99-100)

cultural learning protocols by letting Knowledge Holders set times and locations for meeting, having unhurried time together, as well as taking direction from Knowledge Holders when they were finished with our conversations and not pushing to ask further questions. Part of demonstrating **respect** includes challenging and delegitimizing “expert syndrome” (Absolon 2011) by recognizing that the experts and teachers of cultural knowledge are, and will always be, the Elders and Knowledge Holders and Indigenous people of their respective territories.

I also practiced **responsibility** by designing a sample Research Agreement as a guiding document to clarify aspects of the relationship, not as bureaucratic process, but so that they became part of my methodology and research ethic to honour the agreements²⁰⁰. On direction from Councillor Louis Thomas we did not end up using this Research Agreement, but I was directed instead by Neskonlith’s Executive Director to adapt confidentiality and data sovereignty statements from Neskonlith’s legal contracts into each of the participant consent forms to ensure participant confidentiality, that copyright for any published products such as the Secwépemc plant knowledge cards was assigned to the Neskonlith Band (NIB 2019), and that I would acknowledge individual Knowledge Holders who contributed to the project, with their consent.

I understand that sharing my own background, connections to community, and my reasons for engaging in research was also a necessary part of practicing protocol, **responsibility**, and **respect**. Doing this not only **respects** cultural protocol as a visitor in Secwépemc territory, but also challenges power dynamics in research that tend to focus on sharing as extractive and taking place in one-direction only (Young 2015, 18; Wilson 2008). I held stories shared by Knowledge Holders in this study with utmost respect, practicing **reverence** when I revisited to listen to audio recordings of interviews, and engaging with their stories. I remained open to guidance from Knowledge Holders as I

²⁰⁰ iPinch (2015) designed a useful factsheet resource for researchers looking for guidelines to design a Memorandum of Understanding for collaborative and community-based projects. Bannister (2018) writes further about the use of non-legal mechanisms for protecting cultural heritage in research.

returned drafts of the thesis so each person could review their quotes in the context of the thesis, and clarify the position and meaning of the story. I also understand I am expected to be quiet and listen when Elders share their stories with me, to come prepared and speak with clarity, to understand and interact with stories and teachings with **reverence**, and to ensure I check in with each person individually so that they can give me direction on how they would like their stories to be presented. I also learned to hold **reverence** for orality as a method of teaching story that builds relationship through active learning and engagement, as well as for cultural authority in stories that were described as being from the Old Ones, or ancestors who have passed on. I also hold **reverence** for Secwépemc ways of knowing and my positionality as an outsider and learner, not to appropriate Secwépemc ways of knowing but to understand how Elders and Knowledge Holders were guiding me to understand my **responsibilities** living in their territory. **Relationship** was one responsibility outlined to me by Duane Manuel at the start of this work, when he said to me that to know your **responsibilities**, you need to ask the Elders. To ask the Elders, I first am required to build **relationships** and demonstrate **respect** and **reverence**.

Knowledge Holders also talked about the process and protocols to ask for knowledge, and the responsibility, reciprocity, and commitment that comes with this:

“... we talked a little bit about the protocols, right? Go to somebody in a good way and ask for that knowledge. Well my attitude is that if somebody comes to me and they want to learn what I know, well, put your gloves on, you’re going to go to work. And I’ll teach you anything you want to know ... Commit yourself, that’s all it takes.” (Ed Jensen 24 January 2019)

I engaged with **reciprocity** in this study in the following ways:

- Secured funding to support a part-time Research Partner position (as requested by Councillor Louis Thomas). Kenthen Thomas was my Research Partner from May 2018-November 2019. We worked together to shape ideas for this project into a study design, as well as collaborated on data collection, analysis, and dissemination phases. Kenthen was also an advisor to me on community protocol;
- Secured funding to cover travel for Kenthen Thomas and myself to attend the Indigenous Farmers Conference in Gaa-waabaabiganikaag Anishinaabeg territory

(White Earth Reservation, Minnesota) to present on our work, and learn from other Indigenous food restoration projects. The purpose of this was to attempt to connect to a network of Indigenous food projects led by, for or with Indigenous communities to learn and share resources, knowledge, and build relationships; and

- Learned protocols for conducting myself in a good way, e.g., following a process of respectful story gathering (Peltier 2018).

As many Indigenous researchers have described, relationship is central for working in accountable, reflexive, and respectful ways in Indigenous contexts (Wilson 2009). As Absolon (2011, 129) describes,

Enacting re-search with a good heart is one pathway to *minobimaadiziwin*, the good life. Doing research in “relationship” reconnects us and remembers us to ourselves and one another.

I was reminded several times to think less with my mind and more with my heart, and to be open to being corrected in my ways. I understand this reminder as asking me to engage more deeply with reflexivity and reflection throughout the research process, and to ask for guidance. Knowledge Holder and Councillor Louis Thomas also explained to me that in order to do research, I needed to build relationship and trust with community first. I’ve understood this ongoing context of relationship and the relational accountability that is embedded in this process as a guiding practice.

Yecwemenulécwu

Yecwemenulécwu is a guiding value that taught me about the importance of **respecting** Secwépemc roles and responsibilities as caretakers²⁰¹, as well as **respecting** Secwépemc ways of knowing about the agency of plants, animals and *xwexwéyt ren*

²⁰¹ Many conversations with Knowledge Holders in Secwepemcúlcw described plants as living relatives who have their own rights and agency, and *stsptékwle* were described to me as illustrating Secwépemc roles and responsibilities as caretakers for the plants in exchange for human life. It was explained to me that every living thing has a role and job to do to maintain life, and the responsibility of Secwépemc people in this system is as *yecwemenulécwu* (caretakers). See Ed Jensen (24 January 2019); Nuxnuxskaxa ctš717élt [Julianna Alexander] (14 August 2018; 21 August 2018); and Rhona Bowe (30 August 2018).

*kwséselfkten*²⁰² (*Secwepemctsin*: “all relations”). While many of my initial interview questions focused on local knowledge about changes in quality and quantity of culturally significant plants over time, much of what was shared with me in response challenged me to not only to consider plants, but rather to understand the wider system of interdependent relationships plants are embedded in. Many Knowledge Holders centered kincentricity by speaking about the social relationships and agreements between humans and *xwexwéyt ren kwséselfkten* (“All relations”) as interdependent agents. In this respect, I learned plants, animals and other kin literally figure as deeply into social worlds as social agents, as much as humans do in ecologies. Relational ontologies situate humans in a larger system in which everything has agency, a role, and responsibility. For example, Janice Billy (2015, 32) describes the word *K’welselktnews* as meaning “all beings are related”, and respect and responsibilities exist between all life forms and the land. Knowledge Holders spoke about **respecting** the agency of plants, animals and other relations, which in turn informs protocols such as taking only what you need, consent-based harvesting, and other harvesting protocols that maintain sustainable harvesting regimes and relationships. Some Knowledge Holders specifically describe the role of Secwépemc people within this system as *yecwemenulecwu*. The presence of culturally significant plants in the landscape, in this respect, situates the practice of cultural concepts such as *knucwetwécw* and *yecwemenulecwu*, and legal systems. For example, ILRU and SNTC (2016, 10) describe the concept of *Qwenqwent*, which underlies Secwépemc legal orders:

Beginning with the relationships people in the Secwépemc legal tradition have with land (including animals, plants, water, and specific places), we learn first that the Secwepemctín concept of *Qwenqwent*, which refers to humility and human dependency, is key to understanding legal principles and practices of respectful relations. Stories and community witnesses also teach of interconnection within an environment that sustains human and non-human beings alike. This fact underlies all laws about respecting the integrity and well-being of Secwepemcul’ew’s resources and non-human beings. It also informs an

²⁰² Ignace (2016, xiii)

understanding that the land, Secwepemcul'ecw itself, effects the law's creation, application, and authority.

A key component of **reciprocity** as defined by Tuck and McKenzie (2015a, 95) is grounded in relational ethics and “the long view”, which involves refuting Western binaries between nature and communities, and moving research into a wholistic action that acknowledges interconnectedness and benefits human and nonhuman communities and ecologies. I engaged with relational ethics through practicing **reciprocity** in the following ways:

- “*Eating Our Culture: Secwépemc Feast*” (July 2019)

The “*Eating Our Culture: Secwépemc Feast*” was a public traditional foods feast and art show collaboration between the Switzmalph community and the Salmon Arm Arts Center in Salmon Arm, featuring five culturally significant Secwépemc plants. Led by Councillor Louis Thomas, the feast and exhibit focused on building relationships between members of the Switzmalph community and local residents, and learning about the social, cultural, and ecological significance of Secwépemc plants. Knowledge Holders Louis Thomas and Crystal Morris spoke about observing declines in their populations, as well as local partnerships focused on eco-cultural restoration. Neskonlith storyteller Kenthen Thomas performed *stsptékwle* to highlight the role of Secwépemc plants and stories for teaching cultural and ecological lessons, and artwork hanging between the tables depicted five culturally significant Secwépemc plants and their *Secwepemctsín* names made by local youth (School District 83 and the Neskonlith Education Center). I supported with coordination and sourcing funding from BC Healthy Communities to support harvester honorariums for Secwépemc Knowledge Holders and youth harvesting for the feast.



Figure 6 Louis Thomas and guests at the Salmon Arm Arts Centre Secwépmc Feast, eating salmon, bannock, wild rice, morel mushrooms, and *scwicw* roots prepared by Secwépmc chefs Martina Thomas and Lorna Thomas. Photo by Kristal Burgess, used with permission.



Figure 7 Kenthen Thomas performing *stsptékwle* at the Salmon Arm Arts Centre Secwépmc Feast in July 2019. Photo by Kristal Burgess, used with permission.



Figure 8 Secwépmc traditional medicine maker Crystal Morris teaches about the medicinal teas prepared for the Secwépmc Feast in July 2019. In the background hangs youth artwork featuring five Secwépmc plants and their *Secwepemctsin* names. Photo by Kristal Burgess, used with permission.

- *Yecwemínte re Tmicw: Secwépmc Plants Stewardship Plan*

On direction of Councillor Louis Thomas, I collaborated with Switzmalph and Interior Health to source funding from BC Healthy Communities to support the coordination of a community workshop to inform the creation of the Secwépmc Plants Stewardship Plan, as well as to support a community researcher position. We facilitated a workshop in January 2020 in Switzmalph to receive guidance from community members for the plan, and co-created an adaptive management framework based on the guiding cultural concepts (*knucwetwécw* and *yecwemenułécwu*) and contexts for teaching and

learning (*stsptékwle*, *slexexé'ye*, and *tmicw*-based learning) presented in this thesis.

- *Secwépemc Plant Knowledge Cards*

I secured funding from the Stephens Family Research Award and the Shuswap Community Foundation to support the facilitation of two workshops with Kenthen Thomas, Elders and Knowledge Holders from Switzmalph, and their family members from Splantsín, to design the Secwépemc Plant Knowledge Cards (NIB 2019). The Secwépemc Plant Knowledge cards (NIB 2019) are a language and land-based learning tool designed to bring together Secwépemc and Western ways of knowing to inform learning about culturally significant plants and the cultural landscapes they are situated within. The cards focus on how to propagate and cultivate 41 species of culturally important plants. They assemble previously published plant propagation protocols and Secwépemc knowledge in a waterproof format that can be taken into land-based settings, and encourage learning further from Knowledge Holders in these contexts. The cards are a tool to complement land-based education processes led by Knowledge Holders, understanding that living processes of knowledge generation happen in land-based settings guided by Knowledge Holders.

They also include plant names in eastern and western dialects of *Secwepemctsin*, as well as QR codes²⁰³ so language learners can hear language speakers pronouncing the 41 plant species in the Eastern *Secwepemctsin* dialect (translations by Chief Atahm language teacher and Elder Lucy William). They are a tool for Secwépemc language learners and youth in land-based education settings, as well as for youth in School Districts 73 and 83 to learn about the importance of restoring culturally significant plants and the ecosystems they grow in:

These cards will be good knowledge for future use ... these kids will know where the berries and stuff like that were at one time ... what I say about our reserve

²⁰³ QR codes for the Secwépemc Plant Knowledge Cards are hosted online by the BC Parks Foundation. Some of these QR codes were created by Ivy Chelsea's *Secwepemctsin* class at Chase Secondary School for the Tsútswecw Story Trail project in Scotch Creek, B.C. (see Dickson 2019), and were included with permission.

here, what used to be here, it's all gone because of all the cultivating that went on through here, and haying, and I know there was a lot of gardens put through here that was trying to help all the people to do something that was good, eh? But we lost all our berries and a few other plants, a lot of our wild plants are all gone now, because of that. But if it will be all put on cards, in a few years, who knows, maybe it will all grow back again ... it will be good for the kids to know about it ... It's educational. (Jane Thomas 19 January 2019)



Figure 9 Secwépemc Plant Knowledge Cards, showing *skwekwíne* (Spring Beauty, *Claytonia lanceolata*) (NIB 2019).

Valuing Indigenous Knowledges also includes compensating Knowledge Holders in respectful and culturally appropriate ways for their work and expertise. The full-day workshops opened with a prayer and by gifting tobacco, a catered lunch, and an honorarium for each of the Knowledge Holders who participated. The Knowledge Holders group guided us in what types of stories and information they wanted to have in the cards, and knowledge sharing protocols. As I was working under the Neskonlith Education Center and the Neskonlith Band for the Secwépemc Plant Knowledge Cards

project, I worked under their guidance for protocol and copyright for the cards. The copyright statement below for the Secwépemc Plant Knowledge Cards acknowledges the collective copyright of Secwépemc cultural knowledge as belonging to the seventeen communities of the Secwépemc Nation:

The copyright for this deck of Secwépemc Plant Knowledge Cards lies with the Neskonlith Indian Band. The template for this project was adapted from the Ocean Networks Canada and Uu-a-thluk *Ocean Knowledge Cards*.²⁰⁴

We acknowledge with respect that the ownership of Secwépemc cultural knowledge, oral histories, and any intellectual property rights arising from these are claimed collectively by the seventeen Secwépemc communities of the Secwépemc Nation. We acknowledge oral histories and other cultural knowledge from other Nations in these cards represents the intellectual property of those respective Nations. (Neskonlith Indian Band 2019)

I reviewed intellectual property statements from a Secwépemc Nation Tribal Council publication, as well as a recent publication by Kukpi7 Ronald Ignace and Dr. Marianne Ignace from Skeetchestn Band²⁰⁵, as models for the Secwépemc Plant Knowledge Cards copyright and intellectual property statements. These statements were reviewed and approved by my community supervisors and the Executive Director at Neskonlith Band, and were informed by consultations with Ocean Networks Canada (template developer and licensor) and the University of Victoria Copyright Office. Additionally, the copyright attribution was part of participant consent forms, and was reviewed and approved in the 2-day workshop with Elders and Knowledge Holders.

It is important to note that while knowledge transfer tools such as the Secwépemc plant knowledge cards, books, and theses, can be designed and built with good intent, they can bring additional risks including the interpretation of cultural knowledges by non-Secwépemc people, separate from the relational pedagogical frameworks they are

²⁰⁴ The template and design was adapted, with permission and through a Copyright License, from Ocean Network Canada and Uu-a-thluk's Ocean Knowledge cards (Uu-a-thluk n.d.).

²⁰⁵ See copyright statements in Ignace et al. (2016) and Ignace and Ignace (2017).

grounded in, and from the Secwépemc communities who continue to be responsible for them. The Secwépemc Plant Knowledge Cards were designed specifically as a tool for land-based learning settings to facilitate language learning and knowledge sharing with Secwépemc Knowledge Holders, not to replace the role of Secwépemc Knowledge Holders as teachers in these contexts. The cards make reference several times to connecting with Secwépemc Knowledge Holders for further guidance on certain topics.

Tmicw-based learning

You see and hear things by being in a forest, on a river, or at an ocean coastline; you gain real experiential knowledge that you cannot see by looking at the beings that live in those environments under a microscope or in a laboratory experiment (Deloria & Wildcat, 2001, p. 36 in Tuck and McKenzie 2015, 101)

Everything has a story to tell. Even the water, they have a story to tell. You know, when you talk to the water, they say, oh we're on the way down to the ocean. When I come back I'll tell you all the things I've seen and done on my way down, my journey to the ocean. I'm coming back to tell you that. So when they come back as rain, they come back and tell you that story. You know, it's like a lesson. (Louis Thomas 30 August 2018)

Land-based learning was described by many Knowledge Holders as the context for experiential learning, exercising rights and cultural responsibilities, and educating settlers and non-Secwépemc people about Secwépemc presence and ways of knowing about land. Land-based learning was also a tangible part of my own experiential learning process, where I learned about the interrelatedness between Secwépemc cultural histories, ways of knowing, and land.

In September 2019 I went for a drive with one of my teachers, Duane Manuel, to where he and Louis Thomas were experimenting with propagating wapato (*Sagittaria latifolia*). As we drove, Duane explained the importance of the active process of harvesting and being on the land for monitoring the landscape and for generating relationships with land, and with Elders through learning on the land together. I learned that land-based activities contributed to social-ecological monitoring by noticing changes,

for example from new roads, forestry, climate, animal paths, ripening and patterns in plant growth. Duane described a method of seeing the landscape that is not isolated to specific “sites”, but connected to a moving and living cultural landscape embedded in layers of relationship. He also described the landscape in a **holistic** way, in which the active process of being on the land is part of spirituality, health and well-being, monitoring and observation, connection to ancestors and identity, and a way of life.

What Duane also pushed me to do was understand that land does not exist as an abstract concept in a thesis or paper, and that the work we were doing was not confined to a timeline within this thesis project. Land is tangible, embodied, and a mnemonic device shaped by generations of concrete experiences and interactions with place, and this is not just a project (that starts, and ends), but is an aminate, tangible, and relational part of Secwépemc lives (Fieldnotes, September 2019). I learned that knowledge, language and laws are intrinsically co-generated through generations of experiential learning between Secwépemc people, place, and nonhuman beings who share the land. This iterative process of knowledge generation began long before this project, and these processes continue to inform the future. I learned that land-based learning can also be an act of remembering that restores connection, renews relationship, and informs futurities. Importantly, this drive was part of building relationship, learning about the ancestors of this land and how they remain active parts of Secwépemc lives today, and being an active participant and learner with my own understandings. This process has been a critical education of place for me, in which my teachers were Elders, Knowledge Holders, community members, friends, and youth. One of my key teachers was also the land, and the guidance I received from community members to understand the land in a different, tangible, and generative way.

The process of being on the land also connects to memories of ancestors embedded in the landscape. For example, several Knowledge Holders described while harvesting on the *tmicw* that they had memories return to them of knowledge shared with them by family members or ancestors, and the time they spent together in certain areas. Ancestors were also frequently mentioned in connection with cultural and plant-based

restoration work and community gatherings. In one land-based workshop when we were around a culturally significant plant, a younger community member also remembered what they had learned from their grandmother about this plant, and stepped in to share their knowledge with youth who were there.

Land is a mnemonic device that situates networks of values, memories, language, and knowledges in place. Knowledge Holders spoke about the intangible feeling they had from being on the land, and spoke about beautiful parts of their territory and the spiritual and healing nature of being on the land or in the mountains. I understand this **reverence** is embedded in sense of place for many of the Knowledge Holders we spoke with. Thinking about **reverence** taught me to **respect**, as a cultural outsider, the multiple layers of relationship that are engaged when Knowledge Holders opened workshops with prayer or story. **Reverence** for spirituality through this work helped me to understand the significance of prayer and ancestors, and their interrelatedness with way of life. I understood **reverence** as a reminder of the layered ways people are entangled with place, and the ways this shapes interactions with land, and the enactment of cultural values, roles, and responsibilities such as respect and reciprocity to maintain good relations.

For example, in land-based workshops and the Secwépemc feast at the Salmon Arm Art Gallery, an Elder opened the workshop with a prayer, which set a foundation of respect for orality, intention to work with each other in a good way, respecting the role of *Tqeltkúkwi7* (Creator) and spirituality in guiding the work²⁰⁶, and making a spirit plate before a feast also demonstrated **reverence** towards the presence of ancestors. Though tobacco offerings were not practiced by all Knowledge Holders, I understand that for some, leaving tobacco before harvesting was also part of **reverence** towards the land and nonhuman relatives, as well as reinforcing a process of consent based harvesting and reciprocity through prayer and asking permission from the plant. In this respect, a reverence towards land and other beings who share the land acknowledges both as more

²⁰⁶ Archibald (2008, 48).

than inanimate objects, but as part of a sentient landscape (Ignace and Ignace 2020). As Archibald (2008, 42) describes, reverence towards “all relations” is also part of positioning people in a network of relationships and responsibilities. I understand reverence as including a deep respect towards beings who share the land, specifically thinking of Knowledge Holders descriptions of the process of working with a good heart and mind through the harvesting stages, processing stages, and gifting stages. I believe this process reinforces networks of relationship and values for caring and maintaining lands and responsibilities to beings who share the land in sustainable and reciprocal ways.

I learned that my **responsibility** in *micw*-based learning contexts is to ask Elders and Knowledge Holders for direction throughout the research process to ensure that I am following protocols, and to listen to community voices to ensure projects remain community based. Community involvement and **respecting** the role of Knowledge Holders as teachers, is vital for ensuring frameworks for teaching and learning in land-based settings are culturally safe, culturally relevant, and transmitting knowledges within community relationships, agendas, priorities, and within community pedagogies. Participatory research incorporating action-oriented *micw*-based learning components was a part of demonstrating **respect** for the role of land-based learning in relevant and community-based ways. I worked to demonstrate **reciprocity** through the following examples demonstrating land-based learning as part of this thesis:

- *Knucwetwécw* Community Garden

I secured funding for building an ethnobotanical garden and mural with the youth summer program in Switzmalph. The idea for the ethnobotanical garden stemmed from Kenthen’s work as an educator, as well as from the ideas of Elders in the Switzmalph community who wanted to create an accessible space to continue experimenting with culturally important plants, and engage youth and Knowledge Holders to share knowledge in the process. Kenthen and myself built raised beds for an ethnobotanical community garden (as well as personal raised garden beds for Elders), and we transplanted or propagated culturally significant plants over a period of 2 growing

seasons. I also secured funding to support Knowledge Holders coming to the ethnobotanical garden to teach youth about the plants and how to grow them as part of a series of 5 workshops in collaboration with Kenthen Thomas and Erica Seymour (Neskonlith Youth Program Worker).



Figure 10 Quintessa, Silas, and Logan Christian. Photo by Kristal Burgess (2019), used with permission.



Figure 11 *skwekwine* growing in the *Knucwetwécw* community garden. Photo by Libby Chisholm (2019).



Figure 12 Switzmalph Elders Jane Kolodychuk, Lloyd Charlie, and Delores Purdaby planting native plants in the Switzmalph *Knucwetwécw* garden. Photo by Libby Chisholm (2019).



Figure 13 Youth from the Switzmalph summer youth program, led by Erica Seymour, planting *scwicw* roots. Photo by Erica Seymour (2018).

- *Tmicw*-based workshop

I secured funding from the BC Healthy Communities Plan H grant to facilitate a *tmicw*-Based Workshop in Skunk Hollow, in partnership with Knowledge Holders from Neskonlith as well as their family members from Splatsín. This was an opportunity to learn from Knowledge Holders about harvesting protocols and plant identification for *skwekwíne* and *scwicw*, harvest *scwicw* for families to take home, as well as for the Secwépemc feast at the Salmon Arm Arts Centre, and to record audio for the Secwépemc Plant Knowledge Cards.



Figure 14 Switzmalph Elder Louis Thomas teaches his daughter Christina Thomas and nephew Logan Christian to harvest *scwicw* in Skunk Hollow. Photo by Kristal Burgess (2019), used with permission.



Figure 15 Switzmalph youth Quintessa Christian harvests *scwiew* using a *p tse* (digging stick) made by Duane Manuel. Photo by Kristal Burgess (2019), used with permission.



Figure 16 Louis Thomas speaking before the tmicw-based workshop harvesting *scwiew* and *skwekw ine*. Photo by Kristal Burgess (2019), used with permission.



Figure 17 *scwiew* roots harvested by Delores Purdaby. Photo by Kristal Burgess (2019), used with permission.



Figure 18 Ethel Thomas and Jane Thomas. Photo by Kristal Burgess (2019), used with permission.



Figure 19 Erica Seymour, Logan Christian, Quintessa Christian, and Silas Christian. Photo by Kristal Burgess (2019), used with permission.

I learned that *tmicw* is a motivating factor that consistently brings people together to reaffirm relationships with plants and with each other. In this respect, I understand relationships with family and community are also deepened through land-based processes. This study was grounded similarly in relationships, where my own relationships were developed or maintained through the processes of land-based learning that were part of this thesis.

Stsptékwle and slexlexéye

Stsptékwle and *slexlexéye* were a foundational part of this research process, and I understand I have many gaps in comprehension and understanding the full nature, scope, and importance of storytelling as a visitor and non-Secwépemc person. *Stsptékwle* were shared with me in interviews to explain wider contexts, values and concepts to me; on land-based drives with Kenthen Thomas and Louis Thomas to orient me in the landscape

and understand their role in teaching lessons that are anchored to land; as well as at the Shuswap Roundtable Working Group meetings by Louis Thomas to reflect on wider contexts and considerations, and to guide planning conversations. Within the Shuswap Roundtable meetings, Louis used *stsptékwle* as a pedagogical tool to direct or remind the participants of a wider context or value, for example the recognition of the agency of caribou and non-human animals in planning discussions and contexts. This brought an important consideration to recognizing kincentricity and the agency of *xwexwéyt ren kwséseltkten* (“All relations”) in wildlife and conservation planning (Bhattacharyya and Slocombe 2017). Nuxnuxskaxa cts717élt [Julianna Alexander] also described how *stsptékwle* teach about the importance of cycles, and that medicine wheel framework balancing mental, emotional, spiritual, and physical aspects can guide learning lessons from *stsptékwle* about how to live in Secwépemcúlecw.

When Kenthen Thomas and I first met and began to work together on this project, he shared a story with me called the Researcher and the Basket Maker. Kenthen said this is an Anishinaabe story, and I reached out to Anishinaabe friends and storytellers to try to find a source of this story, though they were unfamiliar with this particular story. Although I was not able to find the source of this story, I will repeat it here as it was told to me by Kenthen and will continue searching following my dissertation defence. The story was about a researcher who came to visit an Elder often to learn the art of basketmaking. Eventually, when they learned how to make their own basket, they stopped coming to visit. The Elder wondered what had happened to the researcher. At this time, the researcher began teaching basket making at the university and became known as the expert on basket making, without sharing who they had learned from. Many people came to see the researcher to learn the art of basket making, and no one came to visit the Elder.

When Kenthen told me this story, I understood that it was an invitation for me to learn about my ongoing **responsibilities** as an outsider and a researcher working in community. This story, and the context within which it was told, taught me about the importance of ongoing relationships, as well as the importance of **reciprocity**. The story

Kenthen shared became a reminder to me of the shared significance of historical and ongoing impacts of research *on* Indigenous communities, and of my **responsibilities** and positionality in this context.

I didn't initially realize the importance of story as Indigenous theory, until Kenthen Thomas introduced me to this in 2018. *Stsptékwle* were generously shared by Knowledge Holders in informal meetings or interviews as a way of teaching and theorizing across time and contexts. Sometimes after telling a story, the Knowledge Holder would ask me what I thought it meant. I responded based on my own understanding, and the Knowledge Keeper said, yes, it could. But it could also mean this. These moments were important for being guided in this iterative context to understand the meaning of the stories and the teaching the Knowledge Holder wanted me to understand in sharing it with me. They were also important for showing my role as a learner, and the role of the Knowledge Holder as a teacher guiding me in understanding their intended meaning in that context, knowing that I arrived without this culturally specific understanding and competency. Friedland et al. (2018) describe how the multiple layers of stories enables them to meaningfully adapt to, validate, and address “the complexities of real life situations and problems, provide insights, and outline multiple possibilities for principled and effective courses of action” in a variety of contexts, as well as within the experiences and lives of the individual (Friedland et al. 2018). As Archibald (2008, 32, 33) describes, it is important to think

critically about one's own historical, cultural, and current context in relation to the story being told... Gerald Vizenor also believes that the story listener must become a participant who is actively engaged with the story: “The story doesn't work without a participant ... there has to be a participant and someone has to listen. I don't mean listening in the passive sense. You can even listen by contradiction ... So that's really critical in storytelling.” (1987, 300-1). ***Synergistic interaction between storyteller, listener, and story is another critical storywork principle.*** [emphasis added]

Knowledge Holders communicated the role of *stsptékwle* as contexts for teaching and learning cultural concepts, and taught me the importance of **respecting** oral and

active forms of teaching. I understood I was also an active part of the process as a listener, because of my own personal interpretations and experiences with understanding story. For example, Lindsay Borrows (2018, x) writes about story in an Anishinaabeg context as a participatory action that engages both the storyteller and listener as participants. As she describes,

You are an agent with the storyteller as you create your own understanding of his story... [however] instead of seeing this previously unimagined story as a call or opportunity to learn, listeners frequently choose to ignore, reject, silence, or manipulate Indigenous stories. The unwillingness of individuals to listen and learn can result in disconnection and understanding.

Storytellers have agency in the ways in which they can tell stories in certain contexts and with certain audiences to elicit lessons and calls to learn. Borrows (2018, xi) discusses the learning opportunities elicited by stories in personal and profound ways when taken seriously and respected, as well as the danger of manipulation of Indigenous stories by outsiders when interpreted from outside that community or Indigenous nation (Kovach 2009, 142). Furthermore, Borrows (2018, xi) describes the Anishinaabe word for truth, *debwe*, as representative of our personal “truth in so far as we can know it”:

...you may wonder what the revitalization of Indigenous languages has to do with revitalizing Indigenous laws... language is the means through which we express law. For example, in Anishinaabemowin, the word for truth is *debwe*. It does not refer to absolute truth but to “truth in so far as we can know it.”

Considering positionality related to story participation and interpretation, I understand Borrows’ (2018, x) description of *debwe* is important for highlighting, in an Anishinaabe context, how interpretations gained from story are always in relation to our own epistemological lens and positionality, an especially important consideration and reminder as an outsider. While story can create opportunity for engaging cross-cultural learning, many stories throughout a history of anthropology have also been recorded and misinterpreted outside of the cultural knowledge systems they are grounded in, causing damage (Kovach 2010, 97). As Kovach (2009, 97) describes,

... the use of story as method without an understanding of cultural epistemology, defined broadly, can create problems with understanding the totality of Indigenous narrative. Cultural specificity of Indigenous story is manifest in teaching and personal narratives and can have profound implications for the interpretation of story within research.

Kovach (2009, 142) highlights the many ethical considerations of interpreting stories from a perspective from outside that community or nation:

In tandem with taking tribal stories without collective permission, it also raises an ethical question about interpreting Haida myths from a non-Haida perspective... A neo-liberal standpoint suggests ethical misconduct is a predicament of researchers having a lack of cultural knowledge but good intentions, while a critical analysis points to a power dynamic sustained by societal and institutional structures that allow the privileged to take, take, and take. Seen from a decolonizing lens, ethical infringement through research is an extension of the Indigenous-settler colonial project. Much has to do with divergent beliefs around ownership of knowledge stemming from collectivist and individualist orientations that hold deep philosophical assumptions about how a society should work.

Kovach (2009, 142) raises this important ethical issue around the appropriation and misinterpretation of story by outsiders, outside of community contexts and separate from cultural Knowledge Holders who have agency and can guide interpretation in storytelling. For example, analysis and interpretation of story by outsiders can sometimes be framed as representative of Indigenous philosophies and worldviews, rather than their own subjective process of learning. Power dynamics in representation play a key role here, where outsiders can misrepresent personal interpretations of story as collective Indigenous worldviews, in a manipulative, dangerous, and disconnected way. In some Indigenous communities there can also be cultural roles and responsibilities regarding who can listen to or tell certain stories, and cultural protocols regarding the time of year, season, or context in which they are told. Storytellers have agency to decide how stories are shared with particular contexts and audiences, and there are ethical concerns with removing story from the communities and cultural contexts that give them life. As the First Peoples Principles of Learning describes,

Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place)... Learning involves generational roles and responsibilities... learning is embedded in memory, history, and story... [and] Learning involves recognizing that some knowledge is sacred and only shared with permission and/or in certain situations. (FNESC 2015)

Kovach (2009, 142) also raises additional ethical considerations regarding Indigenous rights related to collective and intangible cultural heritage, including permissions regarding use and publishing and representation of stories. For example, there are a number of cases of unauthorized copying and commodification of intangible cultural heritage by outsiders for economic gain (Nicholas et al. 2009, 265). As Nicholas et al. (2009, 265) describe, there are many instances in which communities have not equitably experienced benefits, or at all, from research projects that either engage them or rely on their knowledge. Furthermore, many communities have lost cultural items and ancestors to museums, or lost access completely to cultural landscapes or research and data collected by researchers (Nicholas et al. 2009, 265-266). Indigenous communities also experience disproportionate risk from appropriation and commodification of their cultural and intellectual property, with “bioprospecting” Indigenous plant knowledge for new medicinal drugs as one well-known example (Bannister and Solomon 2009, 144; Nicholas et al. 2009, 263, 267).

Although in recent years there has been increasing research and mobilization of legal mechanisms for protecting Indigenous cultural heritage rights²⁰⁷, this remains an area where further legal and ethical application is needed. As Nicholas et al. (2009, 266) describe, the increase in the development and use of legal agreements and research protocols by Indigenous communities that include data ownership and copyright as a result is not surprising. However, as they describe,

... in the absence of a formal legal mechanism enforceable in Western law, such as a contract, most intellectual property regimes tend to protect the rights of the

²⁰⁷ See IPinCH (2016); Nicholas (2019); Nicholas et al. (2009); Nicholas and Smith (2020).

researcher and scientific community, rationalizing that such an arrangement is necessary to encourage productivity and promote the advancement of knowledge.

Nicholas et al. (2009, 266) highlight current gaps in Canadian federal legal frameworks for protecting Indigenous rights and responsibilities to their intangible cultural heritage. For example, intellectual property law protections are limited to tangible expressions (e.g., written, recorded)²⁰⁸, and not the intangible aspects of cultural heritage that are connected to them (e.g., oral histories, songs and stories not in written or audio recorded formats that may be connected to tangible forms of cultural heritage) (Nicholas et al. 2009, 264). Furthermore, intellectual property mechanisms are designed for individual creators and are grounded in Euro-Western ownership frameworks and worldviews which may not be “easily adapted to protecting collectively owned [Traditional Knowledge] or [Traditional Cultural Expressions] of significance to communities” (Government of Canada 2020).

Additional ethical concerns arise with fixing intangible cultural heritage in tangible forms that can have the potential to reify them as separate from their active, participatory, and living processes. This can include the misinterpretation, manipulation, or misunderstanding of cultural stories by outsiders, along with potential harms such as facilitating the disconnection of associated rights, roles, and responsibilities. These illustrate some of the potential gaps that arise with Canadian intellectual property law as it relates some forms of Indigenous knowledge, and the unsuitability of intellectual property frameworks particularly for sacred cultural knowledge (Government of Canada 2020). Colonial legal ownership frameworks do not adequately express the relational aspects of intangible cultural heritage that can be connected to plants, food systems, and

²⁰⁸ In Canada, several Indigenous communities have leveraged federal intellectual property law to protect Indigenous cultural heritage and cultural expressions, for example the Snuneymuxw petroglyphs case using “official marks” under the *Trademark Act* to protect their petroglyphs from being copied and reproduced (see Nicholas et al. 2009, 285); as well as certification marks, registered trademarks, and authenticity labels for cultural symbols and names to Indigenous food products and enterprises (Government of Canada 2020). Protections under the *Copyright Act* have also been used by individual Indigenous artists and performers for artistic creations (Government of Canada 2020).

place, and the ways in which they inform Indigenous identities, legal systems, and futurities.

Concerns about intellectual property, commodification of cultural heritage and knowledges, and frameworks for protecting Secwépemc knowledges for future generations were also raised by Knowledge Holders in this study. This included calls for ensuring that tools developed and informed by Secwépemc knowledges are used in culturally appropriate and respectful ways to rebuild knowledge within Secwépemc communities. While some Knowledge Holders spoke about the importance of sharing some cultural knowledges with non-Secwépemc people to encourage a common value and care for Secwépemc plants and ecosystems and perhaps to encourage other values that would emerge from this, such as the spread of wisdom of land based teachings more broadly, other Knowledge Holders cautioned the importance of rebuilding these knowledges within community first. This included discussions of how cultural restoration is a community-led and community-engaged process, where one of the most important aspects was sharing knowledge with Secwépemc youth, and with Secwépemc people being in control of which knowledges are shared, in what ways they are shared, which audiences they are shared with. Though from an Anishinaabe context, Kathleen Absolon (2011, 160, 161) writes about this similarly:

The cultural context for sacred knowledge production is worth noting. *Our teaching lodges and sacred medicine lodges belong in the community for our people and children and they are protected from the academy. We must be careful what sacred knowledge methods we bring into the academy. We have to be very careful about what we say or write about. There are sacred pathways that can't be scrutinized by the academy... Some need to remain in their context because that's where their beauty and power comes from... To extract them would be to disempower and dismember them... I believe we need to receive guidance from Elders and sacred knowledge keepers regarding the inclusion of such knowledge in academic text. Knowledge extraction and appropriation are also prickly issues. For decades non-Indigenous people have done research on and about Indigenous peoples. Today, we encourage collaboration, partnerships and protocol agreements between Indigenous and non-Indigenous re-searchers. [emphasis added]*

Absolon (2011) raises a number of important considerations, including power dynamics that are part of interpretive processes, and ultimately the importance of Indigenous communities being in control of knowledge sharing and interpretive processes involving their cultural knowledges. She highlights how some cultural knowledges do not belong in the academy, and ultimately these are protocols that would need to be directed and guided locally by Indigenous communities and Knowledge Holders in each context.

A common thread from conversations with Knowledge Holders in this study involved concerns about cultural knowledge appropriation and commodification, and the unique cultural responsibilities and role of Secwépemc people as caretakers of their lands and knowledges. This deeper discussion about cultural responsibilities raised by Knowledge Holders also echoes concerns discussed in relation to the lack of adequate legal and institutional protections for Indigenous rights and responsibilities to their cultural heritage. This is a concern I reflected on, and sought direction from Knowledge Holders on, throughout my thesis. Knowledge Holders supported with distinguishing which knowledges were appropriate for sharing in certain contexts, and which knowledges were to remain for community audiences, which is why this thesis is silent on certain matters and forecloses sharing certain cultural knowledges. As mentioned in Chapter 4 the purpose of this thesis was not to share cultural knowledges, but to focus on my own process of learning about community engaged research, the responsibility and reciprocity that is connected with this, and the significance of concepts and values in guiding food systems restoration and land-based education.

Several Knowledge Holders also described cultural knowledges, or intangible cultural heritage as something that is not owned, but borrowed from the *Tellqelmúcw* (people to come). Many Knowledge Holders also talked about having a duty or responsibility as keepers and sharers of cultural knowledge, with sharing as a foundational value for maintaining language, knowledge, identity, values, and social and ecological relationships for future generations. As discussed in Chapter 5, sharing is one value that is thrown into tension by unwanted colonial contexts and experiences, that sometimes carry with them different value structures that negate relationality and

responsibility in sharing, and can be driven instead by more capitalist economic structures or entitlement to all knowledge. For example, commercialization and overharvesting of culturally significant plants and other foods are two examples of concerns from Knowledge Holders in this study which throw cultural values such as sharing into tension.

Increasing calls from Indigenous people not only for more meaningful research in alignment with Indigenous worldviews (Peltier 2018, 1), but increased protection in terms of legal and ethical dimensions related to Indigenous intellectual property and cultural heritage rights²⁰⁹. There is a movement towards the revitalization of cultural knowledges after decades of colonial policies that separated people from languages, ways of knowing, identities, and communities (Christian 2017). In this time of resurgence and restoration, technology²¹⁰ and theatre are two of a variety of communication methods used both by Secwépemc storytellers and artists, as well as in collaboration with non-Indigenous theatre groups and organizations, to teach *Secwepemctsin*, *stsptékwle*, and *slexléy'e*. As Christian (2017, 164-166) describes, while technology can be a powerful tool for teaching youth about language, culture, and the intangible relationships that connect Indigenous communities with land, further work is needed so that knowledge transfer tools can be developed in ways that cultural knowledges can be protected for Indigenous youth, communities, and future generations. This includes the development of “clear and concise procedures ... so that the grey area of intellectual property rights of each nation is protected for future generations, without losing the benefits of technology”

²⁰⁹ As discussed previously, the legislation of the *Declaration on the Rights of Indigenous Peoples Act* (2019) by the Province of British Columbia includes the implementation of the principles of Free, Prior, and Informed Consent [FPIC]. Included in the *United Nations Declaration on the Rights of Indigenous Peoples* (2007) is Article 31, section 1, which refers to "the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions". Though it remains to be seen how FPIC and Article 31, section 1 from *UNDRIP* (2007) will be interpreted and applied, it is possible these may be mechanisms that can be mobilized to support Indigenous frameworks for protecting Indigenous intellectual property and cultural heritage rights.

²¹⁰ Christian (2017, 166) references Secwépemc language apps, see also collaborations with non-Indigenous organizations, such as through the Salmon Arm Arts Centre (2018) *Slxlxaya Story Box* (Splatsín dialect).

(Christian 2017, 164-166).

British Columbia's legislation of the *Declaration on the Rights of Indigenous Peoples Act* (2019), and federal legislation of Bill C-15, *An Act respecting the United Nations Declaration on the Rights of Indigenous Peoples* (2020) bears special consideration for recognition of Indigenous intellectual property rights and cultural heritage rights in international law, and the potential for future change in provincial and federal law:

“Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports and traditional games and visual and performing arts. They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions;
And, Article 31, section 2, in conjunction with Indigenous peoples, States shall take effective measures to recognize and protect the exercise of these rights”
(Nixon 2020, 17).

Importantly, this also brings to light the question of how Indigenous legal orders conceptualize, protect, control, and define intellectual property, rights, and responsibilities to cultural and biocultural heritage. Furthermore, they pose additional questions in terms of, where there is a responsibility and duty to share knowledge with younger generations, who has the decision-making authority regarding parameters for sharing and use of cultural heritage? Revitalization of Indigenous legal systems²¹¹ and laws could give meaningful direction regarding Indigenous intellectual property rights and cultural heritage rights.

Engaging with stories centralizes the importance of relationship, discussion, and trust (Wilson 2008), as well as respecting Indigenous frameworks and ways of knowing

²¹¹ For example, the Indigenous Law Research Unit at the University of Victoria and Shuswap Nation Tribal Council (2018).

and being. Kenthen Thomas and Ed Jensen both explained protocols as being embedded in, and taught by, *stsptékwle*. My approach to learning protocols in a **respectful** way was to ask guidance from cultural advisors at Switzmalph who supported in instructing me on processes I needed to follow with regards to cultural knowledges and *stsptékwle* and *slexlexé'ye* stories. This includes **respecting** the collective rights and responsibilities of Secwépemc peoples to their cultural knowledges.

Archibald (2008, 44) also describes additional considerations regarding permissions and ethics related to Indigenous cultural knowledges:

Giving and getting permission raises ethical questions of who has authority to give permission and under what circumstances. The researcher given permission has the ethical responsibility to understand the limits of permission and try to prevent his/her/[their] abuse of the knowledge and permission. Sometimes institutional procedures, such as making people sign documents and continually asking them to check the written versions for accuracy, may create an atmosphere of distrust or the impression that the learner/researcher can't get it right.

For the latter, I did find that it depended on the Knowledge Holder as to whether it was respectful to have them review versions of the thesis for accuracy, for example some Knowledge Holders also preferred oral conversations instead of reviewing the text, and some preferred not to review the final version at all and expected me as a learner to get it right. However, the asking itself was important for understanding how relationships, trust, and expectations for engagement were different with each Knowledge Holder and creating space to follow each person's guidance. I followed the guidance of Knowledge Holders involved in this project, as well as Tammy Thomas and Louis Thomas, to understand permissions regarding story. Personal stories are included in this thesis and attributed to Knowledge Holders, and although *stsptékwle* were told orally as part of events organized through this project, they were not written down and published.

I demonstrated **reciprocity**, and this associated **responsibility**, related to *stsptékwle* and *slexlexé'ye* in the following ways:

- *Stsptékwle as part of research process*

Securing funding so that *stsptékwle* could be incorporated throughout the process of this work in meaningful ways (e.g., honorariums for storytellers sharing in youth workshops, at the Secwépemc feast at the Salmon Arm Art Gallery, as well as at community feasts).

- *Secwépemc Plant Knowledge Cards* (NIB 2019)

Collaborated with Secwépemc educator and storyteller Kenthen Thomas on a *stsptékwle* card featuring four previously published *stsptékwle* that are told orally by Kenthen using QR codes.

Interrelatedness

This research process taught me about the interrelated nature of how *stsptékwle*, values, language, and relations between human and nonhuman kin are shaped through tangible and active interaction with place. Furthermore, *stsptékwle* are embedded in layers of relationship between story, storyteller, listener, more-than-human beings, and land²¹². I learned that **responsibility** is also embedded in process, through working in an open, respectful and kind way, with an open mind and heart. I think this is important to highlight because this also teaches about the importance of sharing and learning from positive stories of restoration and healing that are grounded in community strengths, processes, and relationships to land and food. This includes countering damage-centered narratives with community-led stories of restoration and healing that are grounded in community strengths, processes, and ways of knowing, while situating stories in critical contexts.

I also learned that ancestors are always present and guiding the way movements are practiced, generated, and lived now. For example, Elders and ancestors were often

²¹² See Christian (2017, 108, 164) for “layers of relationship” in microcosmic and macrocosmic interrelatedness from *stsptékwle*.

present in conversations about values, teachings, and relationship to land. Louis Thomas expressed to me several times that the work being done was never for personal gain, but to inspire the youth and continue the work of his Elders for the generations to come:

“... it’s all about educating people about who we are as Secwépemc, it isn’t about me. It’s about our people, we’re talking about ... I don’t do it for glory for myself, I do it because it needs to be done, and to give you an example, one time I and mom were going to Kelowna to – she was getting an award from over there, and we were driving along and she said, “You know what Louis, I’m getting tired of these awards, they’re starting to mean nothing to me.” And I thought about it, and I said “You know what mom”, I told her, “you’ve got grandchildren and great-grandchildren growing up, you give them something to aim for. You know, it isn’t about you. It’s about what you’re doing.” You know, and I see it really helping a lot of our young people. You know, they miss their grandma, their great-grandma. So she had that influence on them to do things, so, and she said “Well, Louis I never thought about it that way.” See, cause you know, she thought it was all about her. But she didn’t realize the impact it would have through the generations. So you know, that’s why I do it too, because it’s not recognition of myself, but you know, the impact it will have with the rest of our people. That’s what it’s about. It isn’t about me, it’s about our people as Secwépemc people.” (Louis Thomas 30 August 2018)

In Switzmalph, many of the people we spoke with were either family, or students, of the late Dr. Mary Thomas. Her work and her memory continue to inspire many of the values and movements of people in Switzmalph today.

Synergy

My understanding of synergy didn’t emerge until the end of this work. As Alannah Young (personal communication, 23 September 2020) reminded me, synergy can be important to reflect on in relation to ethics, and the process of revisiting and revising as contexts change over time. I reflected on this in terms of the synergistic nature of relationship and multiple lines of accountability that were threaded through this work. I also understand synergy as the process of working together, and how the smaller threads and individual stories and experiences of this process come together to support a larger whole or collective story of this project. For example, during the conversational data

analysis process with Kenthen I initially felt nervous to reflect on or speak to the emergent themes from the data as I was deferential and respectful of what Kenthen thought of the analysis as a Secwépemc person, and I didn't want to take up space as a non-Secwépemc researcher. However, I learned that the importance of us processing the data together came from the generative insights that came from exchanging our different perspectives. The recursive process of interviewing, analyzing, and reflecting upon the data we collected and worked with was helpful for doing research in a relational way that also brought important nuance and insight, with my own interpretations shaped by my positionality and education as a non-Secwépemc researcher as well as by insights from our conversations. But in turn, the process itself also came to shape my own understanding of that positionality and was also educational for me. My interpretations of this work are important to highlight my biases, my perspective and how it changed through the process of this study, and to demonstrate my understanding of concepts shared with us as representative *only* of my own understanding, rather than as representative of a Secwépemc understanding. As Jones and Jenkins (2014) describe, centering *difference*, positionality, and intersectional systemic privilege is important for understanding how positionality affects our experiences and then knowledges we privilege, instead of focusing on a *shared* value of a future emancipatory togetherness that marginalizes these complexities.

These conversations also interrogated the differences between both mine and Kenthen's relationships to, and experiences of, place. For example, when I first moved to Secwepemcúlecw it took me time to learn to orient myself in the landscape without relying solely on the very visible settler place names, stories and narratives to land. Kenthen spoke about a different memory and relationship to Secwepemcúlecw that privileges *stsptékwle* as methods of meaning making and understanding cultural roles and responsibilities, and Secwépemc place names as ways of orienting and understanding history and contemporary meaning.

These conversations are generative in the way that they can interrogate the power dynamics of representation where settler-colonial place names and stories are normalized

and narratives are inscribed in the landscape alongside, or on top of, Secwépemc ones. These conversations were also central in guiding me to understand the difference between coming to know *place* (human and settler centered), from coming to know *land* and the interrelated relationships and responsibilities between human and non-human beings that construct it. Story anchored to place gives continual meaning.

Story as connected to place, land, legal systems, theory, and identity is continually given meaning through values of Secwépemc communities today, and any interpretations of cultural stories related to the above are importantly done by those within Secwépemc communities. I know that, being a non-Secwépemc person and an uninvited visitor to this territory very recently, there are many parts of understanding how story is situated in a larger network of Secwépemc belief systems and land that I do not know and will not understand. Furthermore, translations and English language can manipulate culturally grounded understandings of concepts, and stories (Campbell et al. 1992, 9-10 in Archibald 2008, 27). My own interpretations and understandings from the stories shared are not reflective of a Secwépemc understanding, but are reflective of my own self, experiences, and positionality. This synergistic interaction between storyteller, listener, and story was an important part of the conversational data analysis between myself and Kenthen, as well as informal discussions with Knowledge Holders. These discussions often included humour and laughter, which both grounded and built upon our relationships through the process of engaging with story. Both *stsptékwle* and personal stories shared by Knowledge Holders in their interviews were stories that I know are important to treat with deep respect, and stories in which I remained a listener with my own interpretations and meaning.

I felt it was important to include the direct words of Knowledge Holders, with their consent, in this thesis to illustrate the ways in which many of their personal stories came together to create a collective story of this project. This not only situates this project in a much longer living timeline that is informed by ancestors who have passed on through the stories of Knowledge Holders today. It is also important for situating my own process of learning and meaning-making, and how this is entangled in the collective story

of this study. I understand that story brought us together to learn in our own ways, staying grounded in our own positionalities with myself as a non-Secwépemc person and visitor here, but learning in relationship to one another.

A Model for contextualizing process-based learning

The model presented below (*Figure 20*) was designed from teachings shared with me by Secwépemc Knowledge Holders in interviews and informal conversations. This model engages my understanding of the embeddedness of research methodology in a relational context, and uses this metaphor to describe my own process of understanding and engaging with this research. This model was presented at a Community Verification feast in November 2019, and represents my understanding of the larger context within which this project is situated, as well as the various levels of relationship that are embedded in this process.

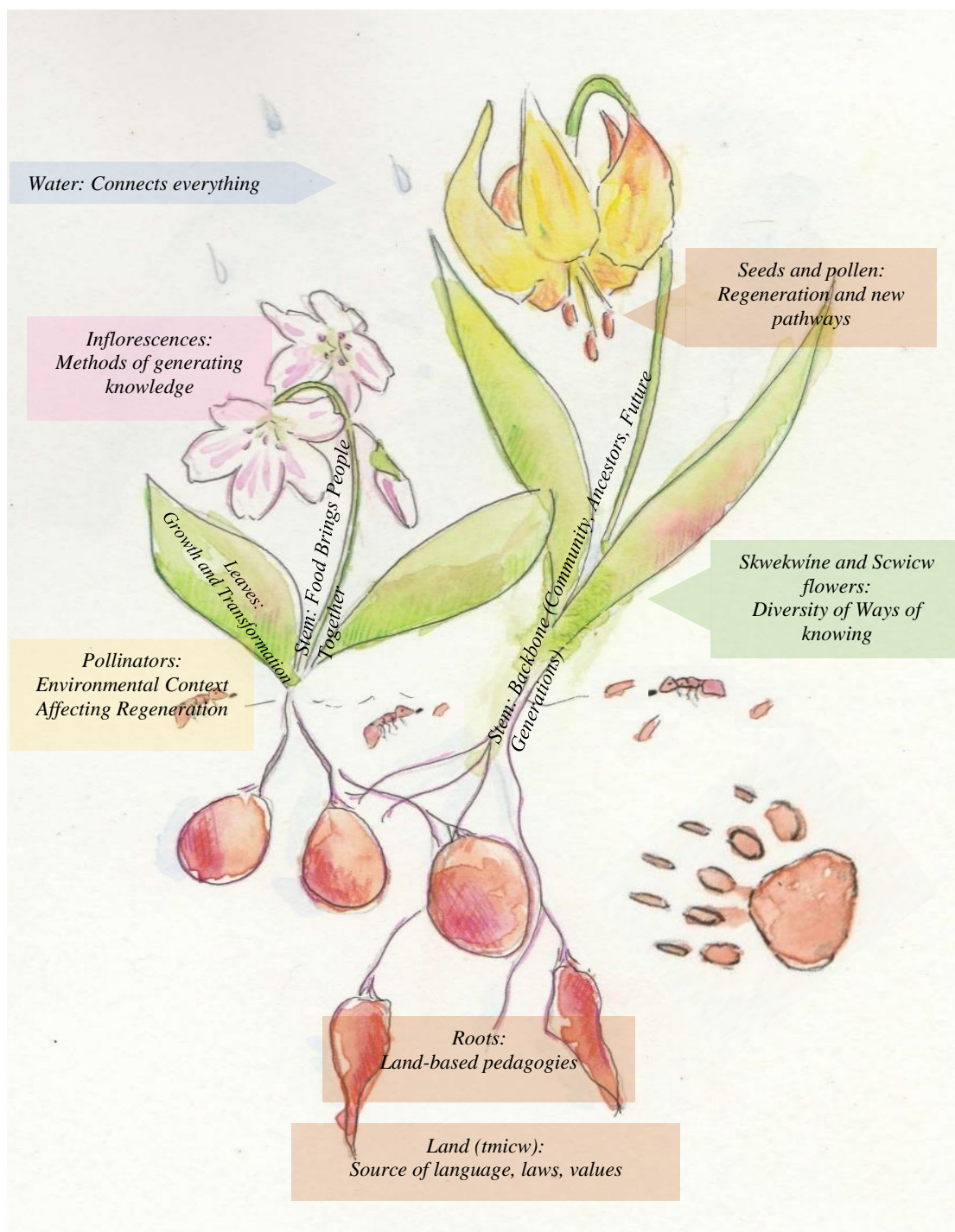


Figure 20 Relational Model with *skwekwine* (Spring Beauty, *Claytonia lanceolata*) and *scwicw* (Avalanche Lily, *Erythronium grandiflorum*)

I chose to focus on *skwekwine* (*Claytonia lanceolata*) and *scwicw* (*Erythronium grandiflorum*) plants in this model because of their importance in guiding this work. They were the first Secwépemc plants I was introduced to when I met Louis Thomas, and he described their importance in Switzmalph as root foods. In this model, they represent the diversity of individual stories and ways of coming to know (epistemologies, ontologies, worldviews, and understandings of place). This illustrates my own lens as an outsider and student in this process.

In Potawatami scholar Robin Wall Kimmerer's (2013) novel *Braiding Sweetgrass*, she describes the three strands of a sweetgrass braid as representing Indigenous knowledges, western scientific knowledge, and individual stories and ways of coming to know. I understand Kimmerer's model as symbolizing the strengths of two ways of knowing, or epistemologies, that remain context-based in their own paradigms and processes but come together to build on knowledge of social-ecological systems. Both knowledge systems yield different methodologies for generating knowledge about land, and Kimmerer's representation of sweetgrass as the fabric of each knowledge system to me signifies both plants and land as the common ground between both, and the material from which knowledge is generated.

This model highlights land (*Secwepemcúlecw*) as the source of knowledge, laws, and values, that is both generatively and iteratively shaped by generations of Secwépemc people. The roots of the model represent Secwépemc land-based pedagogies, and the embeddedness of Secwépemc language, *stsptékwle*, values, and laws in land. For example, Duane Manuel describes the role of plants for Secwépemc people as "anchors" to culture and to land (fieldnotes, 25 February 2020). The growth of the rest of the flower from these roots symbolizes what I understand as the constant connection between Secwépemc food systems restoration and values with land.

Absolon (2011, 50-51) used a flower metaphor as a model for an Anishinaabe methodology, in which she describes the stem of her flower model as the methodological backbone and critiques of colonialism. From this research context in Secwepemcúlecw, and inspired by Absolon's (2011, 50-51) work, I understand this stem backbone to be

community, ancestors, and future generations, and the importance of community-led research, as well as the ways in which food facilitates relationship by bringing people together.

Drawing from Absolon's (2011) work, the leaves in this model represent growth and transformation through the research process, and the role of protocols, roles, and relationships as guides to ethical and meaningful research. Emergent and community-based process²¹³ and relationships teach about the unique roles and responsibilities of outsider researchers in respecting community protocols, processes, knowledges, and contexts in order to contribute to active and transformative research that supports community priorities.

The inflorescences represent the mobilization of Secwépemc land-based knowledges, and the diversity of methods to generate knowledge. This includes generating knowledge through experiential learning, land-based monitoring, land-based education, and research partnerships led by communities and their priorities for food systems restoration. The seeds and pollen in the flowers represent regeneration, and new pathways that grow out of multi-scalar relationships and community-led research.

This model was revised and shaped through individual conversations with Knowledge Holders, and presented at the community verification feast in Switzmalph in November 2019. At this feast and in informal conversations, the absence of water in an earlier draft was highlighted as a gap. Multiple Knowledge Holders described the importance of water (*séwllkwe*) as vital for connecting all living things, shaping ecosystems where the flowers grow, and regenerating life for pollinators and other animals (Rhona Bowe, fieldnotes, October 2019; Nuxnuxskaxa ct's717élt [Julianna Alexander], fieldnotes, August 2019). They also described the danger of missing the larger interconnected network of relationships and social-ecological systems that plants are embedded in by focusing only on plants instead of their interrelationships and

²¹³ See Absolon (2011) Kaandossiwin methodological model

regeneration in social-ecological systems.

Rhona Bowe described the surrounding environment is an important part of the cycle of regeneration, and the life cycle of the plant would be stagnant without it (fieldnotes, October 2019). The pollinators and bear print in the model represent the wider ecosystem the plants are situated within, and their interdependence with each other. This environmental context represented in this model represents the network of relationship the flowers are situated within, just as mutual aid networks and sharing between Indigenous food restoration and food sovereignty movements globally iteratively inform and shape one another.

Similar to generative contexts such as land-based education and community based research, environmental context is necessary not only for critically looking at the situatedness of current systemic landscapes in historical contexts of land tenure and dispossession, but also in the way the researcher and the processes we engage in are influenced by this larger context. As Absolon (2011, 139) describes,

“The environment of a petal flower affects its life. The environment also impacts how searchers and gatherers work... the environmental context is not separate because it affects Indigenous re-search methodologies in the academy”

Similarly, resilience and resistance do not exist in a vacuum, but depend on supportive social, political, economic, and ecological environments. This includes material supports such as access to land, sustainable funding and supportive policy environments for Secwépemc cultural resurgence, the practice of cultural roles and responsibilities to land, and decision-making authority in Secwépemc food systems restoration.

Discussion

Importance of process-oriented research: insight into Indigenous ways of knowing as guides for Indigenous food systems restoration projects

I learned that process-oriented research approaches provide practical lessons for community-engaged researchers by demonstrating how Indigenous ways of knowing can

guide ongoing and embodied applications of ethical frameworks through data gathering, analysis, and dissemination processes. Bannister (2018, 21-22) uses the term “embodied ethics” to refer to the process of building our own internal capacities to become more congruent with the ethical values we promote or adhere to. For example, capacities to process physiological responses to anxiety stemming from internal biases and misconceptions, to practice being fully attentive and receptive to deeper listening and engagement with others. Bannister’s (2018, 21-22) description of embodied ethics calls for a deeper awareness and engagement with reflexivity that leads to deeper learning, and highlights the ways in which our own emotional and physical responses can also be barriers to listening and engaging more deeply with others. This deeper engagement with ethics and reflexivity as praxis can also highlight the importance of acknowledging and responding accountably to the deeper critical contexts our work and selves are positioned within, especially on the part of researchers. It also calls for building our own internal capacities to process internal responses to more fully, respond to challenges with openness and respect, and engage more deeply with transformative and embodied learning. This chapter situates my own process of learning by describing my engagement with storywork principles (Young 2015; Archibald 2008; Peltier 2018), the two cultural concepts taught by Knowledge Holders in relation to food systems restoration and land based education, and the *stsptékwle* and *slexexé’ye* that teach about them in land-based contexts.

Practical examples of how ethics is approached in a continuous and ongoing way are important for learning more about the responsibilities of community-engaged researchers. Highlighting process is important for thinking critically about the methodologies we choose, how they are applied, how to think critically about and learn from our mistakes, and understand the immense amount we as researchers have to learn from the communities we work with about how to engage with cultural knowledges and community members *within* and *on* community terms. This includes describing how protocol, research agreements, and addressing concerns of protecting cultural heritage rights were approached in this study. Process informs the interpretation and presentation

of qualitative data, and focusing on process can be important for understanding how self-location, relationships, and place shape the analysis and outcomes of research.

Taking a process-oriented approach also involves acknowledging the longer process, legacy and context this project fits within. Many of the values shared with me are not new, but are ancestral knowledges that reflect a much larger process of iterative knowledge generation between Secwépemc people and their lands over time. This project is situated in a larger active and ongoing community-led process of knowledge generation and food systems restoration, where the Switzmalph community draws on generations of ancestral knowledge and work to inform future pathways and projects. This thesis offers one snapshot of my interpretations from a specific point of time within this larger context. Furthermore, I understand the development of Indigenous food systems restoration projects and monitoring tools in land-based and experiential learning settings are examples of contemporary meaning-making. This chapter described how Indigenous relationships, ethics, and epistemologies guide the development of *tmicw*-based workshops, the *Eating Our Culture: Secwépemc Feast*, and the *Secwépemc Plant Knowledge Cards* (NIB 2019) as a land-based and language learning tool.

Significance of ancestors

Ancestors were mentioned many times throughout conversations as the source of the knowledge, and the values and teachings from ancestors were described as the source that gives direction for the future and the *Tellqelmúcw* (people to come). As Absolon (2011, 66) describes, “The significance of ancestors cannot be ignored”. I was reminded of this many times in conversations with Knowledge Holders on land-based trips, where memories of ancestors and their actions and relationships to certain places were shared. Ancestral presence in this respect was entangled with my contemporary experience and learning about place as an outsider, and through actions taken by community members to restore culturally significant plants as well (see Thom 2017). I learned that exercising cultural responsibilities and cultivating culturally significant plants is memory work (Mathews 2014), in the sense that ancestors were often referenced and present in guiding

the actions and practice of current generations, and the way Indigenous food systems restoration projects are practiced in contemporary contexts. In this respect, I learned that ancestors affect how people interact with the landscape today, and how Knowledge Holders described their roles and responsibilities to plants and to their territories and communities. In this respect, I understand that ancestors teach about values embedded in the landscape, and affect action for the future. Thom (2017, 144) describes this entanglement in Coast Salish territory by describing the ways through which

... ancestral places reveal ways in which individuals and actors can attend to the nature of relationship and senses of responsibility within these entangled worlds... [and] offer... imaginative possibilities for new relationships based in mutual respect without requiring the diverse elements of the entangled systems to become one.

Thom's (2017, 144) discussion of entanglement also reminds me of Kimmerer's (2013) concept of braiding knowledges, in that entanglement recognizes the coexistence of diverse elements and relationships to place without requiring them to become one. However, this also opens space for critical discussions of where these entanglements are incommensurate through centering actionable measures for change grounded in, and guided by, Indigenous communities and ontological relationships to place, and resisting the ways through which settler-colonialism can work to erase Indigenous relationships to ancestors and place.

These primary values of *yecwemenulecwu*, *knucwetwécw*, *tmicw*-based learning, and *stsptékwle* and *slexlexéy'e* as methods of teaching are not new concepts, but are old ones being expressed in contemporary contexts to build culturally relevant and meaningful futurities. Ancestors were acknowledged by several Knowledge Holders as the source of knowledge and values, and I understand that in this respect ancestors continue to be significant in guiding understandings of roles and responsibilities to land today, and land use planning and restoration for future generations.

Relationship

Process-oriented work highlights the centrality of relationship in research for, with, and by Indigenous communities. Relationships have been the most meaningful and foundational part of this work. Process is tangible and embodied²¹⁴, calling for deeper engagement and responsibility for doing reflexive work that enables us as researchers to engage more respectfully and deeply with relationships and reciprocity. Relational accountability (Wilson 2008) guided my practice of Archibald's (2008) storywork principles in this work, as well as my understanding of the ripples of effect that result from community-engaged research.

Relationships were foundational to my understanding of what was expected of me in terms of reciprocity. The Secwépemc Plant Knowledge Cards, the land-based workshop and Salmon Arm Arts Center Secwépemc Feast, and the youth workshops with Neskonlith's summer youth program were all emergent parts of this research that were only proposed once I had formed some of these relationships and began to get direction from community on priorities and relevant projects. The process of research sheds light on how relationships are formed through the process of working together, and how this guides respectful engagement not only with cultural knowledges but also guides how to form respectful relationships with ecologies and with place.

Importance of place in knowledge generation and cultural landscapes

Critical place inquiry methods shed light on the significance of place for knowledge generation, and the importance of Secwépemc ways of knowing and methods such as *stsptékwle* and experiential land-based learning for generating knowledge about place. For example, *stsptékwle*, language, and place names illustrate a long history of complex horticultural methods used by Secwépemc people to cultivate landscapes in their territory, and the deep interconnected cultural relationships that are also embedded in these landscapes. Secwépemc relationships to land continue drawing from the past to

²¹⁴ See Bannister (2018, 21-22)

inform the future, despite ongoing erasure from policies and legislation responsible for the reserve system, current land tenure landscapes, and rapid social and ecological change. Secwépemc relationships to land resist settler colonial geographies that mark land in a timeline of shifting ownerships²¹⁵ by continuing to acknowledge place as living, people, story, and place are connected in a generative cycle that continues to hold meaning and create relationship and story and life for future generations. Research that respects Indigenous ways of knowing also needs to respect the role of place in providing the context that iteratively shapes, and is shaped by, Indigenous knowledges and communities. In this respect, research can be accountable both to Indigenous communities as well as to ecologies (Tuck and McKenzie 2015b, 635). Indigenous ways of knowing can inform the ways in which we understand and relate to landscapes, for example through moving away from focusing on individual sites, to highlighting movement, process, and interrelated cultural landscapes.

Plants engage people in cultural landscapes

I learned that culturally significant plants such as *scwicw* and *skwekwíne* have the potential to facilitate relationships across multiple scales and networks (e.g., Secwépemc, municipal, provincial and federal governments, regional districts, local and community organizations). Plants are agents that create powerful places, which entangle Secwépemc and non-Indigenous worldviews in the landscape. The multi-scalar relationships formed as a result of these culturally significant plants in Secwepemcúlecw demonstrates their power to entangle relationships at multiple scales to encourage a deeper dialogue around interrelationality between humans and nonhumans in social-ecological landscapes, and positive stories that lead to action and working together. We can't learn about the plants without learning their stories and the contexts and relationships they sit within. Secwépemc ways of knowing about land resist colonial nature/culture binaries by

²¹⁵ See Goeman (2008)

explaining how other relations (plants, animals) factor into social worlds and *stsptékwle* as much as humans are part of ecologies. Culturally significant plants anchor lessons from *stsptékwle* to land, and facilitate relationships and values of *knucwetwécw*, *yecwemenu'ecwu*, and *tmicw*-based learning.

Importance of Indigenous-led research, and land as pedagogy

I learned that research guided by community priorities, in alignment with and respectful of Indigenous ways of knowing, and with active positions for cultural Knowledge Holders, can bring a fuller picture of the relationships and connections between sites in cultural landscapes, how they remain an interactive part of social lives and futures, in ways that can meaningfully benefit communities. This thesis taught me was my own roles and responsibilities in this process to learn critically about historical policy and legislative contexts that continue to impact Secwépemc food systems today, to seek guidance from Knowledge Holders to interpret protocols and understand how to work “in a good and kind way”, and to engage with community in a way that centers community laws, priorities and values and work accountably and respectfully. In addition, I learned about accountability to relationships and the ongoing nature of this that continues well past the submission of this work to my committee and to the University of Victoria library.

Challenges and further research

I believe it would be helpful for institutions to build capacity for mentoring students in understanding ethical research as something that goes beyond the initial research ethics review, and highlights the importance of engaging with and taking seriously community ethical frameworks and our responsibility to follow them as researchers. This includes continuing to build accountable and reciprocal relationships between Indigenous communities and research institutions that support high degrees of community participation and direction for research, engagement and leadership of

Indigenous youth, as well as a recognition that there are cultural knowledges that are also not meant to be in the academy. As a student, I felt like there was a lack of guidance regarding research processes that would support the protection of Indigenous rights and responsibilities to their cultural heritage, and the ethics process doesn't prepare for harder ethical challenges associated with working closely with cultural knowledges. My own process of learning about ethical and intellectual property concerns related to cultural heritage depended on seeking out mentorship in this regard as well as through my own reading. The Indigenous Mentorship Network of the Pacific Northwest was one invaluable resource that supported me in connecting with a mentor to ask some of the deeper questions I had regarding cultural heritage, such as working with cultural stories in research.

Chapter 7: Conclusion

“I think it’s important that the Elder didn’t just tell them the relationship between the mud and the fish, but took them to a place where they could discover that relationship for themselves. That is what relationality and relational accountability are all about.” (Wilson 2008, 118)

With the overarching objective of contributing to ongoing efforts in Neskonlith’s Switzmalph community to restore Secwépemc access to, and knowledge of culturally significant plants, this thesis aimed to create a series of planning and knowledge sharing tools, and investigate the following questions:

1. *How values based frameworks in Switzmalph, and Secwépemc territory more broadly, inform existing land-based education projects as well as guide future transformative pathways for Secwépemc food systems restoration?; and*
2. *In what ways can Indigenous ways of knowing guide the application of ethical frameworks in research processes?*

This chapter synthesizes how each of these questions were answered, and their main findings. My first research question was answered through a series of community interviews with 18 youth and Knowledge Holders from Switzmalph and Secwépemc territory more broadly, land-based workshops, Secwépemc food events, and the creation of an adaptive management framework and strategic plan for Neskonlith grounded in the emergent values from this study. Knowledge Holders described two cultural concepts as guiding current and future pathways towards Secwépemc land-based education initiatives and food systems restoration: *knucwetwécw* (helping one another, cooperating) and *yecwemenulecwu* (role and responsibilities of Secwépemc people as caretakers of land). Furthermore, Knowledge Holders described the role of *slexlexéy’e* and *stsptékwle* (two forms of Secwépemc oral tradition) as methods and contexts for teaching and learning

about cultural concepts, such as the two listed above, in land-based learning settings. I learned that these two cultural concepts, and the role of *stsptékwle* and *slexexé'ye* as methods of teaching about them in land-based contexts, are significant for guiding learning in relationship to land when applied by Secwépemc Knowledge Holders, as well as being significant for the maintenance and revitalization of land-based knowledges and guiding future pathways to Secwépemc food systems restoration in Switzmalph. These cultural concepts and contexts for teaching and learning informed the theoretical framework (Figure 1) presented in Chapter 3 of this thesis, which describes how Secwépemc values can potentially be culturally-grounded indicators for measuring and planning for transformative pathways out of social-ecological traps.

My second research question was answered through describing my own process of engaging with storywork principles (Archibald 2008), an Indigenous ethical and methodological framework with seven principles for working with oral tradition and cultural knowledges in research contexts. These seven principles are respect, responsibility, reciprocity, reverence, holism, interrelatedness, and synergy.

Chapter 6 of this thesis describes my process of engaging with these principles, in conjunction with Secwépemc protocols and values, to collaboratively create land-based learning tools such as the Secwépemc Plant Knowledge cards in partnership with the Neskonlith Education Centre; designing the *knucwetwécw* Melamen Centre community garden in Switzmalph; a series of land-based workshops and Secwépemc foods feast led by Knowledge Holders from the Neskonlith Band's Switzmalph community; and the creation of a relational model in Chapter 6. The experiential learning led by my teachers in Switzmalph, and in Secwépemc territory more broadly, was deeply transformative for me. I learned that process-oriented studies provide important lessons for community-based researchers by describing how Indigenous ways of knowing can guide ongoing and embodied applications of ethical frameworks in collaborative ethnography and critical and Indigenous place inquiry. Process-oriented research also centers the significance of place in knowledge generation by reflecting on the role of place in knowledge generation, and the significance and active presence of ancestors for guiding Secwépemc futurities

and pathways towards food systems restoration.

This study contributes to literature documenting the diverse network of Indigenous cultural resurgence and food sovereignty projects engaged in restoring kincentric and relational aspects of Indigenous food systems on Turtle Island. Relational and culturally-grounded values can inform future land use planning, multi-scalar collaborations, ethno-ecological restoration, and potentially transformative pathways out of social-ecological traps. This study also contributes to literature on process-oriented examples of ethical approaches to research in alignment with Indigenous ways of knowing (Peltier 2018; Archibald 2008). Through foregrounding how the storywork principles guided the methodological approach of this study, and reflecting on the role of local Secwépemc values for guiding culturally meaningful work, this study contributes to understanding relational accountability in the practice of research, both to Secwépemc communities and their non-human relations (plants, animals, lands).

As Whyte (2017) describes, plants have an immense power to motivate social institutions and culture. They also create a space for dialogue about place, understanding the critical and ongoing contexts of dispossession through settler colonialism, the role of Secwépemc plants in situating and contributing to the collective continuance of Secwépemc geographies, and the ways in which conceptualizations of place determine which stories, values, and ways of knowing are centered in transformative theories of change and the futurities that are built from them. Plants are tangible anchors that situate Secwépemc relationship, knowledges, language, and geographies through time, and continue to inform planning and eco-cultural restoration for future generations. These stories shared by Secwépemc Knowledge holders continue to generate layers of interrelationship that anchor Secwépemc communities, geographies, and futurities, to place. In the words of Secwépemc scholar Kathryn Michel (2005), “you can’t kill Coyote”, and *stsptékwle* and *slexlexéy’e* shared by Knowledge Holders in land-based and planning contexts are lessons and reminders, to non-Secwépemc guests or settlers here, of the lessons, values, and legal orders that are embedded in land and community, continuing to teach about transformative change and continuity of Secwépemc roles,

responsibilities, and relationships to land.

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Crystal Morris. Transcript of 29 August 2018. Interview from “Eating Our Culture” Master of Arts Thesis with Libby Jay Chisholm and Kenthen Thomas.

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Ed Jensen. Transcript of 24 January 2019. Interview from “Eating Our Culture” Master of Arts Thesis with Libby Jay Chisholm and Kenthen Thomas.

Jane Thomas. Transcript of 10 September 2018. Interview from “Eating Our Culture” Master of Arts Thesis with Libby Jay Chisholm.

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Logan Christian. Transcript of 30 August 2018. Interview from “Eating Our Culture” Master of Arts Thesis with Libby Jay Chisholm and Kenthen Thomas.

Lorna Thomas. Transcript of 17 August 2018. Interview from “Eating Our Culture” Master of Arts Thesis with Libby Jay Chisholm and Kenthen Thomas.

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Phil McIntyre-Paul. Transcript of 30 January 2019. Interview from “Eating Our Culture” Master of Arts Thesis with Libby Jay Chisholm.

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Quintessa Christian. Transcript of 30 August 2018. Interview from “Eating Our Culture” Master of Arts Thesis with Libby Jay Chisholm and Kenthen Thomas.

Silas Christian. Transcript of 30 August 2018. Interview from “Eating Our Culture” Master of Arts Thesis with Libby Jay Chisholm and Kenthen Thomas.

Knowledge Card Workshop Citations

19 January 2019

Crystal Morris. Transcript of 19 January 2019. Sharing circle from Secwépemc Plant Knowledge Cards workshop at the Neskonlith Melamen Centre for “Eating Our Culture” Master of Arts Thesis with Libby Jay Chisholm and Kenthen Thomas.

Ethel Thomas. Transcript of 19 January 2019. Sharing circle from Secwépemc Plant Knowledge Cards workshop at the Neskonlith Melamen Centre for “Eating Our Culture” Master of Arts Thesis with Libby Jay Chisholm and Kenthen Thomas.

Gerry Thomas. Transcript of 19 January 2019. Sharing circle from Secwépemc Plant Knowledge Cards workshop at the Neskonlith Melamen Centre for “Eating Our Culture” Master of Arts Thesis with Libby Jay Chisholm and Kenthen Thomas.

Jane Thomas. Transcript of 19 January 2019. Sharing circle from Secwépemc Plant Knowledge Cards workshop at the Neskonlith Melamen Centre for “Eating Our Culture” Master of Arts Thesis with Libby Jay Chisholm and Kenthen Thomas.

Nuxnuxskaxa ctś717élt [Julianna Alexander]. Transcript of 19 January 2019. Sharing circle from Secwépemc Plant Knowledge Cards workshop at the Neskonlith Melamen Centre for “Eating Our Culture” Master of Arts Thesis with Libby Jay Chisholm and Kenthen Thomas.

Pat Thomas. Transcript of 19 January 2019. Sharing circle from Secwépemc Plant Knowledge Cards workshop at the Neskonlith Melamen Centre for “Eating Our Culture” Master of Arts Thesis with Libby Jay Chisholm and Kenthen Thomas.

27 April 2019

Delores Purdaby. Transcript of 27 April 2019. Sharing circle from Secwépemc Plant Knowledge Cards workshop at the Neskonlith Melamen Centre for “Eating Our Culture” Master of Arts Thesis with Libby Jay Chisholm and Kenthen Thomas.

Ethel Thomas. Transcript of 27 April 2019. Sharing circle from Secwépemc Plant Knowledge Cards workshop at the Neskonlith Melamen Centre for “Eating Our Culture” Master of Arts Thesis with Libby Jay Chisholm and Kenthen Thomas.

Gerry Thomas. Transcript of 27 April 2019. Sharing circle from Secwépemc Plant Knowledge Cards workshop at the Neskonlith Melamen Centre for “Eating Our Culture” Master of Arts Thesis with Libby Jay Chisholm and Kenthen Thomas.

Nuxnuxskaxa ct's717'elt [Julianna Alexander]. Transcript of 27 April 2019. Sharing circle from Secwépemc Plant Knowledge Cards workshop at the Neskonlith Melamen Centre for "Eating Our Culture" Master of Arts Thesis with Libby Jay Chisholm and Kenthen Thomas.


Appendices

Appendix A: Human Research Ethics Board approval



Office of Research Services | Human Research Ethics Board
 Administrative Services Building Rm B202 PO Box 1700 STN CSC Victoria BC V8W 2Y2 Canada
 T 250-472-4545 | F 250-721-8960 | uvic.ca/research | ethics@uvic.ca

Certificate of Approval

PRINCIPAL INVESTIGATOR: Libby Jay Chisholm	ETHICS PROTOCOL NUMBER: 18-246 <i>Minimal Risk Review - Delegated</i>
UVic STATUS: Master's Student	ORIGINAL APPROVAL DATE: 17-Jul-18
UVic DEPARTMENT: ENVI	APPROVED ON: 17-Jul-18
SUPERVISOR: Dr. Darcy Mathews	APPROVAL EXPIRY DATE: 16-Jul-19
<p>PROJECT TITLE: Cultural Resurgence and Indigenous Food Systems: A Case Study of Community Gardens as Sites of Resistance and Wellbeing</p> <p>RESEARCH TEAM MEMBER Research Partner: Kenthen Thomas, Neskonlith Indian Band</p> <p>DECLARED PROJECT FUNDING: 1. SSHRC CGSM; 2. Elizabeth Henry Scholarship Fund for Communities and Environmental Health (pending); 3. Lorene Kennedy Field Research Grant; 4. Stephens Family Award (pending); 5 Shuswap Community Foundation (pending)</p>	
CONDITIONS OF APPROVAL	
<p>This Certificate of Approval is valid for the above term provided there is no change in the protocol.</p> <p>Modifications To make any changes to the approved research procedures in your study, please submit a "Request for Modification" form. You must receive ethics approval before proceeding with your modified protocol.</p> <p>Renewals Your ethics approval must be current for the period during which you are recruiting participants or collecting data. To renew your protocol, please submit a "Request for Renewal" form before the expiry date on your certificate. You will be sent an emailed reminder prompting you to renew your protocol about six weeks before your expiry date.</p> <p>Project Closures When you have completed all data collection activities and will have no further contact with participants, please notify the Human Research Ethics Board by submitting a "Notice of Project Completion" form.</p>	
Certification	
<p>This certifies that the UVic Human Research Ethics Board has examined this research protocol and concluded that, in all respects, the proposed research meets the appropriate standards of ethics as outlined by the University of Victoria Research Regulations Involving Human Participants.</p> <p></p> <hr/> <p>Dr. Rachael Scarth Associate Vice-President Research Operations</p>	

Certificate Issued On: 17-Jul-18

18-246
Chisholm, Libby Jay

Appendix B: Interview questions

Interview Guide:

Introductions

Name:

Birthplace:

Where you were raised:

Date of birth:

Genealogy:

Food System

1. When you think of foods, what are some of the things you think about? (i.e. family/other values)
2. How would you describe your current food system (where you access food)?
 - a. What are the key things that shape your food system?
 - b. Have there been changes to your diet, and what have the causes of these changes been?
 - c. How would you describe a food system that fits with your values?
 - d. What are the primary components of this desired food system?
3. What is your knowledge of, and access to traditional plants?
 - a. Who did you learn about these plants from?
 - b. How do you access traditional foods, and what are the barriers to accessing these foods? (Do you or someone you know harvest traditional foods?)
4. How do you see your relationship and responsibilities to foods?
5. What are the processes through which Secwepemc values about foods are taught, and how are these values and principles put into action in land-based education and Secwepemc food initiatives?
6. Are there protocols about harvesting in certain areas?
7. Do you pass on traditional knowledge to youth, or teach youth about being on the land? What are important parts about being able to pass on this knowledge?
8. What are the main constraints around access to foods? What policies could enable more access?

Land-based Education

1. In your opinion, what constitutes Secwepemc knowledge —how is it different than other ways of learning in education contexts?
2. What does land education mean to you? What does it mean to be connected to land today?
3. How do people of different genders/ages enact responsibilities to land?
4. Have ways of sharing knowledge changed generationally?
5. *What is important for others to know if they want to start Secwepemc land-based education programs?*

6. *How can educational institutions, governments and First Nations organizations support similar programs?*
7. How do you understand protocols and ethics, that ensure knowledge is passed on in a good way, and not misrepresented?
8. Connections between Secwepemc land-based education and food sovereignty?
9. Is being on the land important in Secwepemc education systems? (What is the meaning of Secwepemc-centered land-based education)?
10. Is learning *Secwepemctsin* connected to learning on the land, and if so, can you describe how? Can you describe the relationships between Secwepemc culture, ability to access traditional foods on the land, and language?
11. Do you think that harvesting traditional foods is connected to your ability to exercise your Title and Rights in Secwepemculecw?
 - a. What are some of the guiding values and principles that you envision for Secwepemc land education systems?
 - b. Is land education learned and experienced in different ways depending on gender? If so, was it always like this?
12. *How can land education teach about hunting, territory, and responsibility? Can this teaching be integrated into educational programs in schools? Do you think there are economic development opportunities for your community related to traditional foods?*
13. *Do you have ideas for food programs you would like to see in your school and community?*

Skwekwine, Community Gardens

14. Do you know any stories about *skwekwine*, where it was harvested, the ways it was managed, or protocols around harvesting?
15. Do you remember how much *skwekwine* would be harvested by your grandparents? Your parents? In the 60s? 70s? 80s? 90s? 2000s? Today?
 - a. Would you be able to point to some of the areas it was harvested on a map?
 - b. Are there *Secwepemctsin* names for some of these places where *skwekwine* and other roots were harvested?
 - c. How would you know it was the right time to harvest the corms?
 - d. How many people would help?
16. When was the last time you saw people going to dig root vegetables?
 - a. How many people did you see at this time?
17. Is there a *Secwepemctsin* name for taking care of root foods, or stewardship?
18. Do people have gardens in Neskonlith? What do they usually grow?
19. Have people at Neskonlith tried to grow traditional plants in their gardens? What was the result?
20. Are you interested in seeing culturally important plants be restored in your territory, or grown in a garden setting?

21. What are existing initiatives in your community for teaching youth about culturally important foods?
 - a. Are these initiatives important to you? Why or why not? Do you think they resonate with how Elders teach about land and food?
22. Are there differences between accessing traditional plant foods on the land or in a community garden setting (i.e. in terms of how medicinal they are, or their quality)?
23. In this community garden we have been asked to plant both conventional garden vegetables and traditional plants. Do you think this represents your food system? Which foods do you value, and why?
24. What are some of the values and principles you would like to see reflected in the community garden outside the Melamen Center?
 - a. How should these values and principles be integrated into this community garden?
25. Do you think a community garden can be a space for land-based education to learn about nutritional and cultural benefits of traditional foods and other foods?
26. *How can these teachings/stories be applied to land use planning contexts and renewing relationships with land?*

Youth Interview Questions:

1. What does food mean to you?
2. Are you familiar with traditional Secwepemc foods?
3. Have you learned from family members, community members, or through culture camps about harvesting food from the land before? If so, what have you learned?
4. Have you learned about food through school before? If so, what have you learned?
5. Is learning on the land important to you? Why or why not?
6. What does/would it mean to you to be able to access traditional foods out on the land?
7. Do you think language, learning on the land, and food are connected? If so, in what ways?
8. Some traditional plants have been declining in Secwepemc territory, and are more difficult to harvest and find. Do you think it's important to restore these plants?
9. Would you be interested in growing traditional plants in the community garden in the future?
10. What kinds of food programs would you like to see in your school and community?
11. Do you have any advice for adults about learning on the land, and food?

Appendix C: Community newsletter

“Eating Our Culture”: Land Based Education and Eco-Cultural Restoration in Secwepemcúlecw

November 2019



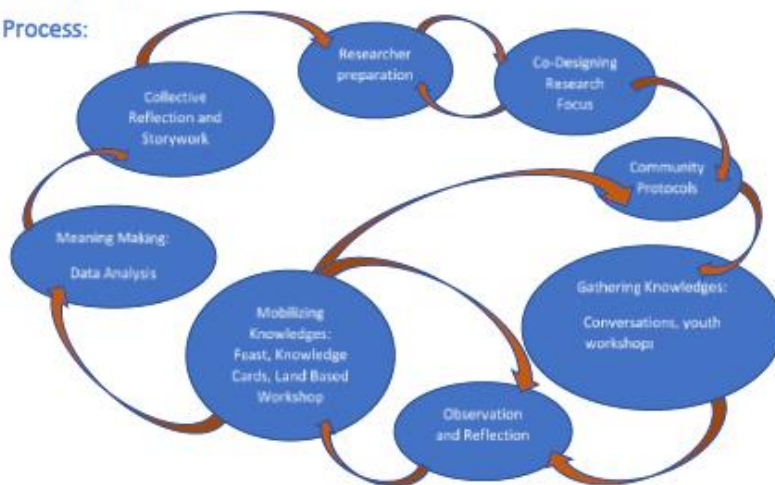
Gathering and Mobilizing Knowledges:

Conversations with 17 participants (5 youth, 12 adults and Elders)
 Knowledge Card workshops (8 additional Knowledge Holders) and youth workshops

Indigenous Research Methodologies and Ethical Frameworks:

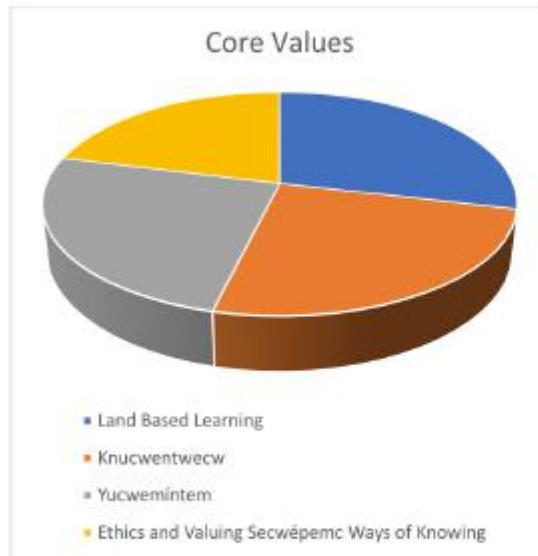
Respect, reverence, reciprocity, interrelatedness (Archibald 2008; Young 2015; Christian 2019)

Process:



Libby Chisholm is Anishnabe (Timiskaming) and settler ancestry, and a Masters student in Environmental Studies at the University of Victoria. This newsletter is based on conversations and workshops coordinated by Libby and Kenthen Thomas, and discusses how values, principles and relationships to food guide cultural revitalization and food systems restoration in Secwepemcúlecw. Cell: 519-803-2831 email: libbyjayc@gmail.com

Values, Principles, and Relationships: How they guide cultural revitalization and food restoration



1. Land based learning

Conversations talked about the importance of:

- **Mentorship and Access to Knowledge Holders & Passing on knowledge to younger generations**
- **Observation and process of being on the land is important to see how things are changing, share stspstekwll and knowledges about places, and to make new knowledges.**
- **Importance of roles: Stspstekwll: The Worm.**
- **Family and school as two main sources for learning**
- **Stspstekwll: Stspstekwll teaching about ecology and laws**

Future Directions:

- **Experiential learning on the land with Elders and Knowledge Holders, and connection with mentors for youth**
- **Land-based culture camps to learn and share knowledges**
- **More knowledge holders in the public school system**
- **Encouraging and supportive environments for learning**
- **Creating Understanding and relationships between Indigenous and non-Indigenous communities**



Kristal Burgess 2019



Kristal Burgess 2019



Kristal Burgess 2019

2. Knucwentwécw ("Helping One Another")

Coyote and the Salmon Stspstekwll

Conversations talked about the importance of:

- **Sharing as the biggest value (sharing food & knowledge)**
- **Food Brings People Together**
- **Trade networks**
- **Family and Community: memories of family and ancestors**
- **Changing Values: Technology, less working together.**

Future Directions:

- **Culture camps to connect with community**
- **Re-instilling the value of trade networks**
- **More spaces and programs (i.e. community garden) to bring people together to learn and teach and share about food. Helps build relationships, restore connections to land, connect to spirituality, and learning to survive on the land.**
- **More service programs designed around Secwépemc knowledge and medicines so people have an option of what they want to access.**
- **Learning about the culture through food: Having more opportunities to eat and share traditional foods. A resurgence in these foods also reconnects people to culture, history and values that come along with the foods.**

3. Yucwemíntem (“Taking Care Of”)

Stsptekwll that teach this concept: Coyote and the Salmon, Story of the Little People, and Beaver and Porcupine

Conversations talked about the importance of:

Eco-Cultural Restoration:

- Growing Secwépemc plants in home gardens and community gardens
- Protecting and restoring harvesting areas; harvesting protocols

Governance:

- Title and rights: Ability to practice responsibilities as Yucwemíntem
- Balancing Secwépemc and Western scientific knowledges (planning, research)

Future Directions:

“Feeding the People”

- Community gardens, and revitalizing harvesting areas
- Secwépemc food economies: i.e. Secwépemc restaurants highlighting the diversity of foods from Secwepemcúlecw; traditional food co-ops

Governance:

- Research partnerships
- Environmental Planning and Protection: important and high elevation places, BC Parks plant harvests & management, restoring Secwépemc laws (Stsptekwll) to protect plants (wildcrafting), land, water
- Monitoring: Knowledge Cards are a plant monitoring tool to support future research & planning. Trails educate visitors about Secwépemc laws and territory.
- Employment for Secwépemc people to monitor, restore, and tend to backcountry gardens. Pre-harvesting and monitoring before large industry projects

4. Ethics and Valuing Secwépemc Ways of Knowing

Conversations talked about the importance of:

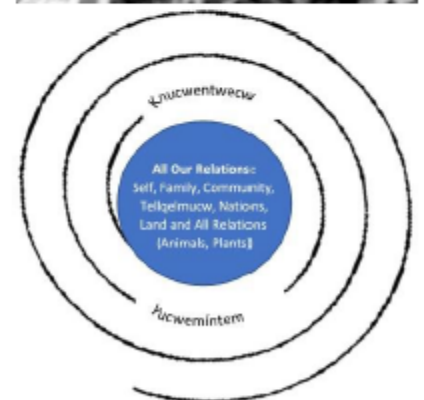
- Respect for knowledge holders and the time and knowledge they share with you
- Collective knowledge, patents, intellectual property rights
- Plant management knowledge (cultivation, controlled burning, harvesting, pruning, understory management, plant processing and storage)
- Secwépemc sense of place and relationship to land: Secwepemctsin, place names, connection to land, spirituality, landmarks, ye7ecw (energy), Systems and connectedness, Rights of Plants
- Food is medicine: Health, holistic, and nutrition in Secwépemc land based food. Importance of the unique characteristics of certain habitats for plants (i.e. certain elevations, amounts of rainfall, soil types, water, and sunlight aspects).
- Balance between “traditional” and conventional lifestyles

Future Directions:

- Valuing Secwépemc Knowledges: Perceived Credibility of Language and Traditional Knowledge, Compensation and Recognition for Knowledge Holders, Accreditation for traditional wellness and medicines, Power Dynamics in Research
- Addressing Collective Knowledge and intellectual property rights
- Stsptekwll and Cultural Resurgence: Knowledges are never lost but are part of blood memory and come back through stories, youth, and observing and learning from the land.

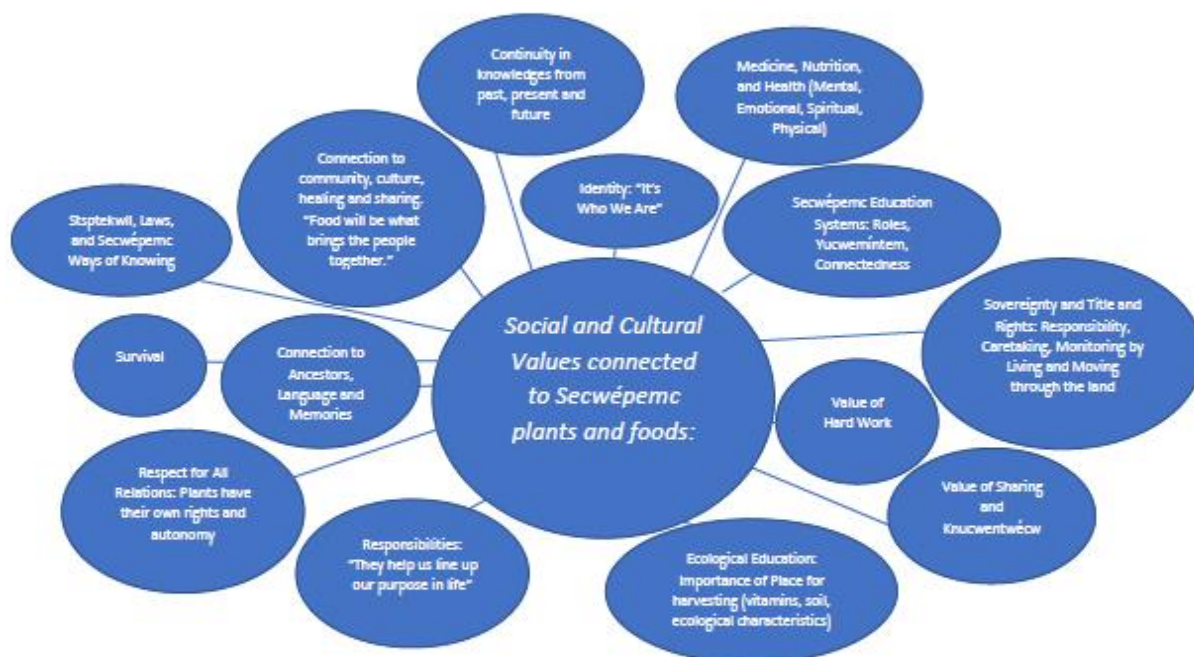


Harvesting Protocols:



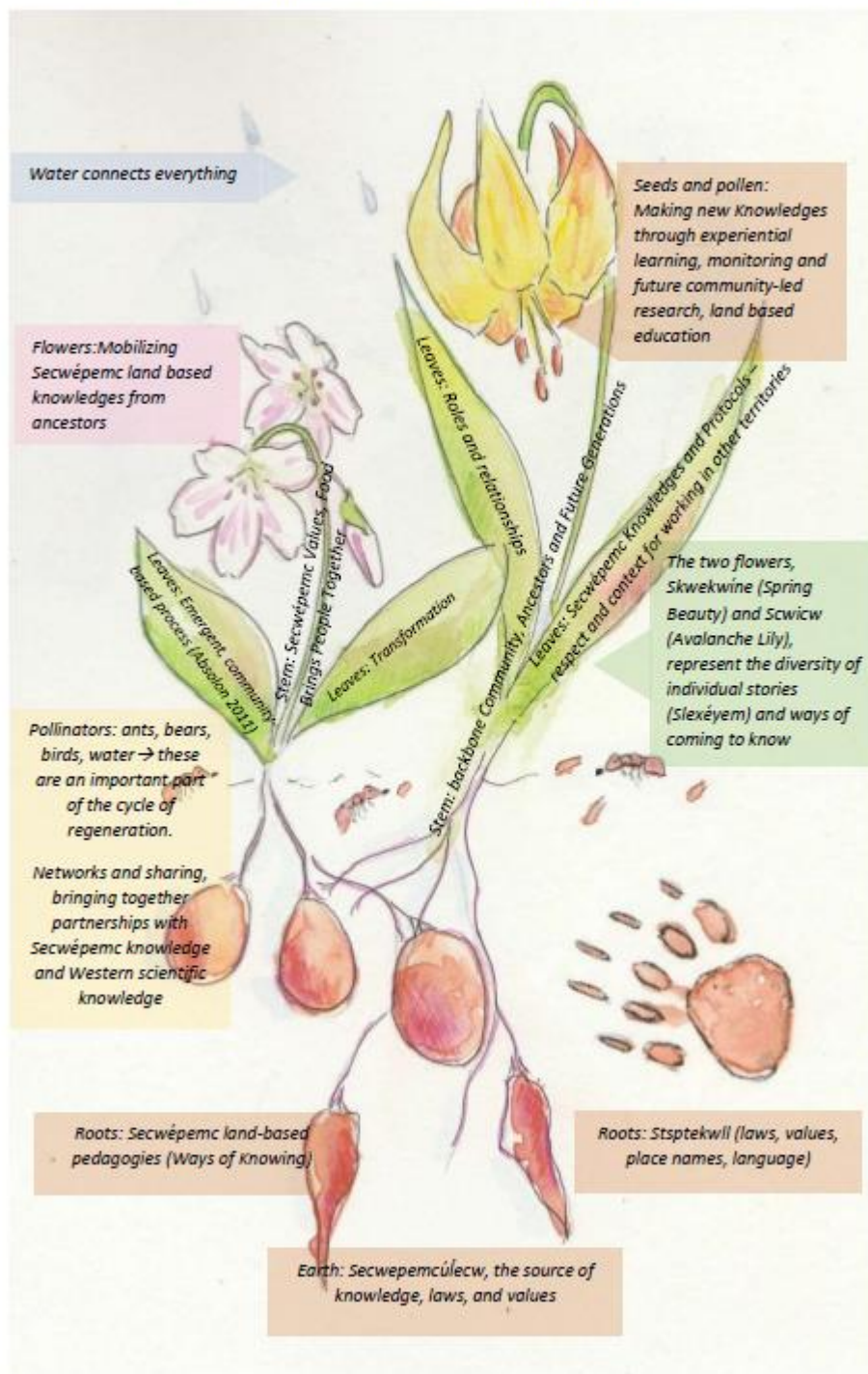
Social and Cultural Values Connected to Secwépemc Plants and Foods

Conversations talked about a number of different values connected to Secwépemc plants and foods. This diagram shows some of the main values that came up in conversations with community members (youth, Knowledge Holders, and Elders). Secwépemc plants and foods motivate ways of teaching, learning about, and practicing these values on the land.



Project Context Model:

Yucwemíntem re Tmicw: "Eating Our Culture"



Appendix D: Band council resolution

Reviewed by Bobby Watkinson, NIB Executive Director X 

Date: May 9/18



BAND COUNCIL RESOLUTION

The Council of the:	NESKONLITH INDIAN BAND	Chronological No.
District:	B.C. REGION – AREA NORTH	2017-2018-690- <u>04</u>
Province:	BRITISH COLUMBIA	Quorum of
Place:	CHASE B.C.	4

Day: 08

Month: May

Year: 2018

RESOLUTION OF THE COUNCIL OF THE NESKONLITH BAND (Hereinafter, called the "Council")

WHEREAS: The Neskonlith Education Center supports Kenthen Thomas, NEC Instructor and Libby Chishom, Masters Student in Environmental Studies to teach the youth/student's to build raised garden beds and grow Secwepemc plants as well as some garden vegetables;

WHEREAS: The Neskonlith Education Center supports the project application through the Elizabeth Henry Scholarship Grant in the amount of \$3000, to build the garden, honorariums for Elders and Knowledge Holders participating in the workshops and hiring a research assistant to support with analyzing the interviews;

WHEREAS: The Neskonlith Education Department do hereby support the Neskonlith Education Center's submission to the Elizabeth Henry Scholarship Grant application in the amount \$3000 to coordinate training and build the garden;

AND WHEREAS: The Neskonlith Band Chief and Council further support the Elizabeth Henry Scholarship Grant application in the amount of \$3,000 to be managed under the Director of Education with the primary support of Kenthen Thomas, NEC Instructor;

THEREFORE BE IT RESOLVED: The Neskonlith Band Chief and Council authorizes the submission of an application to the Elizabeth Henry Scholarship for the garden building and training program and that the Chief and Council support this project through its duration.

Chief Judy Wilson

Councillor Louis Thomas

Councillor Joan Manuel Hooper

Councillor Duane Manuel

Councillor Arthur Anthony

Councillor Fay Ginter