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LOOKING BACK, THINKING FORWARD: STORYTELLING AS A TRANSMISSION MECHANISM OF INDIGENOUS ECOLOGICAL KNOWLEDGE OF NORTHWEST COAST FIRST NATIONS

DOCTORAL THESIS

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STORYTELLING JAKO FORMA PRZEKAZU RDZENNEJ WIEDZY EKOLOGICZNEJ PIERWSZYCH NARODÓW PÓŁNOCNO-ZACHODNIEGO WYBRZEŻA KANADY

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Table of Contents

List of Figures

Glossary

’Namgis peoples are a part of the Kwakwaka’wakw whose ancestral territory lies within the Nimpkish and Bonanza Watersheds on the northeast coast of Vancouver Island, along with the surrounding coastal area.

’Yalis[1] is a Kwak’wala words that refers to Alert Bay, which is the main village of the ’Namgis Nation.

Haida are an Indigenous Nation that has resided on the coastal bays and inlets of Haida Gwaii in the Province of British Columbia.

Haisla are a First Nation from the Northwest Coast who have inhabited their ancestral lands situated in Kitaamat in the North Coast region of present-day British Columbia. Their traditional territory stretches along the Douglas Channel Region of Kitimat of British Columbia’s north coast, encompassing the Kitlope Valley.

Hesquiaht are a distinct group among the Nuu-chah-nulth peoples who inhabit the west coast of Vancouver Island.

Indigeneity is a much-contested term that lacks a clear definition, but it refers to a state of being Indigenous, which connotes being rooted in and attached to a specific regional area (Merlan, 2009). It relates to the ancestral land, culture, community, traditions, and cosmology, which define a distinct Indigenous identity. At its core, indigeneity, as a social paradigm, revolves around Indigenous people’s spiritual and reciprocal relationship with the land, particular place, and its living beings, predating the arrival of colonists and settlers and creation of modern state borders (Armstrong, 2009). Indigenous communities are deeply connected to the land and have a profound sense of belonging to a specific location “just as their descendants do and they relate to living communities as spirit conveyors of ancestral traditions” (Harvey, as cited in Ferlat,

[1] It is important to note that the Indigenous style acknowledges place names of Indigenous origin in order to demonstrate respect for the contribution of Indigenous communities to the English language and mainstream culture. See Gregory Younging. *Elements of Indigenous Style: A Guide for Writing By and About Indigenous Peoples*. Brush Education, 2018, p. 103.

2019) and consider themselves distinct from other groups within their homelands (Steeves, 2018). Throughout history, Indigenous peoples and communities have experienced colonization, dispossession of the land, ethnic cleansing, forced acculturation, and discrimination, but they have managed to preserve their ancestral territories, worldviews, and land-based knowledges that define their ethnic identities. Paulette F. Steves (2018) observes that diverse Indigenous communities "weave Indigeneity through a multifaceted array of space and time to revive identities and cultural practices and to regain or retain land, human rights, heritage, and political standing. Jeannette Armstrong (2017) also talks about the need to re-indigenize the world by empowering people's new relationship to their homelands and instilling in them a sense of belonging and connection to a place, which was severed. It is necessary to heal the society and the planet and to achieve long-term ecological sustainability as we have all been Indigenous once. In the face of environmental, economic, and spiritual crises, Indigenous worldviews and ways of knowing are gradually acknowledged in the western world as solutions to global challenges. As Tyson Yunkaporta proposes, it is only possible when people "learn or relearn how to become Indigenous to their local place in locally specific ways." This suggests that "everybody can access indigenous thought, and can therefore *be* or learn to be indigenous." He further stresses that "the assistance people need is not in learning about Aboriginal knowledge but in remembering their own" (Yunkaporta, 2020, p. 163).

Indigenization refers to an on-going collaborative process of recognizing, respecting, and incorporating diverse and complex Indigenous onto-epistemologies, worldviews, knowledges, values, cultural understandings, and perspectives into education, business, governments, and institutions. As a part of reconciliation, it involves creating a new sustainable and respectful relationship and cooperation with First Nations, Métis, and Inuit communities. It is important to note that the goal of Indigenization is to braid together Indigenous and Western knowledge systems in ways that will foster understanding and appreciation of both perspectives without privileging any of these knowledges. Understanding the nature of Indigenous knowledges, its sources and ways of transmission is a significant part of the Indigenizing process. It is important to stress that Indigenization processes relate to all spheres of life. When the Truth and Reconciliation Commission (TRC) of Canada issued its 94 Calls to Action in December 2015, it put education at the heart of Canada's reconciliation process. Many Canadian

universities have embraced these calls as actionable policy recommendations, particularly Calls to Action #62-65 which, in various stages of progress throughout the provinces and territories, aim to Indigenize higher education. For instance, as Indigenization recognizes the invisibility of Indigenous perspectives and knowledges in the Western-dominated academy that reproduces colonial history and epistemic violence, post-secondary institutions gradually Indigenize their curriculum, create an academic space where Indigenous land-based knowledges, worldviews, multiple truths, and languages are respected. They also include Indigenous voices and methodologies in academic and scientific discourse, teaching policies, programs, and educational decision-making, as well as establish respectful relationships with local communities. Power dominance is rebalanced. Indigenous communities are empowered, feel respected, properly represented, and valued while non-Indigenous peoples, scholars, and students get a deeper understanding of Indigenous ways and perspectives. Canadian universities develop training for a new generation of educators and faculty in methods which are used to incorporate culturally appropriate courses, programs, and resources, as well as create a learning environment that reflects Indigenous ways of knowing and learning. This way, Indigenization disrupts the prevailing mindset that has erased Indigenous history and regarded their land-based and place-based knowledge as primitive and unsophisticated. Howeve, these Indigenizing processes are not mandatory ("Ikta," n.d.; Mihesuah & Wilson, 2004; Atleo, 2005; Archibald, 2012c, Knopf, 2015; TRC, 2015b; Bopp, Brown, & Robb, 2017; CMEC, 2019).

Indigenous and First Nations refer to original peoples of Turtle Island (North America).

Indigenous spirituality refers to a way of responsible and reciprocal way of life with land-based knowledge that is embodied in Indigenous peoples' every thought, word, actions, and practices in every day contexts. It encompasses a holistic belief that everything that exists in the pluriverse, including people, animals, plants, and land forms, is interconnected and related to each other. All elements of the natural world are alive and animated. As a way of knowing and way of life, Indigenous spirituality fosters a profound connection with the Creator and land imbued with a spirit. Because it is closely connected to their ways of living, spirituality requires a holistic approach. In this vein, nature-centered spiritual traditions of various Indigenous peoples, emphasizing the

interrelatedness of all things in the universe, are inseparable from their cultures and have informed their traditional ways of life and provided understanding of the surrounding world. Indigenous spirituality has underpinned Indigenous peoples' life for thousands of years, helped them to address the sacred and the supernatural, and thus explained and strengthened their holistic relationship to the surrounding world and to one another. Since their intimate relationship to the land as a living being defines who they are as stewards of the land, resource harvesting and management sites, location of stories, ceremonies, and medicines, as well as burial sites are sacred places. Their traditional ceremonies and spiritual practices have also allowed them to survive the onslaught of settler colonialism and massive mistreatment in the last half millennium and to preserve their cultural legacy (Cajete, 1994; Egri, 1997; Jocks, 2000; Cordova, 2007; Brown, 2009; Atleo, 2005, 2012;Fleming and Ledogar, 2008; "Spiritual Practices,"2015; LaDuke, 2016;).

Indigenous worldviews which can be considered relational philosophies focus on a holistic understanding of the whole in which Indigenous communities operate in a state of relatedness, unity of existence wherein all livings things, physical and spiritual, human and more-than-human worlds are interconnected in a reciprocal relationship. It delves into the highest questions surrounding meaning and value. With relationality as a fundamental aspect of Indigenous worldviews, they perceive the whole person (physical, spiritual, emotional, and intellectual) as connected to sentient land and others (communities, plants, and animals). From an Indigenous point of view, relational philosophies/worldviews recognize spiritual energies and embrace humans with other animated species into a collective relationship with all of creation and connect them to a place in a meaningful and spiritual way. Life is understood through time as cyclical and complex forms of kinship and non-hierarchical interrelatedness. Kinship ties and spirituality reinforce this interrelatedness of all seen and unseen being on ancestral territories. On that note, since all things are sacred, they ought to be respected; hence, there are right ways and wrong ways to interact with the surrounding land and waters, plant, and animal species. Learning is considered experiential and collaborative as it is based upon interpersonal tactile engagement with land (Wolters, 1983; D. Cranmer, 1992; Cajete, 2000; Atleo, 2003, 2005, 2012; Wilson, 2008; Brown, 2009; Kimmerer, 2013; Watts, 2013; Martinez, as cited in Nelson, 2018; Kanngieser and Todd, 2020; Jacobs, 2020; Narvaez and Topa, 2022; Narvaez, 2022).

Kwakwaka'wakw are one of Northwest Coast First Nations who ancestral territories encompass the coastal areas of Northeastern Vancouver Island and mainland British Columbia.

Land, for Indigenous cultures, is not conceptualized merely as a supplier of plant and animal resources, a material support for the collective or individual self, but it is the heart of creation that ought to be respected, appreciated, and taken care of year after year, generation after generation. From the perspective of kincentric ecology, land is sentient and animate. It includes animacies such as spiritual beings, geographical formations, and place-based relationships with more-than-human others. Integral to Indigenous knowledge systems and place-based cultural stories, land is the source of underlying philosophies and ontologies of that physical geographic space. Not only is it space (abstract) and place/land (concrete), but it is also embodied, spiritual, experiential, storied, and relational. In this light, it is important to maintain ethical and reciprocal relationships with land as a sentient being. Land encompasses cultural ways, social systems, spirituality, ecosystems, relationship, and law (Kimmerer, 2013; Watts 2013; Whyte, 2017; Styres, 2019; Clement, 2019; Kanngieser and Todd, 2020; Dei et al., 2022).

Musqueam are an Indigenous Nation who have inhabited the lands encompassing present-day Vancouver and its surrounding areas for countless generations.

Mythology can be viewed as a colonial form of categorizing Indigenous stories and narratives, being the creation of different cultural codes, which not only disregards their alternative classification but it also marginalizes and stigmatizes Indigenous oral traditions as marginal, thus effectively silencing their pedagogical functions. With respect to Indigenous peoples, the term myth has become synonymous with falsehood and misinformation, for it oversimplifies or completely disregards the actual message embedded within Indigenous stories and narratives. This term is considered offensive as it implies that Indigenous oral traditions are irrelevant and not based in reality. Also, Indigenous ways of knowing are denigrated and labelled as mere myths and folklore by Western methods and knowledge systems. However, Indigenous knowledge-keepers use oral traditions as a powerful means to transmit and disseminate Indigenous land-based and place-based knowledges. Therefore, it is suggested to use terms such as oral

traditions or traditional stories as Indigenous stories embody knowledge and history of Indigenous peoples (Little Bear, 2000; Datta, 2018; Younging, 2018; Korff, 2021).

Nlaka'pamux peoples have inhabited the lands in the southern interior of British Columbia, along the Thompson River and the Fraser River north of Yale.

Nuu-chah-nulth[2] are an Indigenous Nation residing in their ancestral lands along the southwest coast of Vancouver Island, Canada.

Sacredness,[3] for Indigenous peoples**,** is a substantial power of the Creator that is inherent in the land which is sacred and referred to as "Mother". Since their relationship to the ancestral land determines who they are, Indigenous peoples built their cultural ways on and about this land, which evokes a profound sense of gratitude and provides people with close connections to ancestors. In the kincentric worldview, hills, rocks, trees, lakes, water from the river, places, other natural features, and more-than-human beings are sacred and ancient ancestors intimately tied to humans. In creation stories that took place in the ancient times, these powerful more-than-human beings, notable transformers transcended different worlds, wandered the earth, and created and shaped the world people are a part of. While human ancestors journeyed into the spirit world and engaged in interactions with animal beings. These interactions and relational bonds with the more-than-human beings of animals and ancient times are acknowledged through embodied ceremonies and dances, songs, teachings, prayers, family crests, totem poles, medicine, important items, names, narratives, and sacred sites where spiritual work or special events occurred. These embodied ceremonies, objects, forms of cultural expression, and locations of sacred sites are used to situate meaning in places, preserve their knowledges, celebrate traditional stories, and honour their ancestors. These are not mere artefacts but living entities in themselves. It is important to note that each Indigenous community determines what is sacred. Therefore, the notion of sacredness refers to a holistic understanding of the interconnectedness between human beings, land, and the spiritual realm that is incorporated into Indigenous communities,

[2] In line with the Indigenous guide for writing by and about Indigenous peoples and decolonizing practices, I have used the names for the Northwest Coast First Nations that they use for themselves. See Gregory Younging. *Elements of Indigenous Style: A Guide for Writing By and About Indigenous Peoples.* Brush Education, 2018, p. 102.

[3] There is no fixed term for sacredness as everything is considered to be sacred.

cultures, and stewardship of the land. Indigenous peoples' commitments and actions therefore emerge from their spirit-based relationships founded on respect, care, and reciprocity and lead to the formation of relational networks. emphasizing their deep reverence for all of Creation as an important part of the sacred web of life. (DeLoria Jr., 1972; Cajete, 2000; Maracle, 2002; Atleo, 2003, 2005; LaDuke, 2005, 2016; Smith, 2008; 2012; Keller, 2014; Turner, 2014a, 2014b; Feather, 2021; "Spiritual Practices," n.d.).

Secwépemc peoples occupy a vast territory of the interior British Columbia, stretching from the Columbia River valley to the Fraser River and Arrow Lakes.

Squamish are an Indigenous people of the Pacific Northwest Coast. Their ancestral lands encompass the Burrard Inlet, English Bay, False Creek, and Howe Sound watersheds.

Ts'elxweyeqw First Peoples are a distinct Indigenous group among the Stó꞉lō Nation. Their ancestral lands encompass the entire Chilliwack River Valley in British Columbia.

Tsimshian are one the Indigenous peoples of the Pacific Northwest Coast. Their traditional territories include the mainland and islands around the Skeena and Nass Rivers in present-day British Columbia.

Turtler Island refers to how Indigenous peoples identify the lands known as the continent of North America.

W̱SÁNEĆ (Saanich) are Indigenous peoples residing along the Pacific Northwest Coast. Their ancestral lands include the San Juan Island and the east and north coasts of the Saanich Peninsula in British Columbia.

Acknowledgements

I am deeply grateful to many people who have stood by me over the last few years. Without their efforts and support, this research study would have been impossible.

My first acknowledgment goes to the spirits of the ancestral lands of the Northwest Coast First Nations on whose lands I have been living and working to create this research study. I want to acknowledge that I have conducted my research on the unceded ancestral lands of the Northwest Coast First Nations and I pay my respect to the Knowledge-keepers both past and present.

I would like to thank the Indigenous Knowledge-holders who have provided me with invaluable guidance and teachings on Indigenous worldviews, oral traditions, place-based knowledge systems, and ethical protocols: specifically, Gloria Cranmer Webster, Chief Umeek Richard Atleo, Ray Peter, Dolores Louis, Carrie Mortimer, and Marlene Atleo. I have always felt honored by their generosity and willingness to share their perspectives with me throughout my journey of decolonization and indigenization. I am fortunate to have learnt from the Indigenous peoples, many of whom have already left us.

I am deeply grateful to Professor Eugenia Sojka, my esteemed Academic Supervisor at the University of Silesia, for introducing me to the captivating world of the Northwest Coast cultures and their rich oral traditions. Her guidance and mentorship have been invaluable in shaping my research and setting me on the right path. Her support has been instrumental in helping me stay the course through some challenging times. I am eternally thankful for her unwavering inspiration as an advisor, mentor, and remarkable individual. I sincerely appreciate the trust she has placed in me and the countless hours of revision. Without her holistic vision and expert guidance, this dissertation would not have been completed. I am truly grateful for the great privilege of working under her supervision and for the immeasurable influence she has had on my research journey as a non-Indigenous scholar-ally.

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appreciate her astute opinions and wise perspectives, and I am grateful for her contribution to my growth and understanding.

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G'ilakas'la everyone.

Chapter 1

Introduction – Learning the Territory

> *The purpose of any ceremony is to building stronger relationships or bridge the distance between aspects of our cosmos and ourselves. The research that we do as Indigenous people is a ceremony that allows us a raised level of consciousness and insight into our world. Let us go forward together with open minds and good heart as we further take part in this ceremony* (Wilson, 2008, p. 11).
>
> **Shawn Wilson**
> Opaskwayak Cree scholar

I am beginning my dissertation with acknowledging the Nuu-chah-nulth, Kwakwaka'wakw, Haida, Secwepemc, Nlaka'pamux, Squamish, Musqueam, Tsimshian, Hesquiaht, W̱SÁNEĆ, Ts'elxweyeqw, and Haisla Nations, on whose territories I resided as a guest while working on this project. It was indeed a great privilege to be there among so many dedicated and inspiring people and witness and hear their cultural stories. I acknowledge the Knowledge-keepers who have put me on the right track in terms of my research and that includes Gloria Cranmer Webster ('Namgis First Nation), Carrier Mortimer ('Namgis First Nation), and Chief Umeek Richard Atleo (hereditary Chief of the Ahousaht First Nation). I thank them for sharing the beauty and energy of their lands. Inspired by those scholars and activists, this project resists colonial dominance and incorporates and gives voice to Indigenous perspectives that were subdued and eroded by colonials, which shows how crucial they are for the contemporary world. It also demonstrates how the power of their narratives enacts the rhetoric of survivance[4] to challenge the prevailing assumptions of the dominant culture about Indigenous peoples and their relational knowledge systems. To

[4] According to Anishinaabe scholar Gerald Vizenor, an act of survivance "is an active sense of presence, the continuance of native stories, not a mere action, or a survivable name […]. Native survivance stories are renunciations of dominance, tragedy, and victimry. Survivance means the right of succession or reversion of an estate, and in that sense, the estate of native survivancy." See Vizenor, G. (1999). *Manifest Manners: Narratives on Postindian Survivance*. University of Nebraska Press, vii.

do so, I have decided to use a decolonizing and anti-oppressive perspective in this work,[5] combining it with selected perspectives of Indigenous scholars. I think of this project as my ceremony (Wilson, 2008) adding to the re-indigenization of education, emphasizing learning across Indigenous and Western knowledge systems. To advance decolonization, this research advocates for Indigenous placed based knowledge to be included in academia, taught and valued as equal to Western science, for academia can challenge "the dominance of Eurocentric discourses [that] has historically precluded an examination and acceptance of Indigenous knowledge" (Browne et al., as cited in Held, 2016, p. 10). My research as a ceremony is my relational responsibility to myself and the Indigenous communities who are educators and place-based knowledge holders. For me, the meaning of this research study is a form of decolonization, advancing Indigenous placed-based knowledge, experiences, and perspectives. Therefore, the anti-colonial discursive framework which seeks to challenge and disrupt prevailing ways of knowing (Kempf & Dei, 2006) is important for addressing the questions I posit in this research study.

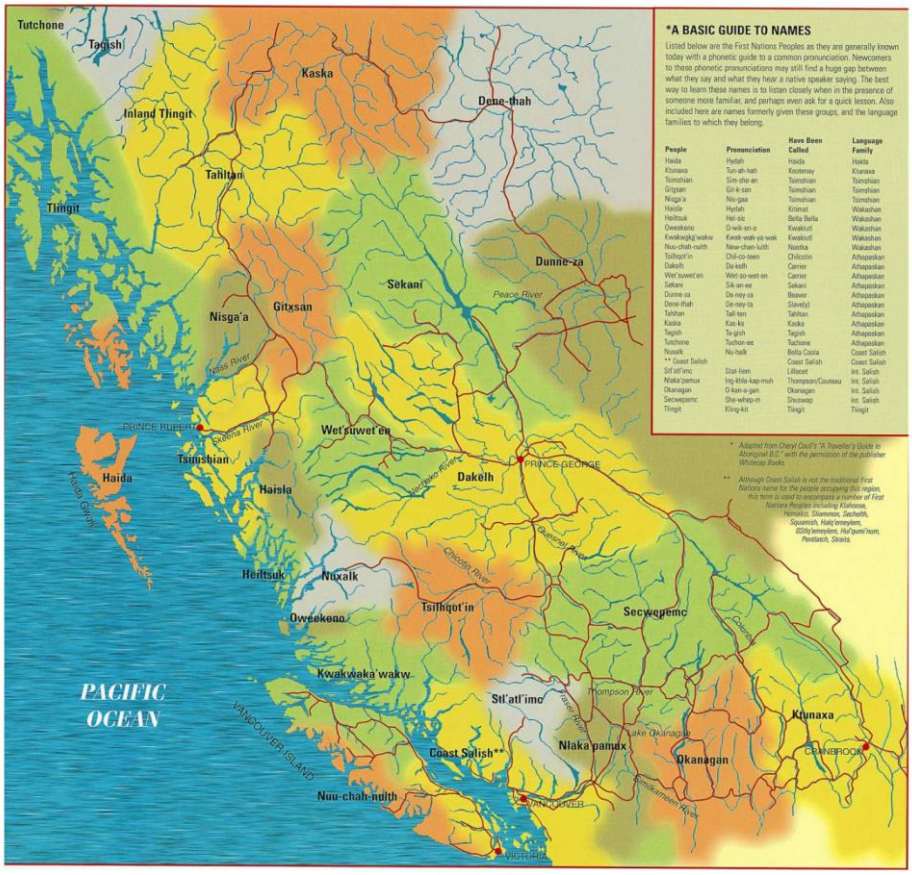

Fig. 1. A map of First Nations in British Columbia. Illustration by BC Campus OpenEd.

[5] My decolonizing and anti-oppressive perspective will be explained in Chapter 3.

I envisioned that the focus of my dissertation would be on Indigenous ecological knowledge systems and storytelling as a crucial transmission method/pedagogy. In this regard, I stress that storytelling serves as the important aspect of my research and methodology in the gathering of knowledge. As an allied scholar supporting the self-determination of Indigenous peoples (Mertnes, 2012; Held, 2019), I have worked on and inscribed academic discourse methodologies and Indigenous decolonizing and indigenizing methodologies – which are described later in detail – from the very start of my research. In my project, I have combined the Western paradigm/academic discourse in literary studies and writing**.** I add my voice to the process of creating a dialogue of non-Indigenous (transcultural) and Indigenous perspectives/methodologies, by foregrounding, affirming, and centering Indigenous ecological knowledge to the world. Respectfully following the rules of Indigenous ethically responsible research, I ensure that Indigenous knowledges, cultures, and communities are not exploited within research (Jacobs, 2019; V. Clement, 2019). Through a delicate balance of decolonizing and indigenizing perspectives (Armstrong, 2017), I have taken the structure of my dissertation out of the colonial standard that corners and suppresses Indigenous ways of knowing and methodologies, and thus I used and privileged Indigenous land-based methodologies and holistic approach. Following Indigenous research methods, I start with the protocol of introducing and positioning myself and I discuss my placeness and tradition of storytelling in my family. I present a story of my research journey undertaken with humility and respect for Indigenous ways of knowing and cultures and my embodied research experience related to reclaiming traditional land-based philosophies and storied knowledge systems and speaking back to the dominant voices of the coloniser.

This thesis has had a lengthy development since writing about the Northwest Coast First Nations, their ecological knowledge and intellectual traditions from a visitor perspective is a hard task. Throughout the 2010s, when I began my doctoral studies and then research towards this dissertation, I was fortunate to be involved in a number of research projects in various supportive roles. This simultaneously allowed me to become familiar with Indigenous ecological knowledge in the field because it brought me together with Indigenous peoples, elders and academics possessing invaluable knowledge and intellectual tradition. In my travels, as a non-Indigenous researcher, I have been privileged to work with representatives of Northwest Coast First nations and thus I have been able to observe that First Nations, mainly those of British Columbia,

continue to have extensive knowledge about the land and its ecosystems as they continue living on the land and waters, observing and exchanging information regarding the surrounding ecosystem and its biodiversity, with their lives intimately linked with their natural resources. In the light of the guiding principle of two-eyed seeing,[6] I did everything in my power to embrace the gift of multiple perspectives and immerse myself in the Indigenous cultures, at the same time, bringing my Eastern European upbringing and perspectives of the underprivileged Europeans. I have decided to use Indigenous methodologies as most conducive to my study. I am, however, a visitor to this world and a researcher in a transcultural position. As a transcultural researcher, my exploration of Indigenous ecological knowledge in British Columbia aims to demonstrate its value and learn its importance and by means of transfer of that knowledge, I would like the project to draw attention to Indigenous perspectives and to the indigeneity in Eastern/Central Europe[7] and specifically Upper Silesia, with the biggest unrecognized minority population in Poland.

1.1. Research positionality: Reaching into the past to find the future

In the light of Indigenous protocols and teachings I have received, it is important for me to follow an important protocol and share information about my identity, origins, and family, which aligns with ethical Indigenous methods of inquiry, promoting transparency (Kovach, 2009). In accordance with the Indigenous storytelling methodology that I use in this dissertation, I will begin with situating myself with a story.

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[6] The Guiding Principle of Two-Eyed Seeing, as brought forward by Mi'kmaw Elder Albert Marshall, refers to an approach of inquiry and solutions in which people learn to see the world through an Indigenous lens with one eye(perspective) and through Western ways of knowing through the other, thus valuing different perspectives as well as blending and merging Indigenous and Western ways to establish pathways to move forward in collaboration and respect and leave the world a better place for generations to come. It is important to avoid a domination of one worldview or assimilation of the knowledge of the other. According to Indigenous peoples, although it is a difficult process, it can be done. See *Two-Eyed Seeing*. (n.d.). Integrative Science. Retrieved September 2, 2022, from http://www.integrativescience.ca/Principles/TwoEyedSeeing.

[7] I use the term Eastern/Central Europe as historically it was the term used in literature. There has been a change in the terminology only in the recent decade. There exists a variety of terms to denote the geographical area that spans between the Baltic, Adriatic, and Black Seas. These terms include as Central Europe, Central and Eastern Europe, Central-Eastern Europe, and East Central Europe. See https://securityanddefence.pl/Central-Europe-after-1918-A-short-outline,103334,0,2.html & https://calenda.org/979958.

My story is of someone with legacy of complicated history and dispossession. I come from the place that experiences the history of cultural imperialism and linguistic murder. I was born and grew up in Chrzanów, a borderland town in southern Poland currently situated in the Lesser Poland Voivodeship whose name recalls the traditional name of a historic Polish province located in the catchment area of the Vistula River. This land has changed hands several times in history and one can trace its location within the boundaries of such colonizing powers as Russia, Prussia or Austrian Galicia.

With the outbreak of WWII, Chrzanów was annexed to Nazi Germany and became part of the Province of Upper Silesia. The Nazis systematically dismantled Polish culture, replacing it with Nazi German culture. They removed Polish signs, streets received German names; and the town was renamed Krenau. As part of their colonial campaign, they violently seized the Polish territory, which resulted in the violent dispossession of the land from Polish people. In 1941, a ghetto was established in Chrzanów, where Jewish residents were relocated before being sent to Auschwitz-Birkenau. After these events, Poland was subject to decades of economic and political suppression under Soviet Communism. My town was ruthlessly administered by the local and incoming communists. It was "detached from its original Province of Cracow, to which it belonged since restoration of Poland's independence after World War I, and annexed to the Province of Katowice until 1999" ("Chrzanów," 2016) when it became a part of Lesser Poland ("Chrzanów," 2016).

Although the discourse of colonialism has not been used for a long time with reference to Eastern Europe, Poland, in fact, was historically subject to cultural erasure and subjugation by Austrian, Hungarian, German, and Russian powers whose actions can be read as colonial practices. Due to unfavorable socio-political conditions many Polish people left their homeland in search of a better life. Nevertheless, in this geographical space, subnational minority cultures have encountered even more challenges. They often face denial of their minority culture status and their languages are frequently reduced to dialects. This is exemplified by the situation of the Upper Silesians who have faced unjust accusations of betraying their Polish identity. They have not been recognized by the Polish state as an ethnic minority or a distinct regional cultural group with a distinct language (Buchowski & Chlewińska, 2012; Kadłubek, 2016; Sojka, 2021; Buchowski & Chlewińska, as cited in Sojka, 2021).

Upper Silesia, currently a territory in southwestern part of Poland, is "distinct region in of Eastern/Central Europe that crosses Poland, the Czech Republic, and

Germany" (Sojka, 2021, p. 170). It has always attracted a lot of attention from dominant political and cultural powers which divided it many times and aimed to erase the identity and distinct character of its inhabitants. According to University of Silesia scholar, writer, and translator Zbigniew Kadłubek, as a result of the long process of colonization and exploitation of Upper Silesians, they lost their connection to the land and their family ties were eroded. Projects of nationalization divided Upper Silesians and forced them to choose a national identity. The socialist government of Poland tried to create a homogenous society. Their attempts involved either erasing local history and culture or reimagining them as a mere folklore. People became alienated from their families and disconnected from their cultural heritage. (Kadłubek & Smolorz, as cited in Sojka, 2021, p. 185). The spiritual essence of the region was lost over time (Sojka, 2021, p. 187).

However, Sojka emphasizes that the process of re-reading Upper Silesian history and a gradual linguistic decolonization have been taking place in recent decades. Upper Silesian literary and cultural scholars and writers, such as Kazimierz Kutz (Upper Silesian film director, journalist, an politician), Zbigniew Kadłubek, Tadeusz Sławek (University of Silesia writer-scholar of literature and culture), and Wojciech Kuczok (Upper Silesian writer), just to mention some of them,[8] started a decolonization and re-indigenization process of Upper Silesia by re-defining Polish history, including local perspectives and stories, thus challenging the alleged ethnic homogeneity of Poland, decolonizing the Upper Silesian mind, and asserting the Upper Silesian regional collective identity, its language, and memory. Witness accounts, individual memory, and oral traditions have a significant role in the new narrative which brings silenced perspectives, forgotten heritage, victimization, and mistreatment of Upper Silesians into light and thus removes the stigma of primitivism (p. 185).

The story of my homeland and Upper Silesians serves as a testament to the resilience of communities in the face of adversity. My homeland, a borderland multicultural region in a state of constant change, underwent colonization, exploitation, and degradation. People were dispossessed of and disconnected from their land, and the

[8] There are other writers, playwrights, scholars, translators, journalists, and literary critics known for their struggle for Silesianness: Jolanta Tambor (University of Silesia scholar), Aleksandra Kunce (University of Silesia anthropologist), Artur Czesak (linguist and lexicographer), Tomasz Kamusella (expert in Upper Silesian history and language), Grzegorz Kulik (translator), Michał Smolorz (journalist and film director), Jerzy Ciurlok (journalist), Anna Dziewit-Meller (journalist and writer), and Marcin Melon (journalist), Henryk Waniek (writer and painter), Alojzy Lysko (writer), Jerzy Pilch (writer and playwright), Stanisław Bieniasz (playwright and writer), Stanisław Mutz (playwright and poet), Julian Kornhauser (writer, playwright, and literary critic).

environment was destroyed by industrialization. Yet, there has been an awakening of Upper Silesia in the work of Upper Silesian scholars and writers, which can be seen as an act of survivance aimed at resisting and repudiating that dominance. Such narratives about Silesianness embodied in the spirit of the land and the language aim to re-indigenize our consciousness. As a way of re-imagining Upper Silesia and valorizing the knowledge and worldviews indigenous to this land, Sojka proposes to reclaim "the pre-industrial past of Upper Silesia, and even […] the pre-Christian past and the knowledge of the land and its people, from the Upper Silesian storytelling tradition" (p. 187).

Placeness

My roots are hybrid but close to the land. Since they derive from living at the borderland of Western Galician and Upper Silesian cultural regions, I construct and negotiate a place-based but hybrid identity[9] that has been situated in-between two cultural values and therefore shaped by them. I was born in the 1980's into a Polish family living in Chrzanów. On my paternal side, I have Upper Silesian roots as my father's grandparents came from Upper Silesia where he spent most of his life living and working as an electrician in a coal mine where he learnt to speak the Silesian language and embraced Upper Silesian culture that he later brought back home and shared his life experiences and knowledge with our family.

On the other hand, on my maternal side, my roots are deeply rooted in the land of the most Western reaches of Western Galicia. My mother was born in Paszkówka, a village situated in what is now known as the Lesser Poland Voivodeship, into a farmer's family that cultivated their land for several generations, following traditional methods of cultivation and crop management determined by the clock of nature, which was very often a spiritual experience. Thus, my maternal lineage had a very intimate connection to the land that was based upon respect and appreciation for what the land provided them with on a regular basis. It may be argued that they were stewards of the land cultivating it in a sustainable manner taking into consideration the health of the local ecosystem, thus preventing its exploitation and depletion of local biotic resources. Both

[9] My placeness and borderland consciousness is crucial for me. Anyone can have a place-based identity but might not be aware of its importance. I became more sensitive to my identity due to my studies and contact with other cultures.

my maternal and paternal lineages, closely tied to the land, remembered their histories predating the modern nation state of Poland. My grandparents were eye-witnesses to WWII and experienced relocation, linguicide, and land dispossession at the hands of the Nazi German occupants. My parents experienced life in the Communist Regime in Poland, which meant being watched, censored, and deprived of basic necessities.

Despite those hardships, my parents, deeply rooted in two disparate cultural regions and possessing strong connection to the land and place-based identity, were able to bring to life a new in-between space where their worldviews could overlap, share, and exist in a non-binary third world. I grew up in this fluid space which, similarly to the place I was brought up by my parents, is a borderland where solidity and permanence do not exist. My mother, speaking Lesser Polish dialect fluently, was from one place and my dad, speaking both Polish and Upper Silesian, was from another and they eventually ended up coming together in a new space, bringing together their own cultural values and sense of belonging and I am in-between those spaces, speaking from a transcultural position. Hence, what I offer in terms of interpretation is my transcultural positioning. In effect, just as I am able to code-switch between Polish and English so too, as a transcultural person, I am equipped with an ability to navigate between different spaces, each requiring different knowledge, interpreting and translating them appropriately.

Storytelling tradition at home

Within this space, both of my parents occupied my childhood with their life experience stories. My father was very fond of reading historical books and playing games to such an extent that books, cards, and chessboard were always placed on the table in the living room. He was always ready to play those games with me, smoking a cigarette and impatiently waiting for me to return from school. While spending time together playing those grown-up games, he related stories of his hard and dangerous work in an Upper Silesian mine in Katowice to make a living for our family, as well as of factual stories about WWII he vividly remembered not only from the first-hand recollections of his father but also from the plots of the books he used to read until late at night. With seriousness imprinted on his face, he whispered stories about the Communist Regime and how the family struggled to make both ends meet on a daily basis.

Whereas, my mother told me stories, previously shared with her by my grandmother, of the designated frontline positions the Nazi German army formed and moved to in her village as well as mentioned bits and pieces of our family's history in Nazi German-occupied Poland over the years. She spoke about the time when Wehrmacht soldiers took one of rooms in the house and used it as sleeping quarters and, much to the family's surprise, they treated them with respect and shared a bitter-sweet dark chocolate bar, which was a staple of military rations, with them, whose taste my grandmother has not forgotten throughout her entire life. My mother sometimes brings up a story of her aunt who went to Cracow to the market to sell vegetables and food they had grown on their land and, then, she was taken captive in a roundup organized by Nazi German forces and disappeared without trace. She might have been imprisoned in a labour camp in Germany or, which is more probable, sent to the death-camp in Auschwitz-Birkenau. Yet, it often seems too painful for my mother to recall it as if she simply wanted the memories to be forgotten. Her other stories encompassed the hardships of working on the land with her parents and grandparents and the strong connection with the land that she used to have as a young girl. Having relocated with her family to the industrial town of Chrzanów seeking better material opportunities, she became somewhat alienated from the land, experiencing the loss of her grandparents' intellectual tradition and life experience stories. Thus, she took matters into her hands and wove her own stories to give meaning to her life.

In terms of our intergenerational transfer of stories and cultural knowledge, both of my parents wove my childhood with their life experience stories and testimonies that had been passed to them by their parents, thus creating a narrative string that connects the past and the present. Arguably, it was their process of storywork[10], to use Jo-Ann Archibald's terms (Stó:lō First Nation), aimed at shaping their identity as well as creating an in-between space for me in terms of which I have been able to navigate between different cultural realms, somewhat joined by the thread of my family stories.

In this project, my transcultural positioning situates me in the third space which creates conditions for a more sensitive approach towards the non-static Indigenous relational worldviews nurtured since time immemorial. Being in this third space, I have

[10] According to Indigenous scholar Jo-Ann Archibald, also known as Q'umQ'umXiiem, stories are aimed at attracting Indigenous peoples' attention and, as a source of Indigenous knowledge providing guidance, compel peoples to ponder over their behaviour, actions, and reactions, which is a process called storywork. See Archibald, J.-A. (2008). *Indigenous Storywork: Educating the Heart, Mind, Body, and Spirit.* UBC Press.

decided to use several aspects of Indigenous methodologies which enable me to explore the deep connection Indigenous peoples have had with their land and natural resources. Following the principles of Indigenous methodologies and need for reciprocity, I believe this project can have practical outcomes for Indigenous communities, Canadians, and Poles, including minority cultures in my home country. From this decolonizing and anti-oppressive perspective, I am able to understand how traditional approaches to the environment, based on respect and reciprocity, can contribute to mainstream environmental conservation practices.

Such perspectives have been recognized by some non-Indigenous scholars – allies of Indigenous peoples who have been collaborating with Indigenous communities – such as Nancy J. Turner (University of Victoria Emeritus professor and ethnobotanist working with First Nations elders and cultural specialists), Douglas Deur (Professor of Anthropology at Portland State University), and Fikret Berkes (Distinguished Professor at University of Manitoba and applied ecologist), just to mention a few names. These perspectives are also discussed by Indigenous scholars such as Thomas King (Cherokee novelist and short-story writer), Louis Bernice Halfe (Cree poet), Melissa K. Nelson (Anishinaabe/Métis scholar and writer), and Robin Wall Kimmerer (Potawatomi ecologist, educator, and writer). No sufficient space has been devoted to these ideas globally and – in the spirit of Indigenous research methodologies – I would like to consider this project as my contribution to promoting Indigenous ecological knowledge systems and foregrounding research and scholarship grounded in Indigenous knowledges. Engaged in Indigenous research as a personal and subjective process honouring Indigenous worldviews, my project is also a journey of self-discovery in relation to Creation and it is guided by the principles of "respect, reciprocity, and relationality" (Wilson, 2008, p. 59). Such research demonstrates my respect for Indigenous knowledges and my commitment to upholding them as a way of gratitude and hence the need for reciprocity. My interest in Indigenous cultures has also deepened the process of my self-learning, my journey into reconnecting with the land, culture, my family history, my ancestry as an indispensable condition of my Silesianness. The collective memories of my relatives have been with me on that research path. As a journey of self-discovery, this research has helped me reclaim my place on the land and my parents' teachings on collectivism, the well-being of the motherland, and intimate

relationship with the land,[11] and responsibility for nature – being the sum of the experience of my family's previous generations – and I have implemented these ethical values in my research. I have combined these ethical guidelines and my lived experiences with Indigenous principles of interconnectedness of all living things and respect for the land passed down through language, storytelling, and prayers. It is crucial as many people have started losing their connection to the land for the sake of pursuing their careers which has subsequently resulted in neglecting a reciprocal relationship with local ecosystems.

My research journey

Before my research into this area, I went through a raising of consciousness journey and decolonization of my own mind. My family background, placeness, and university experiences, including conferences and workshops both in Poland and abroad, shaped my interests and led me to recognize the idea of pluriverse and diverse ontologies and epistemologies. This kind of knowledge was not taught in Polish high schools and even universities, except at the Institute of English Cultures and Literatures, University of Silesia in Katowice, Poland. It was at the university where I learnt about Indigenous views on history, cultures, and current issues facing Indigenous peoples. We examined various types of harmful misrepresentations of Indigenous men and women, primarily perpetuated by Hollywood cinematography, including both positive and negative stereotypes such as savage warriors or stoic noble savages, and beautiful Indian princesses or squaws, just to mention a few of them. Understood in the context of colonization, land dispossession, and forced assimilation, I found those misrepresentations of Indigenous peoples oversimplified, dehumanizing, and highly disrespectful. I learnt that those popular yet derogatory stereotypes ought to be deconstructed as they actually erased their rich culture, unique ways of knowing, and colonized their identities as Indigenous peoples. It was then that I gradually developed my interest in Indigenous cultures.

In 2010 I went to Vancouver Island University in Nanaimo, British Columbia and to Alert Bay Indian Reserve to further my research into First Nations Studies and Indigenous cultures. I, together with a group of five M. A. students, went on a research

[11] I have some childhood memories of working on the land with my mother, teaching me human-nature reciprocity, that I carry in my subconscious memories.

trip "Transcultural Dialogues between Canada and Poland" to Vancouver Island University and Alert Bay Indian Reserve. The research trip allowed me access to the rich archives of VIU library and with numerous opportunities to meet and have discussions with the Elders at the First Nations Institute. I had conversations with the world-renowned anthropologist Gloria Cranmer Webster('Namgis First Nation), Cowichan Elder-in-residence in Indigenous/Xwulmuxw StudiesRay Peter, Elder-in-residence in Indigenous/Xwulmuxw Studies Dolores Louie, as well as many 'Namgis artists from the Village of Alert Bay ('Yalis).Along my journey, I have established and still nurture connections and relationships with Gloria Cranmer Webster[12] and Chief Umeek Richard Atleo (hereditary Chief of the Ahousaht First Nation) who have enabled me to recognize and further broaden my understanding of the value of kincentric perspectives on a deeply personal level.

Storywork – Elders Teachings

I also had a chance to observe and participate in the process of indigenizing Canadian education and see the work of Elders at Vancouver Island University (VIU)and their crucial role in the decolonization and re-indigenization, starting with the education system and curriculum. For decades Indigenous worldviews, histories, and knowledge systems have been excluded from the Westernized academic curricula. Thus, there is a moral imperative and institutional commitment to indigenize Canadian education system, to transform curriculum and teaching practices by including Indigenous perspectives, worldviews, protocols, ceremonies, creative expressions, and approaches to knowledge. It also counters the impacts of colonization "by upending a system of thinking that has typically discounted Indigenous knowledge and history" (Antoine et al., 2018, p. 9). Importantly, in response to this, it was at Vancouver Island University (VIU) where the process of indigenizing education and curriculum was already in place long before the implementation of the Calls to Action of the Truth and Reconciliation Commission (2015) to enact a reconciliation of Canadian universities' commitment to inclusion of Indigenous peoples. VIU appointed Indigenous elders to bring their cultural

[12] I am deeply saddened by the recent passing of Gloria Cranmer Webster. I would like to express my heartfelt gratitude for the invaluable teachings, insights, and guidance she shared with me. Her wisdom and generosity have left a lasting impact upon my personal and professional journey as a transcultural researcher. I am forever grateful for the knowledge and inspiration she shared with me, and I will carry these teachings with me as a tribute to her legacy.

perspectives and in-depth knowledge into the university's program and provide assistance for students.[13]The very concept of including Elders-in-residence in the teaching process was an eye-opener to me. Namely, my stay at Vancouver Island University was an excellent opportunity to meet Ray Peter, Cowichan Elder at Vancouver Island University First Nations Department. "Uncle Ray", as he was affectionately addressed by students and faculty alike, explained to me how a storyteller is capable of engaging his audience to situate them into certain stories within contexts, spirituality, geography, interrelationships, and spatiality. As he suggested, in order to make meaning with stories, we must embark upon visualizing characters and their actions not only by using our auditory sense but also by letting our emotions surface. Furthermore, I learned from him that stories can be categorized into time-honoured stories situated in the past and true stories dealing with recent experiences in the lives of people. The stories that I learned from Uncle Ray include the River Otter Story, the Coyote Story, and the Lightning Story. I was in a privileged position as Uncle Ray shared stories with me about Coastal First Nations Fundamental Knowledge concerning stewardship and environmental sustainability, sharing teachings concerning Indigenous peoples' deep connection to the land and their reciprocal relationship with the surrounding environment.

My early exposure to Indigenous storytelling practices, I was also taught that knowledge-making was a process that took place through the interaction between the storyteller, listener, story, and setting. Uncle Ray explained to me that Indigenous storytelling is a participatory act in terms of which the listener supplies meaning to the related story (R. Peter, personal communication, 2010). Significantly, I further my research into the area of storytelling as a transmission mechanism of Indigenous ecological knowledge. Moreover, while in Nanaimo,[14] I was billeted with First Nations Studies student Lenny Louie. During that time, I lived on the reserve of the Stz'uminus First Nation in Ladysmith, BC, and I was provided with an insight into how the communities of Coast Salish peoples live in close harmony with their traditional territory and strive to ensure that their distinctive culture will not only be preserved but also flourish in the years to come.

[13] My personal and participatory observation/witnessing, Vancouver Island University, Nanaimo, 2010.
[14] While at Vancouver Island University, I also gave a public presentation on the history of Upper Silesia at Nanaimo Campus on March 16, 2010.

Kota – String figure pedagogy

The idea for this research emerged during my visit to the Village of Alert Bay, located at the top of Johnstone Strait on Cormorant Island. I had a chance to appreciate the riches of the natural environment of this place and the cultural heritage of the Kwakwaka'wakw peoples. At U'mista Cultural Centre, I witnessed various dancing ceremonies accompanied by traditional chants and stories aimed at maintaining the Kwakwaka'wakw peoples' fundamental knowledge for future generations. Moreover, as I stayed at the house of Gloria Cranmer Webster, I spent a considerable amount of time listening to many absorbing stories she shared with me. It was at that time it dawned on me that it is her ancestral land and cultural heritage, as well as her close relatives, that matter the most to her. Being there, I could not think about anything else and it was the foreshadowing of my story. For me, in the practice of Indigenous research methodologies, my journey to Alert Bay, the privilege to interact with the Indigenous peoples and Indigenous community on their ancestral land was an empirical and embodied research experience based on good faith and mutual respect.

The main thread of my story has several other components. Namely, during our storytelling sessions, which mostly took place late in the evening, I was also able to speak and listen to Laura Cranmer ('Namgis First Nation)[15] and Carrie Mortimer ('Namgis First Nation)[16] about the traditional Kwakwaka'wakw pass-time of *kota*. *Kota* once used to be a very important performance art that included string figure making that illustrated storytelling accompanied by music, chanting, and sound effects (personal communication with Carrie Mortimer, 2010). Carrie Mortimer taught me several string figure patterns, their methods of construction, and how string figures correspond to living speech. My imagination was piqued as to why certain figures presenting natural environments and botanical imageries are presented in string whereas some are not. A series of questions came to my mind at that time and further during my research into the

[15] Laura Cranmer is currently a retired Professor of English and First Nations Studies at Vancouver Island University, playwright, and Artistic Director for the Limpfish Collective. Her play *DP's Colonial Cabaret* is the result of four years of her autobiographical research on the process of decolonization, Eurocentric world view, and positive changes within Aboriginal communities. As a playwright, Laura has twice been accepted to the Booming Ground Writer's Community Workshop at the University of British Columbia, and worked with Tomson Highway, Judith Thompson, and dramaturge Frank Moher.

[16] Carrie Mortimer was Gloria Cranmer Webster's niece and Laura Cranmer's cousin. Also known as Nagega, she was a Kwakwaka'wakw community member with extensive experience in academia. Together with Gloria Cranmer Webster, Laura Cranmer, and Patricia Shaw, she conducted research on Kwak'wala language documentation and revitalization. She was also interested in and adept at the traditional practice of *kota* string figures.

area. What cultural values were hidden in the network of the string façade? Is it possible to identify tools for learning and teaching, manuals, and progression in *kota* and related stories? What traditional types of learning were involved in string figure making? How does a loop of string weave cultural meaning and various lessons that bring the past alive into the present? How did individuals employ final string patterns and accompanying narratives? These are some of the multileveled questions which have become my research questions to be examined in this dissertation that I will address and examine extensively throughout this project using Indigenous and decolonial research methodologies.

Developing my research framework

In Alert Bay, I was brought to a place where stories are history, continuity, and identity. It is a place that I was able to recognize across cultural and language boundaries with a loop of string functioning as connecting mechanism. It became my second home, the home and spiritual space that is missing in Poland at this moment and it is in British Columbia that I have found a story in which I can actively participate. For all that, I perceive my life and personal experience as a loop of string which, moving between and across the oral tradition of my family and Northwest Coast First Nations orality, links the past and the present, Indigenous and non-Indigenous worlds together and stretches back into the time immemorial and forward into the future so that the cycle of life continues in the context of storytelling and learning. The loop is a framework for this project, encompassing the idea of relatedness and reciprocity. Providing me with an insight into Indigenous ecological knowledge and wisdom and guiding my research dissertation, it is my transcultural storywork framework for analyzing and understanding Indigenous time-honoured and life experience stories embodying lessons and manuals for sustainable living.

Equipped with the above insight, I was introduced to other issues that included reclaiming the pre-contact ways of living grounded in oral traditions, identifying and respecting the rhythms and warnings of Mother Earth alongside pipelines, fish farming, and climate change in Canada and beyond. It became clear to me that Indigenous peoples, exemplifying the significance of their ongoing relationship with the land, have played a key role in preserving and shaping the natural environment of what is now

known as British Columbia, Canada's westernmost province. From this moment my interest grew further about how this intimate relationship with the local ecosystem and its living resources can be so instrumental in guiding human actions towards sustainable resource use. How could this realm of knowledge have been accumulated, updated, and conveyed by means of storytelling from one generation to another since time immemorial? During the past few years, other events also played an essential role in the direction of my research and writing.

Purpose

The main objective of this dissertation is to analyze Indigenous ecological knowledge of Northwest Coast First Nations as inscribed in *kota* string figures and storytelling with a special attention to the role creation stories and personal narratives play in recording, teaching, and illustrating Indigenous ecological knowledge to further generations. From my transcultural perspective, determined by relational accountability to Indigenous peoples that is encapsulated by the principles of reciprocity, responsibility, and respect (Wilson, 2001, 2008; Kovach, 2009; Archibald, 2001, 2008; Rix et al., 2019) in order to determine the validity and scrutiny of my research,[17] in this dissertation, I have taken into consideration a number of First Nations cultural groups, mainly those of British Columbia, since what is reflected in the multiplicity of their stories is their cultural diversity, richness of spiritual themes, and Indigenous knowledge systems. I place the main emphasis upon using Indigenous story-based methodology to document and analyze Indigenous stories, life-time experience narratives, and *kota* string figures from the study region that embody Indigenous place-based knowledge grounded in the relational worldview. It is important to note that scholars Gloria Webster, Laura Cranmer, Carrie Mortimer, and Patricia Shaw (UBC Professor of Anthropological Linguistics) have conducted research on reconstructing the Kwak'wala language of *kota* performance (Shaw and Webster, 2013). My research approach, however, is different as I demonstrate that these stories and *kota* string figures, as a form of pattern literacy, provide land-based information on ecological and holistic relations between particular species and sustainable land-based resource management and harvesting systems; they

[17] Rix, E. F., Wilson, S., Sheehan, N., & Tujague, N. (2018). Indigenist and Decolonizing Research Methodology. In O. Liamputtong (Ed.), *Handbook of Research Methods in Health Social Sciences* (pp. 253-267). Springer.

respectfully and practically guide sustainable management practices and use of animal and plant resources, and they also serve as mapping devices; moreover, they integrate historical and factual information with a highly valuable guidance and teachings on how to apply this knowledge nowadays in a relational manner. My project explores different ways in which Indigenous storytelling creates ties between the physical and metaphysical spaces and different ontologies, weaving together the human and more-than-human worlds together. The aim of my dissertation is to contribute to scholarship which is at the intersection of Indigenous and Western knowledge systems wherein storytelling and storywork serve as a catalyst for the interdisciplinary exchange conducted in a respectful fashion.

For my analysis, I have carefully selected traditional stories, personal life experience stories, and *kota* string figures from the study region. These narratives serve as an informative material that validates the experiences, ontologies and epistemologies of Indigenous peoples. They also play an essential role in regulating the specific cultural and social order by means of presenting cultural protocols that ought to be obeyed while interacting with the ecosystem in a relational manner. These stories are also filled with significant references to relational knowledge, plants and animals employed in daily activities. In addition, it needs to be noted here that the essential characteristic of the stories and figures analyzed in this dissertation is not their sophisticated form but it is their power lying in the spoken word and string design that has creative power, allowing for the sense of the sacred to be brought to life.[18]

I posit a thesis that different forms of local narrative, creation stories, personal life experience stories, and performance art of *kota* string figures, deeply grounded in Indigenous worldviews, have been used to revitalize Indigenous ecological knowledge systems preoccupied with traditional practices and methods of sustainable and responsible harvesting and management of local ecosystems and biotic resources in British Columbia across time and space. My analysis shows how they have been used and how this relational knowledge can add to and be combined with Western practices. The focus on Indigenous systems is studied in the context of Indigenous holistic philosophy (ontology, epistemology, axiology) and I contribute to the decolonization of the politics of knowledge creation by foregrounding the work of Indigenous scholars. Since these stories may be sometimes regarded as mythopoetic (Pugliano-Martin, 2006;

[18] I have discussed the concept of sacredness with reference to Indigenous cultures of the study region in Glossary.

Korba, 2006), I myself put the quotation marks around "mythopoetic" since such classification implies that such stories are untrue. In fact, I argue that these apparently entertaining stories are integral to Indigenous epistemologies and contain crucial Indigenous ecological knowledge. My examination of these stories and pedagogical strategies (i.e., *kota*) shall demonstrate how Indigenous stories convey a holistic view of reality, inclusive of both the spiritual and physical realms; it will also show their practical use as justification of certain actions by establishing socially acceptable knowledge regulating human-ecosystem relations. Specific hypotheses have been defined as a result of the methodological discussion presented in the first chapter.

1.2. Organization and scope of the dissertation

Chapter 1

In Chapter 1: Introduction: Learning the Territory, I explore my transcultural positioning within this dissertation and discuss the back story of my research journey and how it has influenced the nature of this dissertation and the research described herein. I introduce my Eastern Slavic background and Upper Silesian minority perspective. I discuss the intergenerational transfer of stories and cultural knowledge that took place at my family home. Also, I focus on my placeness and borderland identity and how I went through a raising of consciousness journey and decolonization of my own mind before I began my research into Indigenous ecological knowledge and Indigenous storytelling. The final section of this chapter describes the major components of my dissertation and outline the research purpose and its objectives.

Chapter 2

In this chapter, I present the literature I have reviewed in various disciplines in order to discuss research on Indigenous ecological knowledge and Indigenous storytelling of the Northwest Coast First Nationsas a knowledge making process, research methodology, and resurgence tool. I highlight research discussed in the context of Indigenous ecological knowledge and the role of co-management serving as a tool for effective environmental stewardship in a resource harvesting and management context. I outline tensions inherent in research into Indigenous ways of knowing. Then, I focus on how storytelling has been used to validate experiences and epistemologies, share ways of knowing, conduct research in an ethical and respectful manner, and contribute to

decolonization and resurgence. I have included literary sources written by Indigenous peoples considered to be experts by their communities, Indigenous and non-Indigenous scholar-allies.

Chapter 3

This chapter delves into the story-based research methodology employed to conduct research with and on Indigenous peoples and their knowledges and intellectual traditions so as to make sure that the research takes into consideration and respects their cultural protocols, values and codes of conduct. To contextualize the research design of my qualitative study immersed in Indigenous research methodologies, I do a cursory introduction of story-based research and discuss the application of storytelling and storywork within the relational approach of my methodology. Then, I discuss the application of the storytelling method in the narrative analysis of traditional creation stories, personal life experience stories, and *kota* string figures practiced by Northwest Coast First Nations. I describe how I use the Indigenous storywork and reflexivity to make meaning with and from Indigenous stories. My storytelling research method seeks to demonstrate how Indigenous ways of knowing have been embodied, preserved, and updated by Indigenous stories and *kota* string figures.

Chapter 4

This chapter explores the unique character of Indigenous storytelling, with reference to Northwest Coast oral traditions, and its importance for contemporary Indigenous communities as the underpinning of their lifeways and act of survivance in the present. It is complemented by an in-depth analysis of the categories and intricacies of Indigenous stories, narratives, and overarching themes and provides guidelines how to make meaning by deciphering messages and cultural teachings deeply embedded in those stories to provide a basis for a discussion of Indigenous storytelling as transmission mechanism of dynamic and place-based Indigenous ecological knowledge. Specifically, I work with storytelling of the Nuu-chah-nulth, Kwakwaka'wakw, Haida, Secwepemc, Nlaka'pamux, Squamish, and Haisla Nations living on the territory of British Columbia. It is essential to note that throughout the dissertation I will examine material written and already published in English. Anthropologists and scholars-allies have cooperated with Indigenous knowledge-keepers to produce translations of Indigenous stories with permission of specific groups to publish them. Incorporating

these translations has enabled me to use Indigenous stories without fear of violating ethical protocols as they have already been in the public domain for a long time. I have made every effort to work with stories accepted by Elders and bring Indigenous languages into my research to confirm my respect for revitalizing and preserving Indigenous onto-epistemologies and to decolonize the English language.

Chapter 5

I explore different forms of Indigenous ecological knowledge transmission by examining creation/teaching stories and personal life experience stories of the Northwest Coast First Nations. I analyze the way these stories shape peoples' pro-ecological approach and awareness, grounded in the relational worldview, requiring sensitivity and responsibility for the land. I document and work through stories that codify in their plot the inherent teaching of kin-based philosophy, animism, and related sustainable harvesting, as an ongoing production of relational ontology, making people identify themselves with their ancestral lands and animated beings of more-than-human species in a reciprocal and respectful manner and, thus, understand that nothing should be wasted. Afterwards, the subsequent discussion focuses on the way the recorded stories accumulate, update, and transmit the holistic knowledge of long-term application of plant and animal species in different aspects of Indigenous peoples' lives as well as in millennia-old resource harvesting methods and sustainable management systems. I show that these stories enact their meaning in performance, in various contexts bringing these stories to life, enabling people to move beyond colonial heritage and communicate and share Indigenous knowledge in an anti-colonial manner. Each analysis confronts what seems to be incomprehensible details and attempts to make them meaningful bya careful argument that is based upon narrative, biological, and ethnographic sources. In effect, the analysis of these stories enables me to bring into light the practical use of Indigenous narratives, interweaving ethical and spiritual context and philosophical guidance, in justifying specific human actions towards the land and its kins/resources.

Chapter 6

In this chapter, I analyse *kota* string figure storytelling practiced by the Kwakwaka'wakw peoples as another storytelling form, a performance art used to record and transmit Indigenous ecological knowledge regarding not only the local ecosystem but also a number of various resource harvesting and management systems. I

demonstrate that early ethnographers paid no attention to the scientific and spiritual importance or role of these string figures, focusing more on the way these patterns were constructed while leaving out Indigenous ecological knowledge and holistic worldview deeply encoded in some patterns and accompanying stories. Among the rich string figure repertoire, I inquire into string patterns and accompanying stories whose subject matter deals with spirituality, relatedness, and the biodiversity and functioning of the ecosystem of the northern part of Vancouver Island, paying particular attention to the local seascape and landscape. I examine string figures that may function as a mapping device commemorating crucial geographical features, seasonal round routes, and thus essential plant and animal harvesting localities, suggesting their general outlines preserved in terms of string designs. I provide a close analysis of *kota* string figures as a form of pattern literacy and associated stories and their connection with Indigenous philosophies and worldviews. I argue that *kota* string figure storytelling is a reclamation of Indigenous perspectives and voices and lays a framework and foundation for the cultural revitalization of Indigenous ecological knowledge and resurgence of Indigenous sovereignty.

Chapter 7

This section concludes the dissertation. I summarize the contributions of the core chapters and present my research findings and implications. I finish the chapter with my personal reflections on the process of doing the research from my transcultural perspective and what I have learnt from my research journey and how it has changed me over the years. I stress the importance of Indigenous ecological knowledge and spiritual perspectives in bringing Indigenous and Western ways of knowing together into equitable dialogue to re-indigenize Western academia and foreground the importance of reclaiming Indigeneity in Eastern European minority Slavic cultures.

Chapter 2

Literature Review

In this chapter, I provide and further examine background information on research on Indigenous ecological knowledge of Northwest Coast First Nations in both scholarly and social contexts, Indigenous storytelling practices, relational worldviews, and Indigenous research methodologies. To provide theoretical grounding, I highlight research discussed in the context of Indigenous ecological knowledge and the role of co-management serving as a tool for effective environmental stewardship in a resource harvesting and management context. I outline tensions inherent in research into Indigenous ways of knowing. I then review crucial discourse on Indigenous methodologies and storytelling practices. While not meant to be an exhaustive and detailed literature review, it is meant to provide essential background and theoretical context for my research. Although there are written references to Indigenous ecological knowledge on the Northwest Coast, there are no resources that specifically focus upon Indigenous forms of storytelling and *kota* string figures as a form of pattern literacy and mechanism of Indigenous ecological knowledge preservation, dissemination, transmission, systematic updating, and practical application. I have included literary sources written by Indigenous peoples considered to be experts by their communities, Indigenous and non-Indigenous scholars-allies. My aim is to provide a broad theoretical basis to fully situate each chapter in the relevant literature.

2.1. Indigenous ecological knowledge revival

In the following section, I discuss fields where Indigenous ecological knowledge has experienced revival and applied value. In today's world that is in the throes of ecological crisis, strong trust in science and technology as the only possible solutions to environmental problems has not really worked out and it turns out that, despite tremendous technological and scientific advances made since the Industrial Revolution, such as genetic engineering, robotics, and nanotechnology, Western science and poorly considered use of technology are in fact responsible for a plethora of environmental

problems that human beings currently have to deal with. The air we breathe, the water we drink, and the food we consume are all impacted by the industrial capitalistic society dominating the world. According to Nancy J. Turner, First Nations peoples, "particularly culturally knowledgeable elders, knew that this Western view was deeply flawed, but their voices were seldom heard and usually ignored" (2014b, p. 409). Other approaches towards addressing global environmental problems and disappearing natural resources are necessary and, thus, Indigenous ecological knowledge is gradually given serious consideration as a reliable alternative to the current status quo. Below I detail fields where Indigenous ecological knowledge has an applied value and has been utilized.

Indigenous ecological knowledge, acquired and practiced through hands-on experience of living in close contact with local ecosystems for thousands of years, has attracted a lot of attention in Western academic fields in the last few decades(Inglis, 1993; McGregor, 2004; Menzies, 2006; Turner, 2014a, 2014b, 2020) and "a growing body of literature attests not only to the presence of a vast reservoir of information regarding plant and animal behavior but also to the existence of effective [Indigenous] strategies for ensuring the sustainable use of local resources" (Johnson, 1998, p. 3). I believe this realm of place-based knowledge which offers alternative modes of interacting with local ecosystems needs to be considered more widely by people all over the world. Despite the effort to eliminate Indigenous peoples from Canada, they have been able to persist and, thus, the strength and perseverance of their knowledge should not be underestimated. Several examples that follow exemplify my point.

Colonizers – albeit having done nothing to build trust of relationships with Indigenous ways of knowing and local ecosystems – stripped Indigenous peoples of their lands, languages, and lives; refused to show respect for their land and its biotic resource, thus contaminating local ecosystems – began to request Indigenous peoples to share their place-based knowledge and experience in order to deal with a plethora of problems that the very society had brought to life by means of their actions. Scholars and scientists realized that the complexity and uncertainty of ecosystems and biodiversity is an asset that should be protected and that realization led to the drive to employ Indigenous ecological knowledge to improve environmental outcomes (Feit, 1988; Battiste, 2000; Menzies, 2006; Turner, 2014a, 2014b, 2020; Nelson, 2018). Needless to say, the rise of Indigenous knowledge drawn from the experiences of thousands of human generations in prominence started to coincide with the rise of the

importance of sustainability as a guiding theme, particularly crucial in the discourse on global climate change and environmental issues we struggle with. It might be a new story of science and knowledge based upon peoples' participation with the natural world, somewhat reestablishing the participatory mind in the larger ecology of the world in the critical times ahead. Indigenous scholar-activist Melissa Nelson (Anishinaabe/Métis/Norwegian)[19] suggests that it is knowledge that must become "the story of this awareness and relationship to the animate world" (2018, p. 17).

The recognition of Indigenous ecological knowledge as a valuable source of ecological information and imperative for consultation brought about a lot of research carried out by Indigenous and non-Indigenous researchers in recent years. Northwest Coast scholarship in the past three decades has witnessed "an increasing number of researchers [who] now understand that people of this region actively manipulated both terrestrial and aquatic ecosystems to increase natural biodiversity and abundance" (Cullon, 2017, p. 51), for which extensive datasets might not exist in Western science (Berkes, 2012).Among them, one can name Fikret Berkes (Distinguished Professor at University of Manitoba and applied ecologist), Nancy J. Turner (University of Victoria Emeritus professor and ethnobotanist working with First Nations elders and cultural specialists), Robin Kimmerer (Potawatomi Nation), Melissa Nelson (Anishinaabe/Métis/Norwegian), and Charles Menzies (Gitxaala Nation of northwestern British Columbia and an enrolled member of the Tlingit and Haida Nations of Alaska). Trying to pave the way for a shared and sustainable future for all people, Indigenous peoples, communities of researchers-allies and advocates, as Marie Battiste (Mi'kmaq Nation) and James Henderson (Chickasaw Nation) observe, call attention to the detrimental impact of global climate change upon Indigenous peoples, their knowledge systems and understanding of the land (2000, p. 12). For many years, natural resource management and the overall capacity of Indigenous peoples to influence the landscape was overlooked. It is now evident that patches of natural or undisturbed habitat have, in fact, been carefully managed by Indigenous peoples since time immemorial and they have actively engaged in their surrounding ecosystems in a reciprocally influential way (Battiste and Henderson, 2000; Menzies, 2006; Turner, 2014, 2020; Nelson, 2018).According to Elizabeth Padilla (Outreach specialist at the University of Alaska

[19] I deliberately choose to repeat the national affiliation most of the time to foreground the contribution of Indigenous Elders, scholars, and critics. I quote them to have their voices resonate in my transcultural project.

Fairbanks) and Gary Kofinas (Professor of resource policy and management at the University of Alaska Fairbanks), early systems of knowledge were dichotomized, which is western versus traditional knowledge systems. Thus, in the late 1970's, a number of co-management bodies of Canada were established as an effort to include Indigenous resource users and scientists in an adaptive management process of a particular territory within a specific ecosystem (Padilla & Kofinas, 2014), which might offer a potential for the recognition of the legitimacy of local place-based realm of knowledge in formal ecosystem management regulations.

Early studies on Indigenous ecological knowledge

Early studies carried out by Northwest Coast anthropologists, ethnologists, ethnographers, and scientists were targeted mainly at documenting Indigenous knowledge pertaining to animal and plant behavior in a particular ecosystem. That rich set of research dominated by 'salvage ethnography'[20]was conducted by Euro-American anthropological scholars, such as James Teit, Franz Boaz, and George Hunt. Human-nonhuman relationships and Indigenous worldviews are elements that can be identified within recorded 19th century oral texts and ethnographic literature. Franz Boas, James Teit, and George Hunt tapped into local knowledge sources to provide records of numerous Indigenous stories, many of which relate to summer resource procurement season and management of resource localities (Teit, 1900, 1906, 1909, 1930; Boas, 1912, 1916, 1934, 1966; Hunt, 1905, 1906). For the purpose of my research, I find those ethnographic texts useful for my analysis of Indigenous ecological knowledge and its forms of transmission. It needs to be brought forward, however, that even though Indigenous peoples, particularly Indigenous women, were instrumental in collecting those narratives of oral traditions as procurers and cultural translators, their voices and perspectives are not visible in the anthropological texts and transcriptions, those made particularly by Hunt, as they were marginalized and accorded neither authority nor authorship for the sake of privileging the methodology of positivist scientific rigour as

[20] The term 'salvage ethnography,' coined by Jacob W. Gruber, focused on the documentation of Indigenous cultures whose extinction was feared as a result of dislocation and modernization. Nineteenth and early-twentieth century salvage anthropology, including the pursuit of artefacts, was carried out through disrespectful methods. For further information on salvage ethnography, see Gruber, J. W. (1970). Ethnographic Salvage and the Shaping of Anthropology. *American Anthropologist*,72(6), 1289-1299.

well as male and colonial perspectives. Yet, as Harry Whitehead (Associate Professor in Creative Writing at the University of Leicester) states, "there is also a strong sense of some past cultural entirety that has been shattered, and whose broken pieces must be gathered and rebuilt into a coherent whole" (2010, p. 218). Although not ubiquitous, I observe that some examples of holistic Indigenous ecological knowledge pertaining to interconnectedness of all beings, remarkable plant cultivation practices, resource harvesting, management of local ecosystems, social management structures informing action and administering use, access, preservation, monitoring, and enhancement of resource localities, as well as ingenious harvesting and management technologies in the study region can be identified in James Teit's *The Thompson Indians of British Columbia*, *Mythology of the Thompson Indians*, and *The Lilooet Indians*; Franz Boas' T*simshian Mythology: Thirty-First Annual Report of the Bureau of American Ethnology*, *Geographical Names of the Kwakiutl Indians*, *Kwakiutl Tales*, and *Kwakiutl Ethnography*; and George Hunt and Franz Boas' *Ethnology of the Kwakiutl* and *Kwakiutl Texts*.[21] Their notes and colonial-era observations regarding the perspective of knowledge holders who share those stories are useful in interpreting their meaning, and those stories are not simply narratives for the sake of pleasure and entertainment but, in fact, they convey a great depth of knowledge regarding the spirituality of Indigenous peoples, their holistic relationship with the land, surrounding environment, and local ecosystems. My research shows that the recorded stories represent much more complex knowledges than what those anthropologists and ethnographers observed at that time.

Boas and Hunt brought to light a realm of underlying knowledge of plant and animal behaviour. Their research was done under political pressure to recognize Indigenous peoples' rights but also under a growing environmental movement aimed at identifying alternative approaches to Western science and technology. Martha Johnson, the Research Director of the Dene Cultural Institute in Canada's Northwest Territories, observes that there has been a recent emphasis on understanding sustainable practices for resource use and exploring ways to integrate this complex knowledge Western scientific resource management (1998, p. 5).

[21] According to Harry Whitehead, "In concentrating as they did on the salvage of pre-contact Kwakwaka'wakw language and culture, Hunt and Boas, in their many published works, in fact helped *create* a classical, literary historical narrative, language and mythological corpus, which is today often considered (nostalgically) authentic, a more 'real' Kwakwaka'wakw identity. The U'Mista Cultural Centre illustrates how the Boas/Hunt corpus has become such a powerful symbol of authenticity to the Kwakwaka'wakw people." See: Whitehead, H. (2010). The agency of yearning on the Northwest Coast of Canada: Franz Boas, George Hunt and the salvage of autochthonous culture. *Memory Studies*,3(3), 219.

What played a significant role in the international recognition of Indigenous ecological knowledge was the implementation of the World Conservation Strategy (IUCN) in 1980 and the publication of the Brundtland report, *Our Common Future* (WCED) by the World Commission on Environment and Development in 1987, calling for the need to collaborate with Indigenous peoples, seek their knowledge and resort to their place-based expertise while managing plant and animal species. The Brundtland report says

> These communities are the repositories of vast accumulations of traditional knowledge and experience that links humanity with its ancient origins. Their disappearance is a loss for the larger society, which could learn a great deal from their traditional skills in sustainably managing very complex ecological systems (1987, p. 74).

This recognition, exemplified in terms of *Our Common Future*, states that the wealth of Indigenous knowledge, practiced, transmitted and based upon thousands of years of land-based experience may play a salient role in teaching modern societies how to manage surrounding ecosystems and their biotic resources. Moreover, by virtue of clauses of the United Nations Convention on Biological Diversity (United Nations, 1992), to which Canada is a signatory, and United Nations Declaration on the Rights of Indigenous peoples (United Nations, 2007), which Canada has endorsed, the United Nations – recognizing, protecting and promoting Indigenous peoples' knowledge systems pertaining to biotic resource use and management – has required member nations to respect their knowledge and seek consultation from Indigenous peoples with respect to biotic resource use having an influence upon their ancestral homelands(IUCN, 1980; Brundtland, 1987; *United Nations Declaration on the Rights of Indigenous Peoples*, 2007; Berkes, 2012; Turner, 2014a, 2014b). Being allowed to refer to their immense knowledge and perspective is a key piece to understanding the fragility of local ecosystems and current use of local plant and animal species as they have seen the changes over the course of time and know what is out there. These declarations promote the involvement of Indigenous peoples in environmental governance.

In more recent times, Canada has also signed numerous international agreements aimed at promoting Indigenous ecological knowledge, such as the Convention on Biodiversity as well as federal acts of Parliament have become amended in an effort to include Indigenous ecological knowledge into environmental impact assessment, namely the Canadian Environmental Assessment Act (Canadian Environmental

Assessment Agency, 2007; Stevenson, 2013). As far as legal issues are concerned, the Supreme Court of Canada has likewise given recognition to Indigenous ecological knowledge in taking decisions regarding land and resource rights in British Columbia where modern treaties are still negotiated (Turner, 2014b). According to Johnson (1998), only by means of bringing to life science inextricably linked with the priorities of Indigenous peoples as well as creating a technological base sort of blending traditional and modern approaches towards problem-solving can their knowledge be meaningfully acknowledged and treated with deserved respect (p. 6). Nowadays, integrating Indigenous ecological knowledge with scientific data cannot be ignored, especially when we are in the face of environmental challenges humanity must deal with all together against all odds. Indigenous voices and perspectives are an extremely important part of this conversation and we should start listening with our three ears.

Value of Indigenous ecological knowledge in contemporary academia

According to Charles Menzies, the relationships between Northwest Coast First Nations and local ecosystems along with their land-based activities have always been of interests to academics. Despite that, as mentioned previously, it is during the last few decades that academia has paid attention to their ecological knowledge systems as a source of wisdom and experience regarding environmental conservation and sustainable use of biotic resources, for there is a need for alternative practices and perspectives aimed at dealing with disastrous climate changes. What ought to be emphasized is an attempt to apply Indigenous knowledge systems in contemporary environmental management. In his research, Menzies (2006) accuses contemporary resource management of isolating plant and animal species as well as other resources in development and conservation planning (pp. 4-5).

In the field of natural resource management, much energy has been given to gathering, compiling, and integrating Indigenous ecological knowledge systems with scientific knowledge. Deborah McGregor (Anishinaabe Nation), Charles Menzies, Robin Kimmerer, and Fikret Berkes put forward that Indigenous knowledge systems should be re-evaluated as Indigenous peoples, unlike industrial capitalist economies intensively exploiting natural resources, are capable of using biotic resources in a sustainable manner since they know how their local ecosystem functions and understand

the interrelationships between various plant and animal resources(McGregor, 2004; Menzies, 2006; Kimmerer, 2002;Berkes, 2012).In his book *Traditional Ecological Knowledge and Natural Resource Management*, Menzies (2006) goes on to argue that Indigenous ecological knowledge is inherent to everyday livelihood activities as well as daily processes of subsistence. According to Potawatomi scientist and educator Robin Kimmerer (2002), incorporating Indigenous ways of knowing into science education allows students to "receive cross-cultural views with great enthusiasm" (p. 436). Furthermore, due to a number of ecological crises, researchers have started turning their attention to Indigenous knowledge systems in order to seek solutions where Western scientific knowledge and technological solutions have actually failed (Menzies, 2006; Berkes, 2012; Turner, 2014, 2020; Nelson, 2018). It needs to be argued, then, that although Indigenous ecological knowledge does not seem to be in the possession of a key to unlocking solutions to all the adverse impacts of imminent climate change, it may provide us with a plethora of invaluable teachings about monitoring and adapting to climate change on a regular basis. Consequently, we cannot totally remain in this Western scientific hegemony, for it disqualifies other forms of knowledge in contemporary context. Instead, Menzies, Turner, Nelson, and Kimmerer claim that Indigenous ecological knowledge, its values, philosophies, spiritual context, ethics governing harvesting, and sustainable practices should be brought to the fore in the climate change discourse not in an exploitative manner yet with deserved respect and gratitude. It should be accepted as valid and good within its own right without being measured against Eurocentric ideas of progress and objective knowledge (Menzies, 2006; Berkes, 2012; Kimmerer, 2013; Turner,2014a, 2014b, 2020; Nelson, 2018). In my approach, I take alternative conceptualizations of the world seriously, moving beyond the confinements of the four walls of Western science. Having gone on the journey of self-development, I recognize the validity of pluriversal anthropocentric perspectives.

Spiritual connections with the natural environment – Voices of Indigenous scholars

The importance of humankind's ecological stewardship rather than exploitation and domination has led to the development of the awareness of the earth-based spiritual dimension of Indigenous ecological knowledge systems informing human-nature

relationships (Starhawk, 1989; Atleo, 2005; Kimmerer, 2013; Cote, 2019). Indigenous ecological knowledge is woven into the social and spiritual context of Indigenous cultures. Indigenous scholars, philosophers, and intellectuals are an important force as they foreground the importance of ecologically sound holistic perspectives. It is essential to note that Indigenous scholars have been frequently omitted by Western discourses and it is one of the aims of this project to foreground Indigenous scholarly perspectives. According to Matthew Fox (1988), "Mother Earth is in jeopardy, caused by the anthropocentrism of religion, education, and science during the past three centuries. A new beginning is required, centered on *the sacredness of the planet* (p. 50). For changes to take place, it is necessary to embrace and understand the spiritual consciousness of humanity to develop a sustainable relationship with the local environment (Schwarz & Schwarz, 1987).

This holistic and practical lived knowledge system is bound to reflect peoples' spiritual relationship with all of creation (Kimmerer, 2012, 2013, 2015; Atleo, 2005, 2009, 2012; Brown, 2009; Watts, 2013). It is important to note that Indigenous concepts of pluralistic realities recognize diverse ways of knowing and relating to all of Creation. Acknowledging the existence of different onto-epistemologies, these perspectives refer to reality as multi-layered and promote the co-existence of multiple-truths and knowledge systems grounded in different cultures (Atleo, 2005; Smith, 2009; Kimmerer, 2013). Metis scholar Zoe Todd writes that "that lands, waters, and atmospheres in what is currently known as Canada and North America are agential beings understood through complex forms of interrelatedness and kinship with humans; they have histories that extend far beyond human existence (Kanngieser & Todd, 2020, p. 389). Tewa scholar Gregory Cajete's research coincides, for instance, with Atleo's work as he observes that all things contain spirit and are agential beings (Cajete, 2000). In his books *Tsawalk: A Nuu-chah-nulth Worldview* and *Principles ofTsawalk: An Indigenous Approach to Global Crisis*, Chief Umeek Richard Atleo states that the relationship between nature and humans is characterized by holistic interdependence and interaction, meaning that there is no separation between the human world and more-than-human world, between physical process and spiritual ones. Atleo stresses that the principle of *tsawalk* refers to the ontological unity of all existence. He goes on to say that the holistic balance with nature and spirit world needs to be maintained by means of active, responsible, and reciprocal effort on the part of human beings. Thus, this holistic understanding of environment includes an ethic of mutual respect and obligation

between humans and the more-than human world (Atleo, 2005, 2012). These Indigenous scholars demonstrate that Indigenous knowledge has a spiritual more-than-human dimension and offers an alternative perspective on the relations between human beings, nature, and energies connected to land. Spiritual relations connecting every aspect of the world require moral accountability among all sentient beings.

As observed by Robin Kimmerer in her scholarship, nature, from an Indigenous perspective, is subjective since it is imbued with personhood and moral responsibility. Key to this is what she calls "grammar of animacy" which means recognizing kinship ties with nature, plants, animals, and land. It is important to acknowledge nature not as a resource but as an elder relative (Kimmerer, 2012, 2013, 2015). Anishinaabe and Haudenosaunee scholar Vanessa Watts (2013) adds that nature and all its elements, animals, plants, and rocks possess agency. It is animate as it breathes and possesses an inherent power. Believing that people's relationship to nature is broken, Kimmerer invites people to be more respectful of local ecosystems and form intimacy and respect with other species. As a path to kinship, people should use "kin" instead of "it" with regard to natural beings (Kimmerer, 2012, 2013, 2015). Similarly to Atleo, in her book *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teaching of Plants,* Kimmerer (2013) argues that the natural world and all animate beings – including animals, plants, rocks, forests, and waterways – are teachers people should look to for guidance as "they've been on earth far longer that we have been, and have had time to figure things out" (p. 9). Unlike the recognized hierarchy of beings in the Western tradition with the human being on top, Indigenous ecological knowledge, as Kimmerer states, places human beings as the younger brothers of Creation, and all living entities are not only sustainers but also teachers and relatives, sharing teachings of generosity and prescription for sustainability to help restore ecological balance (2013). As a result, as Donald Dwayne (Paspaschase Cree Nation) observes, ecology, from an Indigenous perspective, is seen as "all the things that give us life, all the things that we depend on, as well as all the other entities that we relate to, including humans beings" (Dwayne, as cited in Todd, 2014).

Drawing on the Indigenous voices, I have come to realize that the spiritual dimension of Indigenous ecological knowledge rooted in the earth emphasizes the importance of sacred ties of kinship of all beings that extend beyond humans and encompass sophisticated relationship with nature and its more-than-human beings. It keeps the knowledge situated in land. This concept of relationality between all things,

rejecting and challenging the Euro-Western ontological split between nature and culture, is central to my dissertation.

Indigenous scholars call for the recognition of the importance of the land to maintain one's spiritual connection to the sacred and animate nature and local ecosystems. This holistic knowledge is deeply embedded in ancestral land (Armstrong, 1998; Atleo, 2005; Kimmerer, 2013; Watts, 2013, 2016; Coulthard, 2014; Styres, 2019; Kanngieser & Todd, 2020). In *Land Speaking*, Jeannette Armstrong (1998) argues that for Syilx peoples the land is more than an ecological entity. The land speaks and it is a source of memories and knowledge.[22]The impacts of colonization, however, severed the intimate connection Indigenous peoples shared with the land, and, in response, Armstrong urges peoples to re-indigenize themselves and the land, "to regain a sense of the self as overlapping with the land" (p. 153). Vanessa Watts (2016) expands on this notion by unfolding an Indigenous conception of onto-epistemology – connecting knowing with being, place with story – and describes the world through the physical embodiment of *Place-Thought* which is "central to knowledge production" (p. 4) and "based upon the premise that land is alive and thinking and that humans and non-humans derive agency from […] thoughts" (p. 21) that have never been separated from place (2013, 2016). In her research, it follows that Indigenous peoples are an extension of land and are obliged to maintain a communication and reciprocal relationship with it. Indigenous ecological knowledge does not allow for dichotomies between knowing and being (2013, p. 23).

This understanding of land that keeps knowledge situated for people is extended by Mohawk scholar Sandra Styres (2019) who states that land "refers not only to place as a physical geographic space but also to the underlying conceptual principles, philosophies, and ontologies of that space" (p. 27). For Styres, "Land *is* spiritual, emotional, and relational; Land is experiential, (re)membered and storied; Land *is* consciousness – Land *is* sentient" (p. 27). Anja Kanngieser (University of Wollongong) and Zoe Todd state that land "co-constitute[s] human knowledge and being" (2020, p. 389). Acknowledging the animate nature of land brings the reader back to the concept of kincentric philosophy. Thus, human actions are intimately connected to the spirit of land and all its elements and thus Indigenous knowledge cannot be separated from nature and more-than-human beings.

[22] I will elaborate on Jeanette Armstrong's observations on the connections between language and land in Chapter 6.

Convergence of Indigenous and Western ways of knowing

The last few decades have seen a growing interest in the integration of Indigenous ways of knowing with Western scientific knowledge in relation to sustainable development. Scholars such as Berkes, Menzies, Turner, McGregor, and Kimmerer likewise attempt to bring our focus to the importance of research that blends Indigenous ecological knowledge with Western education and science and natural resources management projects, for Indigenous ecological knowledge can serve as a tool in working towards both immediate resource conservation and long-term sustainability, which I briefly outline here. Those researchers have observed that Indigenous ecological knowledge can arguably strengthen science-based methodologies by providing new ecological concepts and resource management strategies derived from a long-term observation of particular ecosystems. As a result, such integration and utilization of Indigenous ecological knowledge with scientific data may play an essential role in complementing conservation research provided that Indigenous people meet at the table of planning in a spirit of equity and reciprocity (McGregor, 2000; Menzies, 2006; Berkes, 2012; Whyte, 2013; Kimmerer, 2013; Turner, 2014a, 2014b, 2020). Significantly, such an integration process ought to involve blending of two knowledge systems instead of one being dominated and controlled by the other. It is important to realize that Indigenous ecological knowledge ought to be regarded as on par with Western ways of knowing. If integration is carried out in a poor manner, there is a risk of harming Indigenous communities by subduing and eroding their vital perspectives and misusing their knowledge. Such co-management projects may lead to the disempowering of Indigenous communities. I acknowledge that these issues are relevant to my research and I outline my response to them in the following chapters.

By the mid-1980s, with an emphasis upon practical matters linked with the conservation of biodiversity and resource management, the rapidly growing literature on Indigenous ecological knowledge led to a recognition on the international arena of its potential applications to contemporary resource and environmental problems. Many Indigenous and non-Indigenous authors have argued that incorporating Indigenous ecological knowledge systems into ecological restoration, conservation biology and resource management decision-making may increase the effectiveness of sustainable resource management planning and activities (Berkes, 1993; Craig, 1998; McGregor, 2000; Kimmerer, 2002; Menzies, 2006). For instance, as Richard Atleo explains,

> I have consistently maintained that the two systems [conventional science and traditional ecological knowledge] can complement one another. And that's my personal view of it […] if people who espouse either system respect each other's system, then I think it can work very well. […] And so from that perspective then, people in that tradition, who live in that tradition require humanization which the other process can bring (Atleo, as cited in Craig, 1998, p. 20).

Atleo draws attention to an increasing recognition of the potential of Indigenous ecological knowledge to create a sustainable world. He further discusses that the key to this process is respect, humility and gratitude (Atleo, as cited in Craig, 1998). Moreover, what is put forward by such scholars is that Indigenous ecological knowledge, providing a complementary and detailed understanding of a particular locality, might be recognized as an invaluable contribution to tackling climate change at local and international levels largely due to its up-to-date detection of climate impacts, development of strategies and methods aimed at dealing with such changes on a regular basis for time untold as well as due to the introduction of sustainable resource and land management practices passed on from one generation to another (Berkes, 1993; Craig, 1998; McGregor, 2000; Kimmerer, 2002; Menzies, 2006).

In a similar fashion, non-Indigenous scholar-ally Fikret Berkes is in favor of Indigenous ecological knowledge systems. He observes that various forms of Indigenous ecological knowledge have become used by scientists in a variety of fields, yet not always consulted with Indigenous peoples (Berkes, 2000). Kimmerer (2002) states that Western science – unlike Indigenous knowledge that "explicitly incorporates the cultural experience of the observer into interpretation of the natural world" (pp. 435-436) – has excluded emotional and spiritual dimensions and moral perspectives (2002). According to Shawn Wilson (2008), an Opaskwayak Cree Nation scholar, Indigenous knowledge is spiritual as it builds upon relationships with all of creation, the land, the cosmos, animals and plants wherein "you are answerable to all your relations" (pp. 56-57).

Similarities and differences between Indigenous ecological knowledge and Western reductionist-positivist scientific knowledge comprise one of topics in contemporary research (Nadasdy, 1999; Berkes, 2000, 2012; Shakeroff & Campbell, 2007). Fikret Berkes (2000) points out Indigenous resource management practices – forestry practices and resource rotation that have fallen out of favor in government resource management yet being now rediscovered (p. 1254). Thus, not only does he take into account benefits of merging Indigenous ecological knowledge with Western

knowledge but he also brings into the open challenges associated with it. Suffice it to say, this system of knowledge – providing different ways of looking at and comprehending the world around us – came under new attention in the sphere of politics and environmental management. Following this line of thought, Kirsten Vinyeta, an Assistant Professor and environmental sociologist at Utah State University, suggests that various forms of Indigenous ecological knowledge became commonly accepted in social sciences as well as by scientists in agriculture and water conservation (2013, p. 5). Berkes (2012) provides the reader with an examination of essential conceptual issues and examples of the practical application of Indigenous ecological knowledge stretching from the subarctic to the tropical areas. He postulates that there is a "need for ecological insights from [Indigenous] practices of resource use, and the need to develop new ecological ethic in part by learning from the wisdom of traditional knowledge holders" (p. 14) which is complimentary to scientific ecology. However, Jana M. Shackeroff (Environmental scientist at Duke University) and Lisa Campbell (Distinguished Professor of Marine Affairs & Policy at Duke University) say that the Indigenous and Western views of ecological knowledge and sustainable development remain considerably different. It should not come as much of a surprise, for these realms of knowledge are products of two different worldviews. What matters is the ethics of such research which brings together multiple perspectives and should be carried out in an appropriate manner and be meaningful to Indigenous communities and researchers (Shackeroff & Campbell, 2007).

Barriers to the utilization of Indigenous ecological knowledge

There are scholars, however, who have been quick to take a dismissive attitude to integrating Indigenous ecological knowledge into Western science and subsequent co-management institutions. According to Paul Nadasdy (2011), an Associate Professor of Anthropology at Cornell University, one reason for this stance is that "the goal of knowledge-integration forces [Indigenous ecological knowledge] researchers to compartmentalize and distill Aboriginal people's beliefs, values, and experiences according to external criteria of relevance, seriously distorting them in the process" (pp. 143-144).Further in his view, he notes that the goal of integrating Indigenous ecological knowledge is aimed at concentrating power in centralized management institutions and

Indigenous ecological knowledge cannot be "incorporated into processes of resource management and environmental assessment until [Indigenous peoples] have achieved full decision-making authority in these realms" (p. 143). Albert Howard (Instructor and Director of Programs, Kennedy College of Technology) and Frances Widdowson (Department of Policy Studies, Mount Royal College) critique Berkes's research aimed at integrating Indigenous ecological knowledge with Western science and bring to the fore that integration ought to be rejected, for the cultural, social, ecological, political, and spiritual components of Indigenous ecological knowledge prevent the scientific community from scientifically validating its insights about the natural environment (1997, pp. 46-47).

The problems that such a long-term collaboration may come across is the fact that an extraction of Indigenous ecological knowledge from a larger context may subject it to misrepresentation and misinterpretation, misappropriation and cultural exploitation. In other words, barriers to the implementation of Indigenous ecological knowledge have been examined by numerous researchers and scholars in Canada. According to Douglas Nakashima (1990), the Head the UNESCO project on Local and Indigenous Knowledge Systems,

> [Indigenous ecological knowledge], in spite of its evident strengths, corresponds poorly with Western intellectual ideals of 'truth.' In our society, the acceptable norms of intellectual development have been rigidly institutionalized. University degrees, journal publications, conference presentations are the milestones which mark our narrow 'path to knowledge.' Guided by these inflexible norms, environmental scientists reject the traditional knowledge of Native hunters as anecdotal, non-quantitative and amethodical. Unable to overcome a deeply engrained and ethnocentric prejudice against other ways of 'knowing', they turn their backs on a source of data of exceptional utility […] (p. 23).

Although Nakashima's words were written more than two decades ago, they arguably still hold true because the approaches underlying the unsuccessful implementation of Indigenous ecological knowledge in the management of local ecosystems still pertain. The application of Indigenous ecological knowledge in addressing environmental crisis may be perceived by Indigenous peoples as another form of colonialism as the recognition of this realm of knowledge arguably still seems to be framed by Western agenda and the need to conform to the existing framework aligned with Western ideals (McGregor, 2004, p. 74).

This situation is further complicated due to an unequal distribution of power with regard to Indigenous and non-Indigenous relations in Canada. As pointed out by Anishinaabe scholar Deborah McGregor and Doug Brubacher (National Aboriginal

Forestry Association), the gap between these understandings is widened because the dialogue on Indigenous ecological knowledge occurs within the dominant institutional frameworks and used the dominant culture's language (McGregor & Brubacher, as cited in McGregor, 2000, p. 81). To expand on this idea, Marie Battiste clarifies that researchers have often tried to fit Indigenous knowledge into Eurocentric academic categories of knowledge instead of acknowledging it as a distinct way of knowing, which distracts "them from developing deep insights that might lead them into a vast, unforeseen realm of knowing" (Battiste & Henderson, 2000, p. 39). Such unethical behavior may deter Indigenous knowledge holders from taking part in future collaborations unless the protection of Indigenous culture and intellectual property takes place. As a result, the meaningful application of Indigenous ecological knowledge is limited. Most work on Indigenous ecological knowledge primarily involves the collection and documentation of information (McGregor, 2004, p. 82), which fails to showcase the real importance of Indigenous ecological knowledge and the potential contribution of Northwest Coast First Nations.

Yet, as Cajete and McGregor explain, despite the development of Indigenous ecological knowledge research, it needs to be added that the state of that research is still considerably unsatisfactory from an Indigenous perspective largely due to the fact that that research has been mainly controlled by interests that are external to Indigenous communities from which that realm of knowledge derives. Also, Indigenous ways of knowing have been perceived through the lens of Western science and perception (Cajete, 1999; McGregor, 2004).

Ecocultural restoration

The mainstream idea of Indigenous knowledge has recently become significantly challenged largely due to the rising dissatisfaction among Indigenous peoples of the way their realm of place-based knowledge has been misinterpreted and misused. It might be argued that some of the people responsible for putting this knowledge on the right track are Nancy J. Turner and Douglas Deur (Deur and Turner, 2005; Turner, 1995, 2014a, 2014b, 2020; Deur, 2009; Deur et al., 2021). Such an approach has been accompanied by their ethnobotanical works focusing upon the traditional use of various plant species by Northwest Coast First Nations within their historical context for

millennia. Based on extensive ethnobotanical research and engagement with Indigenous knowledge holders, the researchers shed light on the long-standing commitment of Indigenous communities to manage their ecosystems and use their resources in a sustainable way. As ethnographic descriptions of plant harvesting and preserving are confined to obscure anthropological journals (Turner, 1995, v), their research aims to address the gaps and biases in the documentation of Indigenous plant cultivation methods by providing ethnobotanical evidence for plant resource management practiced by coastal societies in the study region.

Furthermore, in collaboration with Indigenous and non-Indigenous scholars-allies such as Mary Thomas (Secwépemc Nation), Helen Clifton (Gitga'at Nation), Judith C. Thompson (Tahltan Nation), Douglas Deur, Marianne Ignace, and Dana Lepofsky, Nancy J. Turner has also facilitated numerous research projects aimed at learning about, sharing, and renewing Indigenous ecological knowledge on the Northwest Coast. That is, having worked with Indigenous botanical and cultural experts in British Columbia and beyond over the span of four decades, Turner delves into numerous concepts, values, and perspectives that explain the deep and inextricable bond between humans and all plants and environments (Turner, 1995, 2014a, 2014b, 2020; Turner, Ignace & Ignace, 2005; Turner & Deur, 2005; Turner & Thompson, 2006; Turner & Clifton, 2006, 2009; Turner, Deur & Lepofsky, 2013). Her research shows that Indigenous peoples "systematically manipulated many different plant resources and habitats to enhance the productivity, reliability, and sustainability of the plants they used for food, materials, and medicine – that they, in fact, *cultivated* their environments and resources" (2014b, p. 265). She challenges the work of Western scholars who claim that the management of land on the Northwest Coast started to take place with arrival of first Europeans. I am particularly interested in her exploration of the pathways and processes of knowledge acquisition and dissemination that have taken place since time immemorial, and how they have been developed, applied, expanded, and handed down over generations.

In her research with a focus on British Columbia, Turner addresses intergenerational knowledge transfer of the traditional know-how of seasonal clues in nature, which can determine optimal resource-harvesting times (Turner, 1995, 2014, 2020; Turner & Deur, 2005; Turner and Clifton, 2009; Turner & Turner, 2008; Turner, Deur, & Lepofsky, 2013; Turner & Cuerrier, 2022). Her references to stories and narratives full of information regarding plant and animal use in everyday life as

well as relational worldviews and philosophies, conveying critically essential ideas to future generations has strongly influenced my understanding of the importance of Indigenous stories in the preservation of the immense diversity of Indigenous ecological knowledge. Her research aims to retain subsistence strategies drawn from Indigenous ecological knowledge to cope with biocultural erosion and provide motivation for restoring connections with local environments. She suggests that the process of acquiring and transmitting Indigenous knowledge as well as the values that shape people's relationship "with other humans and nonhuman species and entities may in fact be key in our global efforts to stem environmental destruction" (Turner, 2014a, xxii). However, there is still a long way to go.

There are other scholars who embark upon mainstreaming Indigenous ecological knowledge in the context of global climate change. Douglas Nakashima's research, for example, aims to establish a productive dialogue between Indigenous knowledge keepers and mainstream climate scientists to bring to life a better understanding of our ecosystem and its resources, which will turn out to be beneficial to all of us (2018, xiv). In his book *Indigenous Knowledge for Climate Change Assessment and Adaptation*, Nakashima presents case studies that shed light on processes intertwined with climate change and provide examples of Indigenous coping strategies. Present assertions of climate change are confronted with on-the-ground observations and actual accounts provided by Indigenous peoples from all over the world (pp. 1-5). The scholars are interested in regionally diverse perspectives and conditions for a fruitful dialogue and collaboration with Indigenous knowledge keepers and Indigenous communities.

Following this line of thought, it needs to be added that the proposal for the integration of Indigenous ecological knowledge and its ecologically sound practices into contemporary restoration projects has been given a serious thought, not only by means of embracing Indigenous ecological knowledge and wisdom in an effort to enhance ecosystem functioning but also to sustain economies and cultural practices of Indigenous peoples. The goal of such restoration projects, incorporating both differences as well as correlations between Western science and Indigenous place-based ecological knowledge systems, is to explore and thus demonstrate that it can be successful not only on the Northwest Coast (Senos et al., 2012, p. 393). Indigenous ecologist Denis Martinez (O'odham/Chicano), Eric Higgs (Professor of Environmental Studies at the University of Victoria) and other colleagues put a lot of effort into bringing into life a restoration worldview encompassing Indigenous ecological

knowledge and its practices in ecological restoration. This deliberate incorporation of Indigenous cultural aspects into ecological practices is referred to as ecocultural restoration. According to Higgs, restoration activities based upon science and technology are not enough. To be successful, they need to engage people at the community level. Not only are such focal practices aimed at restoring ecosystems but also at restoring people's relationships with the environment (Higgs, 2005; Senos et al, 2012). Importantly, Rene Senos (Landscape architect at National Park Service), Frank K. Lake (Yurok/Karuk Nation/Research ecologist with US Forest Service), Nancy J. Turner, and Denis Martinez draw attention to storytelling as embedding Indigenous ecological knowledge, suggesting that incorporating this wisdom into restoration practices may serve as a means to sustain cultural vitality and preserve essential elements of their heritage (Senos et al., 2012, pp. 394-395).

My contribution

Decolonial and Indigenous scholars make it clear that their voices are key in tackling various ecological problems. It is rarely taken into consideration that sustainability narratives are inscribed in Indigenous stories and life narratives. My work involves acknowledging and examining these stories and embedded connections. I believe that raising awareness of Indigenous ecological knowledge and intimate relationship with the land through research, education, and restoration initiatives may increase understanding and appreciation of this knowledge among Northwest Coast First Nations and non-Indigenous communities. Indigenous peoples have been struggling for raising this awareness. Through their extensive scholarship on the topic, Indigenous scholars such as Chief Umeek Richard Atleo (Nuu-chah-nulth), Robin Wall Kimmerer (Potawatomi), Frank Brown (Heiltsuk), Charlotte Cote (Tseshaht/Nuu-chah-nulth),Nick Claxton (W̱SÁNEĆ), and Alannah Young (Anishinaabe Midekway and Nehiy/naw Cree) have advocated for the recognition and revitalization of Indigenous relational knowledge systems so rich and relevant in today's world (Kimmerer, 2002, 2012, 2013; Atleo, 2005, 2012; Brown, 2009; Claxton, 2015; Young, 2015; Cote, 2019). Indigenous environmental movements have also been important actors in environmental justice, seeking to demonstrate how Indigenous place-based knowledge can help people address challenges posed by climate change. Among them, one needs to mention the Indigenous

Health Research and Education Garden (IHREG) is located at UBC Farm, the Medicine Collective at UBC, the Moricetown Salmon Tagging Project, and the W̱SÁNEĆ Reefnet Project (Bulkley, 2011; Atlas et al., 2021; Claxton, 2015; "Medicine Collective," 2017; "W̱SÁNEĆ," 2021; "xʷc̓ic̓əsəm Garden," n.d.). This process of restoring local ecosystems and cultural placed-based knowledge practiced and updated for generations needs to be recognized and duly respected. Needless to say, misrepresentation, appropriation, and exploitation of Indigenous ecological knowledge of Northwest Coast First Nations must come to an end. My thesis and my role in this project focus on foregrounding this place-based knowledge and all Indigenous and non-Indigenous allies' contributions in this area. This involves raising awareness of and support for the once-suppressed onto-epistemologies and voices of Indigenous peoples, translating and disseminating this knowledge, and ultimately contributing to the larger project of decolonization. As the above survey of research related to Indigenous ecological knowledge shows, the scholars focused largely on plant life, resources management practices, and potential integration of Indigenous ecological knowledge with Western science. Little or no work was carried out on the preservation, transmission, updating of Indigenous ecological knowledge of Northwest Coast First Nations by means of different forms of storytelling and storywork across time and space. Addressing this gap, I seek to contribute to this field of study by analyzing Indigenous stories and personal life narratives and *kota* string figures as an intergenerational transmission method/pedagogy of the place-based knowledge of long-term application of plant and animal species. I focus on different aspects of Indigenous peoples' lives throughout British Columbia and their traditional selective resource harvesting methods and sustainable management systems. As a non-Indigenous academic-ally, I feel that the alternative approaches towards the land and complex Indigenous knowledges, as inscribed in stories and life narratives (oralized literature), that I am documenting here, are profoundly important and should be more widely known and understood. In this study, I concentrate on the importance of Indigenous storytelling in validating these storied Indigenous ecological knowledges.

2.2. Indigenous storytelling

The study of Indigenous storytelling has been the subject of numerous researches conducted by Indigenous and non-Indigenous scholars, writers, and literary critics. Understanding and recognizing the relevance of oral stories has been crucial for contemporary research methods. Indeed, Indigenous stories serve a variety of functions in Indigenous communities. Being on and with the land, Northwest Coast First Nations have placed a high value on storytelling since time immemorial as a way of sharing and transmission mechanism of history and their ways of knowing. Stories help people to explain who they are, where they come from, and what their purpose is. Storytelling is also used as a way of regaining a sense of belonging and identity as well as reconnecting to their sacred territories (Thomas, 2000; Wilson, 2001; King, 2003; Cook-Lynn, 2006; Archibald, 2008; Kovach, 2009). This section of the literature review briefly traces how storytelling has been used to validate experiences and epistemologies, share ways of knowing, conduct research in an ethical and respectful manner, and contribute to decolonization and resurgence. These are general reflections with examples from the Northwest Coast.

Storytelling as a knowledge transmission

Storytelling is an important aspect of Indigenous knowledge systems. Memorizing and transmitting vast quantities of knowledge was essential in preserving their knowledge and safeguarding their survival. The cumulative heritage of Indigenous ways of knowing drawn from ecological observations and attempts to define those observations, practices, and spiritual ceremonies requires an effective and durable medium that can illuminate, preserve, update, and transmit the place-based relational knowledge that connects people to their roots and holistic worldviews to further generations across time and space. (Cruikshank, 1990, 1992; Cajete, 1994; Wilson, 2001; Battiste, 2002; Atleo, 2005, 2012; Kovach, 2009; King, 2003; Armstrong, 1997, 2000; Maracle, 2007; Archibald, 2008, 2019; Fee, 2015; Legg, 2016; Simpson, 2017). Stories – which live in the land and are not separate from it – are told and retold over and over as foundational narratives of Indigenous ontologies, providing views on what is real and the nature of being that is cared for and nurtured by land.

Storytelling is a powerful and primary medium of life lessons and a pathway to knowledge generation, shaping the actions of Indigenous peoples. For example, according to Indigenous scholar Robina Thomas (Qwul'sih'yah'maht Nation), stories, grounded in a unique history and trajectory, were related through experiences to pass on value-systems, history, morals, and beliefs (Thomas, 2000). Similarly, in his book *The Lakota Way: Stories and Lessons for Living*, Sicunga Lakota Sioux writer Joseph Marshall (2002) describes the importance of storytelling as a powerful technique for teaching about life:

> If storytellers were old, their stories were much older. The Grandmas and Grandpas were the living repositories for all those wonderful stories told them by their elders from generations before. The stories I heard and learned provide lessons that I can apply in the present; but they also connect me to the past – to a way of life that has endured far longer than I can imagine – and to the people who walked the land and left old trails to follow. And because I and others like me were, and are, hearing and remembering the stories, that way of life will remain viable through us (xiii).

According to Julie Cruikshank (1990), a Canadian anthropologist and Professor Emeritus at the University of British Columbia, "storytelling is a universal activity and may well be the oldest of the arts. It has always provided a vehicle for the expression of ideas, particularly in societies relying on oral tradition" (ix). Talking and sharing stories assists in the transfer of Indigenous knowledge systems historically and within an Indigenous setting. Indigenous stories teach healing ceremonies and knowledge of the land. Nishnaabeg writer and academic Leanne Betasamosake Simpson, known for her decolonizing and indigenizing work, writes that learning through story is holistic and contextual (2017). Similarly, Tewa educator Gregory Cajete (1999b) explicitly writes that

> Storytelling and experience form the foundation for much traditional Native American learning and teaching. Stories give focus to and clarify those things, which are deemed important. Experiencing through watching, listening, feeling and doing gives reality and meaning to important Native American cultural knowledge. Combining story with experience, Native Americans are able to achieve a highly effective approach to basic education (p. 128).

Indigenous scholar Chaw-win-is Olgilvie (Checlesaht/Tla-o-qui-aht Nations) also adds that storytelling

> is a means through which community identity and shared values are created and then relayed to educate new community members, including children. The regeneration of Indigenous communities must be based on the original teachings and orienting values of Indigenous peoples. Encompassing all forms of life, these teachings and values are a collective responsibility to maintain and are found in our haa-huu-hah and teachings (2007, p. 9).

Taken together, the role of knowledge keepers is to transmit stories from one generation to another in order to provide guidance for young community members with respect to other people and the land. Stories are full of examples of how people ought to act as well as consequences when oral-based Indigenous communities do not follow their teachings on proper conduct. They are constantly reminded of the right way to live (Cajete, 1994). It cannot be dismissed that generations of understanding the natural world, values, and worldviews are kept alive by stories.

Indigenous pedagogy can be found in prayers, ceremonies, and stories as ways of knowing and learning. There is great wisdom embedded in them (Cajete, 1999a, 1999b; King, 2003; Atleo, 2005, 2012; Archibald, 2008; Harnett, 2010; Ballantyne, 2014; Turner, 2014, 2020; Ignace and Ignace, 2017). Storytelling develops "skills in listening, thinking and imagining" (Cajete, 1999b: 128). It may also be used as a means to develop Indigenous scientific skills and understanding of the natural world, and help to access knowledge (Bringhurst, 2002, p. 17). Importantly, following Chief Umeek Richard Atleo's observation, stories convey holistic and relational worldviews: "origin stories upon which the theory of *tsawalk* is based, clearly show that the physical and spiritual domains are intimately related" (2005, p. 119).

Land stories and pedagogy

Many scholars examine the importance of land as foundational to Indigenous storytelling and they also look at storytelling as pedagogy (Atleo, 2005; Kovach, 2009; Ballantyne, 2014; Ignace and Ignace, 2017). Askānakamaoli scholar Maenette Benham (2007) observes, "identity formation, problem solving, intellectual inquiry, and skill acquisition can be defined by the messages embedded in the narrative" (p. 517). Erin Ballantyne, the Dean of Land Based Academics at Dechinta Bush University, suggests that Indigenous learning is with relationships to the land which is significantly embedded within the content of Indigenous stories (2014). A lot of traditional skills and knowledge pertaining to plant and animal resources were experienced and shared on the land. As "ways of acquiring knowledge and codes of behaviour that are essential to and embedded in cultural practice" (Archibald, 2008, p. 11), stories told, retold, connect the land, culture, and self by means of relationships, experience, and spirit and, thus, allow

Indigenous peoples to understand themselves within the surrounding ancestral territory (Cajete, 1994; Kovach, 2009; Legg, 2016).

Other scholars also point out the importance of oral traditions for teaching and learning and communicating across culture, time and space (Cajete, 1994; King, 2003). Professor of Education Marlene Atleo (2009) draws attention to Indigenous narratives as inscribing "learning archetypes" which provide "a multiplicity of options, embedded in history and displaying a plurality of fully functioning models from which Elders can teach and that learners can choose to emulate. These archetypes portray a full spectrum of [Indigenous] learning ideology" (p. 463). Atleo identifies eight types of Indigenous learners: "the innovative transformational learner, the collaborative transformational learner, the directed lineage learner, the developmental learner, the cooperative learner, the resistant learner, the collaborative resistant learner, and the opportunistic observational learner" (p. 463). This classification of learning styles/archetypes can be helpful in developing educational policies in the mainstream education system.

Indigenous scholars Jeannette Armstrong (Syilx Nation) and Jo-Ann Archibald (Q'umQ'umXiiem) of the Stó꞉lō Nation are amongst the growing number of Indigenous scholars whose work is devoted to storytelling as a pedagogy. Investigating Indigenous oral tradition, Jeannette Armstrong, in her insightful novel *Whispering in Shadows*, compares storytelling to the process of basket-weaving as both Indigenous storytellers and basket weavers show a very similar attitude towards the creation process: a careful choice of materials both for a basket or creating a story. Her research shows that these stories which are in a weaving motion weave pieces of sacred worldviews and ancestral knowledge (2000) and hence they can be considered as pedagogical repositories and transmitters of culturally-specific land-based knowledge systems that are fundamental to the survival and empowerment of Indigenous communities.

The metaphor of weaving is also used by Jo-Ann Archibald in her analysis of storytelling published as her thesis *Coyote Learns to Make a Story-basket: The Place of First Nations Stories in Education*. Archibald considers weaving stories as a treasured aspect of Indigenous peoples' lives and explains that every single cedar strand used to make a story-basket represents a life experience, and many knowledge systems can be woven together in such baskets for educational purposes (1997, 2008). Archibald proposes a concept of storywork for this process and she enumerates important principles of storytelling pedagogy: "the principles of respect, responsibility,

reciprocity, reverence, holism, interrelatedness, and synergy" (1997, iii).[23] Archibald's framework aligns with Atleo's principle of *tsawalk* since it explains the power of stories to create harmony and balance: "stories have the power to make our hearts, minds, and spirits work together" (2008, p. 12).

Storytelling as an episteme

Apart from the pedagogical aspects of storytelling, scholars also focus on storytelling as episteme. Emily Legg (Cherokee), for instance, claims that storytelling, as central to meaning-making, functions as a methodology through praxis. She also uses the metaphor of a basket-making to discuss this feature of storytelling (2016). Legg explains that the four directions of storytelling – culture, relations, experience, and knowledge – "represent the ribs of a basket, which acts as the structure of the basket, but can only be held together through the canes that are woven together" (p. 43). In this way, knowledge-making is provided with form and content, representing the praxis of storytelling. Since stories are endowed with this knowledge-making function, Indigenous value-systems and beliefs are centered on storytelling (pp. 44-45) and they "act as threads to ancestors, places, and times between the lived experiences of the community as the stories are told again and again" (p. 45). They have the power to create an intergenerational weaving process of Indigenous ways of knowing preserved and updated on a regular basis by community members.

Storytelling as research

There is also a good deal of discussion in Indigenous and non-Indigenous scholarly circles about storytelling as research and as methodology within Indigenous paradigms. Previously silenced voices and perspectives of Indigenous peoples are made audible and brought forward in this research which reclaims and privileges Indigenous knowledge systems (Smith, 1999; Atleo, 2005; Thomas, 2005; Archibald, 2008, 2019; Geniusz, 2009; Kovach, 2009).

A lot of effort has been invested into developing methodologies taking into consideration claims to past injustices, territories, and resources. Māori scholar Linda

[23] Jo-Ann Archibald's concept of storywork will be explained in detail in Chapter 3.

Tuhiwai Smith's work is widely regarded as seminal in the realm of Indigenous decolonizing research methodologies. For the scholar, storytelling as an integral part of Indigenous research method needs to be predicated upon "dialogue and conversations among ourselves as Indigenous peoples, to ourselves and for ourselves. Such approaches fit well with the oral traditions which are still a reality in day-to-day Indigenous lives" (1999, p. 145). Taking a critical stance towards the Western notion of research, she writers further that stories, connecting one generation with another, the past with the future, bring into the light perspective of Elders, thus creating a new collective story passing values, intergenerational knowledge, and history wherein Indigenous peoples are able to find their place. Challenging culturally-dominant storylines, oral stories have a purpose to enable them to listen to voices that go unheard in the broader society and learn about themselves in a cultural and historical context (pp. 143-145). For people who have been marginalized by residential schools, storytelling, as I argue, may provide healing and revival of their community relations, of kin relations to those in the past, the present, and those who shall come in the future. Their stories matter.

Nêhiýaw/Cree scholar and theorist Margaret Kovach (2009, 2010) describes stories as a research methodology. She writes that in order to make meaning of the stories that have been collected throughout the research process, it is crucial that "each condensed story was followed by a reflexive narrative by the researcher indicating key teachings received from the conversations and stories." (2010, p. 4). As already mentioned, within an Indigenous research paradigm, the process of decolonizing Indigenous research ought to be conducted in partnership with Indigenous peoples and guided by knowledge and respected storytellers and community members (2009). The scholar also emphasizes that "story is […] a means to give voice to the marginalized and assist in creating outcome from research that are in line with the needs of the community" (2009, p. 100) and, as a result, "Indigenous communities demand a decolonizing outcome from research" (p. 87). With this in mind, I agree with Kovach that storytelling as a research methodology may be inherently decolonizing. It is my belief that such an egalitarian research process in Indigenous communities should foster research that decreases not only the distance between research investigators and participants but also the power dynamics in research and generates knowledge useful both to academia and researched communities. They are brought together in a relationship which is about creating a story.

Expanding upon Kovach's observation, understanding the importance of a research method rooted in storytelling stresses the need to approach research from a decolonizing perspective and conduct it with Indigenous communities in culturally relevant and appropriate ways. As Shawn Wilson (Opaskwayak Cree Nation) states at length in *Research is ceremony: Indigenous research methods*, storytelling is a methodological praxis of research and

> accountability is built into the relationships that are formed in storytelling within an oral tradition. As a storyteller, I am responsible for who I share information with, as well as for ensuring this it is shared in an appropriate way, at the right place and time. In receiving the story, you as an active listener are responsible for putting the story into relational context that makes sense for you and for listening with an open heart and open mind. If you choose to pass along the story or my words, you also take on the responsibilities of the storyteller yourself. The relationship that we all build with an Indigenous research paradigm shape and redefine the concept. In your joint ownership of this concept, you are also accountable for how you use it (2008, p. 126).

The reader of the above excerpt is offered a window into ethics that plays an important role in story-based research. Put another way, ethical research based upon storytelling needs to be conducted in a respectful and appropriate manner within the context of Indigenous worldviews, epistemologies, and ontologies. The knowledge embedded in related stories should be presented by the researcher acting as a storyteller accurately without violating the trust of research participants. I believe this reciprocity should be collective, involving *you* and *I*. As Wilson suggests, "research is a life changing ceremony" (p. 61). I understand it now.

Moreover, Lee Maracle (Stó꞉lō Nation) draws attention to the concept of Indigenous theory as story (2007, p. 3). Storytelling is foundational for Indigenous research. In her book *Circle Works: Transforming Eurocentric Consciousness*, Cree scholar Fyre Jean Graveline (1998) also makes an important point about the use of storytelling in research. She states that Indigenous peoples

> are reclaiming [their] voices. Through voice [they] speak/write of [their] acts of resistance, the healing and empowering values of [their] traditions and the role of the European colonizers in the destruction of [their] communities. Through voice [they] are gaining [their] own sense of conscious reality and providing another lens through which Eurocentric educators may view themselves (p. 41).

What can be inferred from the above excerpt is that storytelling as a methodology enables Indigenous peoples to reclaim the intergenerational traditions and teachings of their ancestors and keep those in mind throughout the whole research process. Likewise, giving voice to erased Indigenous perspectives to be included in the dominant discourse,

such story-based research is an act of decolonization and indigenization, reclaiming their knowledge, language, and culture.

Judy Iseke (Métis) makes an observation about storytelling as a research method that allows the researcher to reflect on each story and thus develop a further relationship with research participants. She points out that storytelling "is a practice in Indigenous cultures that sustains communities, validates experiences and epistemologies, expresses experiences of Indigenous peoples and nurtures relationships and the sharing of Indigenous knowledges and cultures" (2013, p. 559). Storytelling thus, unlike Western approaches, paves the way for a more collaborative research process as the power in research is shifted. Several scholars have discussed this development as challenging traditional forms of research (Bishop, 1999; Baskin, 2005; Hendry, 2007; Wilson, 2008; Kovach, 2009; Legg, 2016). In his article *Kaupapa Māori Research: An Indigenous Approach to Creating Knowledge*, Russel Bishop (Professor for Māori Education at the University of Waikato) cogently explains how implementing this research method shifts the power between the researcher and research participants by virtue of "knowing that avoids distance and separation and promotes commitment and engagement" (1999, p. 4).

Awakening and resurgence of storied memories

Storytelling as research methodology can be linked with Indigenous resurgence in Canada. Far beyond mere entertainment, Indigenous storytelling which is intimately connected to ancestral territories is acknowledged as crucial to the cultural and political resurgence of Indigenous peoples. Teaching the knowledge of resistance ties with the earlier statement about storytelling and Indigenous pedagogy (Vizenor, 1993; Lanigan, 1998; Smith, 1999; Simpson, 2011; Sium & Ritskes, 2013; Cariou, 2014).

Stories as decolonization and indigenization tools

The theme of stories as decolonization and indigenization tools has been an important aspect of research into Indigenous stories by both Indigenous and non-Indigenous scholars. Edward Said (2012), for instance, notes that decolonization movements operate through the medium of storytelling, and that stories can play an essential role in

negotiating present-day conflicts over traditional territories, local resources, and historical injustice. Stories can provide counternarratives to colonial ones, they may serve an emancipatory purpose, they can lead to the resurgence of Indigenous peoples and hence they remain an essential element of their survival. To use Sium's and Ritskes' words: "stories are open-ended processes for speaking reclamation and resurgence, dialogue and contestation, they are part of a cycle of renewal and re-creation" (2013, viii).

There are many scholars who examine the decolonial aspect of counternarratives. Paulette Reagan (Director of Research for the Truth and Reconciliation Commission of Canada), for instance, suggests that it is necessary to re-story the dominant settler version of history in order to make space for bringing Indigenous perspectives on history (2011). Cherokee scholar Jeff Corntassel (2009) draws attention to Indigenous versions of history, to stories functioning as counternarratives to colonial history (p. 2). Patrick Lewis (Professor in the Education Department at the University of Regina) brings attention to stories asspaces of resistance to the narratives of colonial power (2011, pp. 505-510), and Robina Thomas (2000) provides a specific example of such stories when she examines the multigenerational oppression, suffering, injustice, and traumatic experiences in the residential school system run by the government and church (2000, p. 11). Such counternarratives can facilitate acts of healing and resistance, but they can also lead to building bridges of understanding between the mainstream society and Indigenous communities, as several scholars demonstrate (Deloria Jr., 1997; Smith, 1999; Taiaiake, 2005; Wilson, 2008; Simpson, 2013, 2017).

The significance of Indigenous stories in the decolonization process is aptly articulated by Nishnaabeg theorist and writer Leanne Simpson, who states that Indigenous storytelling can be acknowledged as "decolonizing, because it is a process of remembering, visioning and creating a just reality" (2011, p. 33). Simpson writes that storytelling offers a lens through which it is possible to find a way out of cognitive imperialism where Indigenous communities are able to encounter the spaces of justice and freedom. It becomes a crucial medium for free cognitive spaces wherein one "can escape the gaze and cage of the empire, even if it is just for a few minutes" (2013, p. 281).

Other scholars are also involved in the process. Corntassel (Cherokee Nation) and Iseke (Metis), for instance, remark that the art of storytelling can be utilized in the pursuit of pressing contemporary issues, social justice, and equity (Corntassel, 2009;

Iseke, 2011). In her article "Mo'olelo: On culturally relevant story making from an Indigenous perspective," Maenette Benham (2007) discusses how Indigenous communities are in need of indigenizing mainstream narratives. As she observes, Indigenous acts of resistance and the resurgence of the Indigenous voice are powerful for policy and pedagogical implications and lead to deep thinking and growth. Similar to Vanessa Watts, Zoe Todd, and other scholars and artists, Benham insists on reclaiming and revival of Indigenous lifeways, sociopolitical structures, knowledges, philosophies and histories, as inscribed in Indigenous stories which are sovereign spaces for Indigenous people (2007, pp. 521-522).

2.3. Conclusion

In this chapter I have provided a necessarily brief review of the available literature on land-based Indigenous ecological knowledge and storytelling of Northwest Coast First Nations. My aim has been to provide a theoretical basis for the core chapters that follow and situate each chapter in the relevant literature. I have selected from the vast array of works those that are most critical for the understanding of Indigenous ecological knowledge and the practice of storytelling. I have included the writings of Indigenous and non-indigenous scholars-allies, researchers, scientists, and community members, but I have prioritized the work of Indigenous scholars, writers, and philosophers.

My research into the body of work related to Indigenous ecological knowledge and storytelling shows that very little has been written on how Indigenous ecological knowledge of Northwest Coast First Nations has been perpetuated and sustained by specific processes of storytelling transmission. More research into the cultural transmission, preservation, and updating of Indigenous knowledge is needed. What is missing in scholarly literature is an analysis and documentation of how particular aspects of Indigenous ecological knowledge grounded in the relational worldview were recorded, transmitted to further generations, and updated and validated by means of traditional creation stories, personal life narratives, and *kota* string figures. Those aspects pertain to living in harmony with the surrounding land, phenological knowledge, harvesting, processing, and storage practices of plant and animal resources, and sustainable resource and habitat management systems as a form of survivance and decolonization. To understand the lived body of Indigenous ecological knowledge, it is

necessary to comprehend how and what sort of spaces for this knowledge have been transmitted by means of storytelling within Indigenous communities. My research shows that the process of the knowledge transmission may provide a picture of dynamic relationships between shifting ecosystems, human settlement, use and availability of resources. In addition, stories and *kota* string figures may demonstrate various models of accommodating and adapting to imminent and constant environmental changes over the millennia. As a result, they may provide future generations with alternative solutions to sustainable living since stories and string figures, being an articulation of value-laden land-based knowledge systems, are etched into the landscape and seascape, its fauna and flora. In addition, I argue that the revitalization of the performance art of *kota* string figures and embodied knowledge may also serve both as an act of restoring relationships with the land and Indigenous resurgence in the form of reengagement with traditional lifeways and ways of knowing. It is a weaving of resurgence, resilience, and reconnection with the land and Indigenous way of knowing, disrupting the disembodied practices of settler colonialism.

Also, being in a transcultural position, I envision my doctoral project as bringing attention to stories and life writing in other countries that are grounded in such knowledge systems, e.g., in Eastern or Central European Slavic countries. Bringing to the fore Indigenous ecological knowledge as translated into stories representing holistic perspectives that have been long erased by colonial and dominant cultures, I strongly believe that my research is an insightful voice in the process of affirming and validating Indigenous ecological knowledge to the world through foregrounding the knowledge of Indigenous scholars and Indigenous oral narratives (oralized texts). Throughout this research, I have learnt that these stories hold a profound meaning for First Peoples of the Northwest Coast. They transmit holistic environmental knowledge, culturally sanctioned protocols and rules that are intimately linked with sustainable resource harvesting and management practices. I believe that the Indigenous ecological knowledge of the study region embedded in creation stories, personal life narratives, and string figure patterns transcends time and should inform contemporary decision-making process in relation to the conservation of local ecosystems transformed through human agency, changing attitudes of mainstream society to less destructive and more conservation-oriented towards the environment in which they dwell, and tackling ecological problems for the sake of maintaining ecological integrity and biodiversity. Taken together, I hope this approach holds promise not only for the ongoing efforts of

cultural revitalization and maintenance of biocultural richness but also for the ongoing processes of decolonization and re-indigenization globally.

Chapter 3

Methodology

> *Stories are who we are. They are both method and meaning. Stories spring forth from a holistic*
> *epistemology and are the relational glue in a socially interdependent knowledge system* (Kovach, 2009, p. 108).
>
> **Margaret Kovach**
> Plains Cree scholar

Western research has been employed as a colonizing tool, distorting and misrepresenting Indigenous peoples and their cultures (Wilson, 2008; Kovach, 2009; Smith, 2012) and, according to Nêhiýaw/Cree scholar Margaret Kovach (Sakewewpîsimiskwew), it "has worked first to subjugate and then discredit Indigenous knowledge systems and the people themselves" (2009, p. 77). Western scholars used "a colonial worldview as their frame of reference" (Held, 2019, p. 4) and Indigenous systems of knowledge have not been deemed a part of knowledge production and have been relegated to an inferior position by Euro-Western educational institutions. Euro-Western research methods have brought about the erasure of the reality of Indigenous social, political, and historical experiences. Not to be marginalized, for decades, Indigenous academics and researchers have used the Euro-Western research paradigm, yet gradually they have produced counternarratives to the commonly accepted colonial discourse by Indigenizing Euro-Western methodologies and decolonizing their specific disciplines, and thus challenging the status quo. This has paved the way for Indigenous research methodologies and methods as well as to the linking of diverse frameworks and mixed-methods drawn from multiple worldviews, which has led to the development of a growing dialogue between Indigenous and Western ways of knowing with the goal of decolonizing research and academia. The publication of the final report of the Truth and Reconciliation Commission also serves as a catalyst for a new approach to reciprocal collaboration between Indigenous and non-Indigenous researchers which needs to avoid colonial ignorance of Indigenous knowledges (Graveline, 1998; Battiste, 2000; Wilson, 2008; Kovach, 2009; Smith, 2012; Chilisa, 2012; Levac et al., 2018;

Held, 2019; Guttorm et al., 2021). The anti-colonial discursive framework is intricately linked with critical Indigenous scholarship on Indigenous research methodologies which I will discuss in this chapter.

My holistic research and experience of Indigenous cultures have led me to the choice of methodology that is grounded in Indigenous ideas on research. As a transcultural scholar-ally, mindful of the complexities of Indigenous research and aiming to bring Indigenous perspectives and systems of knowledge to non-Indigenous European, and particularly Eastern European Slavic cultures and academia, I honour Indigenous epistemologies (storytelling as research) and choose to work with theories that are foundational to Indigenous paradigms – storytelling and specifically storywork, with a particular reference to Indigenous knowledge situated in the ancestral land of Northwest Coast First Nations, the area my research focuses on. Engaging with knowledge-holders respectfully, I locate myself and my ethically oriented research within the context of Northwest Coast First Nations, whose collectively-held Indigenous ecological knowledge is embedded in stories. Importantly, as a transcultural critic, I aim to respect the core of Indigenous methodologies and methods – which is storytelling. It is important to emphasize that storytelling serves not only as my framing research methodology, a general strategy for my research approach and the lens through which I conduct my analysis, but also as my method that aids in answering my research questions and gathering data (King, 2003; Smith et al., 2016).

Given the holistic nature of the knowledge spaces I work with, I employ an interdisciplinary research methodology that connects various disciplines to analyze the holistic knowledge of Northwest Coast First Nations. This interdisciplinary approach is important as the land-based knowledge itself is holistic. Therefore, I engage with discourses belonging to the sphere of literature, anthropology, ethnography, and ecological studies, with a focus on storytelling as foundational to my research. I build my interdisciplinary approach upon the decolonizing Two-Eyed Seeing principle which links Indigenous and non-Indigenous perspectives (Bartlett et al., 2012).[24] This framework, comprising part of my all-inclusive path of learning and discovery, has

[24] There are other research frameworks that link Indigenous and Western knowledge systems: 4R-4D framework; constellations model; cultural interface; ethical space; Indigenous cultural responsiveness theory (ICRT); insurgent research; expanding learning; hybridity; Indigenous metissage; Mobius strip metaphor; polycentric global epistemology; rhizome; three-sisters framework; transrational knowing; Guswentah, or Two-row wampum; working the hyphen; Kaupapa Māori; and living on the ground. For more information on the research frameworks, see Levac, L., McMurtry L., Stienstra D., Baikie G., Hanson C., and Mucina D. (2018). *Learning Across Indigenous and Western Knowledge Systems and Intersectionality*. Canadian Research Institute for the Advancement of Women.

helped me to guide my research and reflections from start to finish, while allowing me to see through an Indigenous lens, as well as keeping me well versed in the Western gaze. As a result, I consider my research as "an intellectual journey rather than a collection of facts" (Clement, 2019, p. 285) that provides an ethical space which, in the words of Cree scholar Willie Ermine, is "formed when two societies, with disparate worldviews, are poised to engage each other" (2007, p. 93).

Approaching my interdisciplinary research from a decolonizing perspective is also crucial in order to write back against colonial oppression of Indigenous peoples inherent in many types of Western research by challenging colonial categorizations (oversimplified racial and ethnic identity labels, outsider-imposed names), privileging Indigenous knowledge, and re-balancing power (Kovach, 2009; Smith, 2012; Chilisa, 2021).In this dissertation, I use the term 'decolonization' shared by Indigenous scholars, understood as an ongoing process of anti-colonial struggle that respects Indigenous ways of knowing and acknowledges their ancestral lands, Indigenous communities, and their sovereignty. Their onto-epistemologies and perspectives are placed at the center of research (Smith, 1999; Battiste, 2000; Denzin et al., 2008; Wilson, 2008). In conducting my research, I have employed this approach to frame my discussion and organize my arguments throughout the dissertation, giving voice to multiple and often marginalized Indigenous perspectives. It is my responsibility as an ally to stand with Indigenous scholars and engage in the processes of decolonization both in academia and beyond it. In all my research I have been following the crucial principle of Indigenous methodologies – working with and for Indigenous peoples, and not only on them as it was practiced in the early traditional disciplines of ethnography or anthropology. I dedicate the findings of my research to the cultural groups I have been examining in this project.

To contextualize the research design of my qualitative study immersed in Indigenous research methodologies which, as Wilson remarks, are grounded in relationality (Wilson, 2008), I start with a cursory introduction of story-based research and discuss the application of storytelling and storywork within the relational approach of my methodology. Tied to a larger project of decolonization, my relational approach is grounded in Indigenous methodologies, it engages in place and land conceptualized as a teacher and source of knowledge, and maintains and prioritizes my respectful and mutually beneficial research relationships with Indigenous peoples and scholars. I put their intergenerational perspectives at the center as important for their communities and

the world struggling with climate change. To support that process, in the following chapters, I analyze selected stories to give voices to silenced Indigenous perspectives and worldviews on their relational connection with all of Creation as an act of living resistance, and I show the critical importance of their storied land-based knowledge systems in the contemporary world. Through my exploration of selected Indigenous stories and storied ancestral knowledge, I hope to contribute to the resurgence and continuous revitalization of Indigenous placed-based relational ways of knowing which have been harmed by Western and colonial practices.

In this chapter, I also explain Indigenous research methods I have decided to employ critically in the gathering and analysis of Indigenous stories and *kota* string figures. For the theoretical framework of my research, I have turned to the work of such Indigenous scholars as Jo-Ann Archibald, Margaret Kovach, Shawn Wilson, and Albert Marshall, who have developed culturally-specific and empowering research methodologies and methods that shape my work. My analysis draws on Albert Marshall's concept of Two-Eyed Seeing, Archibald's teachings of storied-memory and storywork, Kovach's critical theory of reflexivity, and Shawn Wilson's relational accountability. It is important to note that the theoretical frameworks that are most notable for my study are considered place-based by their authors. Throughout my research, I have employed the following research methods to support my project: embodied experience of storywork, journal, photovoice, interviews, garden fieldwork, and embodied engagement in harvesting and management practices.

3.1. Storytelling as a decolonizing and indigenizing framework

The practice of storytelling conceptualized as a research methodology welcomes a decolonizing perspective and protects Indigenous knowledge by giving voice to the silenced voices of Indigenous peoples that have been marginalized by the oppressive policies of Canadian governments across time and space. In essence, it is identified as a decolonizing research methodology fostering resistance to colonialism and Western worldviews, for stories remind people who they are, where they come from, and how they perceive the world (Graveline, 1998; Smith, 1999; Archibald, 2018; Wilson, 2008; Kovach, 2009; Lewis, 2011; Iseke, 2013). I share Patrick Lewis's understanding that Indigenous stories, connecting people through time and space, create spaces of

resistance wherein Indigenous storytellers are empowered to advocate for themselves and allowed to present their stories and embedded ways of knowing in a respectful and appropriate manner without being subject to the narratives of instituted power and colonial interests (2011, p. 506). Articulating Linda Smith's postulation that Indigenous methodologies give voice to the voiceless and marginalized (1999), storytelling – as an inherent expression of existence (Sium & Ritskes, 2013, p. 6) – is critical to a sustainable resurgence of Indigenous cultures.

Through the eyes of the colonized, Smith acknowledges the significance of Indigenous story-based methodology, especially collective stories built by many voices, as a form of resistance and a powerful tool for rewriting the colonial narrative within the context of Indigenous lives and communities. The scholar (1999) observes that understanding the past has been an integral aspect of the critical pedagogy of decolonization. The access to alternative histories and knowledge systems has implications for education because it can open doors to explore different approaches and practices. As part of their struggle for justice, Indigenous peoples often share their historical narratives from the past and bear witness to past injustices and mistreatment. Although their historical accounts are not acknowledged as valid interpretations of the past, the need to transmit their narratives serves as a powerful form of resistance (pp. 34-35). This observation holds resounding truth as Indigenous story-based methodology can be regarded as an attempt to indigenize and retain Indigenous ways of knowing and sovereignty, cultural values and spirituality. I agree with Linda Smith who asserts that the purpose of Indigenous stories as a research tool is not only to relate a particular story but to create a collective story wherein Indigenous peoples are able to find their own place and recover epistemological foundations. For certain, stories are ways of passing on Indigenous lifeways and knowledge systems to further generations in the hope that this collective information will be appreciated, respected, and conveyed (pp. 144-145). As a result, following Smith, my approach sees storytelling as providing counter-narratives to colonial ones, thus enabling Indigenous peoples to reclaim their knowledges and use them for healing and well-being and legitimize the process of continuous learning millennia-old skills and knowledge systems. Likewise, giving voice to erased Indigenous perspectives to be included in the dominant discourse, such story-based research may shed further light upon their acts of resistance. Due to my privileged access to some of these embodied experiences and being in a transcultural position, I have certain responsibilities – I share accurately what I have learnt over the years.

Throughout her book *Decolonizing Research: Indigenous Storywork as Methodology*, Archibald reminds the reader that Indigenous storywork is aimed at decolonizing and indigenizing the practice of storytelling in an effort to "to rectify colonial damage and reclaim indigenous capacities to story-talk, story-listen, story-learn, and story-teach (2019, pp. 4-7). Indigenous storytelling plays an essential role in disrupting the ongoing history of colonial occupation emerging from Western scientific and Eurocentric traditions which created their own dominant story, deliberately silencing multiple voices and perspectives of Indigenous communities on the Northwest Coast of Canada.[25] The scholar further adds that

> Cultural knowledge, traditions and healing have lessened the detrimental effects of colonization. Cultural knowledge and traditions have also helped us to resist assimilation. I believe that Indigenous stories are at the core of our cultures. They have the power to make us think, feel, and be good human beings. They have the power to bring storied life back to us (p. 139).

As a result, Indigenous storywork contests colonial knowledge-making and deconstructs settler colonial narratives, thus bringing Indigenous perspectives back into light, while culturally relevant ways of teaching and learning are emphasized. I am guided by Archibald's storywork process in my research framework and seek to reinforce her stance on the critical function of Indigenous stories through my research. She points out, it is by recollecting stories and learning and teaching through stories that Indigenous peoples are able to demonstrate their lives lived like a story as a form of resistance and resilience against colonization (2018).

Similarly, Kovach (2009) brings forth an interesting point that storytelling has "a decolonizing agenda that involves healing and transformation" (p. 125). I am particularly inspired by Kovach who likewise provides a thorough and in-depth look at how story-based research methodology gives voice to "the marginalized and [assists] in creating outcomes from research that are in line with the needs of the community" (p. 100) and, in effect, Indigenous peoples expect a decolonizing outcome from research (2009). According to Elizabeth Fast and Margaret Kovach (2019),

[25] According to Jo-Ann Archibald, "Colonial Western research of our traditional stories and research stories of our peoples was used to define, destroy, and deter the valuing of Indigenous knowledge, people and practices. With an objective façade of research, and an assumed position of racial superiority […] on the part of the researcher, the story takers and story makers usually misrepresented, misappropriated and misused our Indigenous stories." See: Archibald, J.-A., Lee-Morgan J., & De Santolo J. (2019). *Decolonizing Research: Indigenous Storywork as Methodology*. Zed Books.

> In the context of research, sharing our story offers the possibility of integrity, accountability as it were, in that, as researchers, we are putting forth as fully as possible our biases, assumptions, and theoretical proclivities. Through the expression of sharing our personal story, researchers learn more of the inter- personal self while simultaneously unravelling a false consciousness. If we are Indigenous researchers telling our story, this acts as a resistance to erasure of our peoples and dismantles the single story of Indigeneity. Within this context, the act of self-locating and sharing our story becomes a political project (p. 25).

These words give a sense of what the goal of decolonizing research is: to recognize and legitimize Indigenous epistemologies (Swadener et al., 2008; Kovach, 2009) as Indigenous epistemic practices have been neglected by academics (Guttorm, 2021, p. 121). Incorporating storytelling into research challenges academics and academic institutions, thus opening new modes of knowledge dissemination (p. 121). With that being said, I agree with the scholars mentioned above that the story-based research methodology is inherently decolonizing, for it recalls and renews Indigenous histories and lifeways and generates knowledge that is useful both to Indigenous communities and Western academia. Kovach's work is particularly significant to my study since it allows me to gain insight into the complex nature of undertaking this research.

Yet, in her insightful, critical approach to decolonizing research, Linda Tuhiwai Smith (1999) asserts that decolonization should not mean a total rejection of all Western research and knowledge. Rather, she believes that "it is about centering our concerns and worldviews and then coming to know and understand theory and research from our own perspectives and for our own purposes" (p. 39). For Smith, one thing is to recover stories of the past as a way to bring back Indigenous languages and epistemologies, and the other is about "reconciling and reprioritizing what is really important about the past with what is important about the present" (p. 39). While theory is crucial for Indigenous peoples as it helps them to make sense of the surrounding world, it is also important to keep looking for alternative theories and "dialogue across the boundaries of oppositions" (p. 39). Smith adds that it is the collective story involving many voices that exerts considerable influence upon the decolonization discourse (pp. 144-145) as the colonial process is not complete (p. 99). In this light, storytelling, being powerful and offering unique perspectives, can be employed as a useful and ethical research tool of less exploitative nature which recognizes colonial structures in research and decolonizes Western research and thought; it rewrites colonial narratives and reframes historical facts while reviving Indigenous ways of knowing and silenced perspectives. In essence, it may be argued that the Indigenous practice of telling stories as a method of decolonization serves both to fight the genocidal policies of Canadian governments

aimed at erasing Indigenous cultures and allow recovery from generations of oppression, for it emphasizes their very existence.

3.2. Two-Eyed Seeing approach and storytelling as an Indigenous research praxis

Indigenous and non-Indigenous scholars-allies have found that storytelling is a methodological praxis of Indigenous research that links Indigenous worldviews, epistemology,[26] methodology, and ethics, shaping the approach of the culturally appropriate research and inserting Indigenous principles into research practices. Acknowledged as timely, appropriate, and culturally relevant, it acts as a knowledge-making methodology (Cajete, 1994; Smith, 1999; Wilson, 2001; Atleo, 2005; Thomas, 2005; Archibald, 2008; Armstrong, 2009; Kovach, 2009; Iseke, 2013). Margaret Kovach observes that Indigenous storytelling, privileging collaboration, holistic interconnectedness, humility, spirituality, and reciprocity, is an essential way of expressing intergenerational Indigenous ways of knowing (Kovach, 2009). According to Thomas King and Margaret Kovach, through Indigenous stories the dynamics of the center are shifted and, thus, the storyteller and listener are brought together as one, creating a sense of unity and a network for knowledge dissemination. In storytelling which builds a relational engagement between the storyteller and listener: they are connected and collaborative (King, 2003; Kovach, 2009). Being ontological, epistemological, and relational, Indigenous storytelling reflects authentic and genuine experiences of Indigenous communities and plays an essential role in distributing Indigenous ways of knowing, situating the storyteller, listener, and non-human world as active participants in the process of knowledge-making (Wilson,2001, 2008; King, 2003; Kovach, 2009; Legg, 2016).

In this chapter, I specifically draw on Indigenous storytelling methodology as a relational knowledge-making practice which has been discussed by several scholars (Cajete, 1994; Cruikshank, 1998; Battiste, 2002; King, 2008; Atleo, 2005, 2012; Wilson, 2008; Armstrong, 2009; Kovach, 2009; Iseke, 2013; Simpson, 2017). They examine storytelling as an Indigenous lived practice grounded in Indigenous

[26] According to Gregory Cajete, "Epistemology, or how we come to know what we know, provides the philosophical foundation through which we gain perspectives of the world. In turn, our overall philosophy guides our individual and collective behavior in the world. How we apply philosophy forms and informs our culture and society." Cajete, G. (2014). Foreword. In L. Lee (Ed.), *Diné Perspectives Revitalizing and Reclaiming Navajo Thought* (ix). The University of Arizona Press.

epistemology and ontology, which is integral to Indigenous ways of holistic and experiential teaching and learning about the world, transferring knowledge from one generation to another. Not only does it validate Indigenous epistemologies but it also allows for the intergenerational sharing of knowledge systems which are critical to the resilience of Indigenous communities. Kovach points out that stories are "active agents within a relational world, pivotal in gaining insight into a phenomenon" (Kovach, 2009, p. 94).

As discussed in the literature review, the use of the story-based research methodology requires a holistic transfer of information. In this study, it is within this context that my Two-Eyed Seeing conceptual framework embodies the relational approach of Indigenous research methodologies and methods, which I examine with reference to storied knowledge, storywork, and reflexivity.

Two-Eyed Seeing epistemological positioning

The Two-Eyed Seeing decolonizing and indigenizing research framework I select for this project is grounded in Indigenous philosophical assumptions and perspectives which impact teachings embedded in the analyzed stories and *kota* string figures. This concept, advocating for inclusion, mutual respect, understanding, and collaboration (Iwama et al., 2009), has enabled me to recognize multiple Indigenous perspectives and work with Indigenous knowledge and share it with others without distorting it. Mi'kmaq Elder Albert Marshall and Jo-Ann Archibald observe that looking through two eyes serves as a metaphor for seeing the world from Indigenous and non-Indigenous perspectives (Archibald, 2008; Bartlett et al., 2012). It is critical to note that this indigenized and emancipatory framework does not privilege one way of knowing over the other but it sees and acknowledges the holistic value of both knowledge systems "within a co-learning, active and inclusive environment" (Levac et al., 2018, p. 7). Not only are these different perspectives valued but may be also blended and merged to establish pathways to move forward in a respectful and reciprocal collaboration. Naturally, seeing with both eyes requires one to possess an in-depth understanding of both distinct knowledge systems, different worldviews (Indigenous and Eurocentric) (Archibald, 2008; Bartlett et al., 2012; Marshall, as cited in "Two-Eyed Seeing," 2017). This inclusive blended approach is based upon relational accountability which "implies

that all parts of the research process are related, from inspiration to expiration," from inception to completion of the project (Marsh, 2015, p. 5). In the context of my research study, seeing with both eyes involves Indigenous oral tradition and Western literary tradition, stories from oral and written sources.

It is important to note the concept of literacy refers not only to written texts; there are also pattern literacies incorporating visual imagery and embodied experience to convey knowledge systems. That is, by creating intricate patterns and geometric designs in the form of weaving, pictographs, beadwork, and sand drawings, Indigenous peoples are also able to tells stories, communicate and learn storied spiritual beliefs, history, and knowledge in a tactile and experiential manner (Mojica, 2009; Carter, 2010; DeLeon Kantule, as cited in Kantule, 2014; Yunkaporta, 2020). As a result, seeing the stories through the oral and literate lens and *kota* string figures as a form of pattern literacy, I could carry out their thematic analysis and search for the cultural knowledge.

Storytelling as a relational approach

In reflecting upon storytelling as a methodology invoking the relational, Shawn Wilson (2001), in his article "What Is an Indigenous Research Methodology," writes that the listener shares the responsibility of the storyteller and puts the related story in a relational context so that the conveyed meaning makes sense. In a storytelling research methodology, it is the researcher who is positioned as an active participant in the research process and who undergoes transformation. In this project, for instance, with each analyzed story, I have been able to deepen my self-knowledge and discover areas of importance I was not aware of prior to my research.

To show the embodied and participatory nature of my research, I want to point out to a volunteer program at the Indigenous Health Research and Education Garden (IHREG), located on the Musqueam unceded territory and UBC Farm in Vancouver, in which I have actively participated since 2015. The garden's traditional xʷməθkʷəy̓əm Musqueam name is xʷc̓ic̓əsəm. The hən̓q̓əmin̓əm̓ word means "The place where we grow". Participants come from Indigenous and various immigrant societies involved in a cross-cultural cooperation and sharing of knowledge. The Indigenous garden gives voice to Indigenous perspectives and it is based on the 4Rs of Indigenous education and research: respect, relevance, reciprocity, and responsibility. This experience taught me the relational character of knowledge. Garden volunteer sessions involve strengthening

social bonds, making connections, and sharing Indigenous knowledge concerning stewardship and sustainability and sharing teachings concerning the layout of the garden and its deep connection to the land. Each volunteer session at the Indigenous Research & Education Garden ends with a debrief circle of the garden interns and garden volunteers wherein we share our experiences as well as teachings which we have learnt during each session (personal participation and observation of the author). I argue that this garden-based storytelling activities promote relational ways of teaching and learning in an Indigenous setting, open lines of communication between different cultural groups, and build trust as part of everyday learning in a way that is respectful and inclusive. Respecting Indigenous core values (respect, reciprocity, responsibility, and relevance), the garden can be acknowledged as a space for the transmission of Indigenous ecological knowledge to future generations. Sharing time on the Musqueam land created a mutual understanding of their epistemology. This research experience and the process of building relationships represent a holistic journey of my self-development which is significant to my research.

Storied memory

Reflecting upon the use of stories for gathering knowledge, I am again inspired by Jo-Ann Archibald who brings into focus the idea that knowledge-making by means of storytelling involves the development of a storied memory and it facilitates meaning-making through and with Indigenous stories (2018). I have realized that storytelling as a research methodology may be used to retrieve precise evidence-based memories pertaining to Indigenous ways of knowing and lifeways practiced and updated on an on-going basis since time immemorial.

Stories are being reawakened and so are the storied memories and ways of knowing that come with them. Kovach and Archibald reflect on the principles of holism, interrelatedness, and synergy, stressing the significance of patience in the embodied story-research process (Kovach, 2008; Archibald, 2019). Incorporating Kovach's and Archibald's insights into my research approach, I have purposefully built in more time for listening to and reading the actual research material. This approach allows for a deeper analysis of what the stories share and teach instead of hurrying and getting through the stories. This research is informed by the work outlined above

valuing the gift of Indigenous stories and seeks to demonstrate how Indigenous ways of knowing have been embodied, preserved, and updated by stories and *kota* string figures.

Indigenous storywork and reflexivity in research

According to Jo-Ann Archibald, stories encourage people to engage in introspection and reflect on their behaviour, past actions, and reactions, thus guiding them to make sound decisions and integrating storied cultural values into their day-to-day life (2001, 2008). She provides such Indigenous storywork principles as respect, responsibility, reciprocity, holism, interrelatedness, and synergy, which I adopt as my guiding research practice. They "form a Stó:lō and Coast Salish theoretical framework for making meaning from stories and for using them in education contexts" (2008, ix).

This privileging of storytelling within the framework of Indigenous research methodologies pertaining to knowledge production and meaning-making means rejecting the colonial notion of expertise and suggests that it is vital to do research in a relational way including varying perspectives, and making sure that stories are not exploited in my research project. I have analyzed and understood them in the context of the Northwest Coast First Nations territories in which they are brought to life, paying particular attention to the underlying epistemological assumptions (Archibald, 2019).

I also align my thinking with Kovach's ideas on Indigenous storytelling as space for reflexivity and personal perspectives "Indigenous story offers knowledge relevant to one's life in a personal, particular way" (2009, p. 100). I devoted plenty of time to reading and re-reading of the selected stories to grasp their meaning and to delve into Indigenous knowledges. At the same time, I reflected on my own Eastern European minority position, the importance of Slavic pre-Christian perspectives which have been systematically erased and demeaned as pagan in the mainstream culture. I also contemplated on my role in the process of reclaiming Indigeneity in my cultural area.

3.3. Decolonizing Indigenous and non-Indigenous methods for gathering and analyzing Indigenous stories

Being a transcultural scholar guided by the principle of Two-Eyed Seeing, I have tried to embrace the gift of multiple perspectives and immerse myself both in the Indigenous

cultures of the studied region, and my Eastern European underprivileged background. I have adopted a decolonizing and anti-oppressive perspective. The methodology and methods I articulate in the chapters that follow begin with an interdisciplinary research method that engages with the teaching stories of Indigenous peoples and their narrative analysis as well as personal life experience stories practiced by the First Nations of British Columbia today. I argue that the teaching stories, personal stories, and performance art of *kota* string figures together provides a way of understanding the current social reality, environmental ethics, values and proper and acceptable conduct in relation to various ecosystems and species, characterized by communal faith in their validity and authenticity.

Method of active listening and visualizing – Embodied experience of storywork

My textual engagement of the written transcripts of the stories analyzed in the dissertation has provided me with a way to experience a sense of synergy of the storytelling practice, for while I was reading and performing the analysis of those stories, I was able to experience, feel, and digest them. For that purpose, I read with three ears and engaged my intuitive, visual, and tactile sense to find meaning in analyzed stories and bring out the embedded knowledge and teachings. Margaret Kovach calls it 'active listening' (2009), which opens up the aforementioned principles of interrelatedness and synergy (Archibald, 2008). I have come to realize that this is the power of synergy in my research.

By viewing my study through the lens of Indigenous storywork, during my research journey, I have also kept a reflective journal in which I decided to record all my fieldnotes, feelings, and observations as a part of a reflexivity method of research "to be continually aware of [my] own biases as a means of consistently locating [myself] in the research(Kovach, 2009, p. 26). Keeping the journal has allowed me both to maintain my motivation for conducting this research and clarity pertaining to its purpose and it has provided me with a space for pondering over the gathered knowledge and self-reflection in the meaning-making process. It may be argued that careful reading and re-reading Indigenous creation and life experience stories bring into light new cultural information and teachings, pertaining to Indigenous relational worldviews,

ecological knowledge, sustainable harvesting practices and management systems, previously hidden in the layers of those stories.

As part of the reflective journal, I have used photography as a visual research method – photovoice – that focuses on community-based praxis. It is a form of visual storytelling which prompts memories that prompt the sharing of associated stories (Wang & Burris, 1997; Stevens, 2020). I was privileged to take part in and take photos of ancestral harvesting locations and plants harvesting and management practices, which allowed me to document and then reflect upon the stories and embodied knowledge shared with me by Knowledge-keepers. It also helped me to further reflect upon my tactile and experiential learning from a new perspective after my fieldwork at the xʷməθkʷəy̓əm garden and making various *kota* string figure patterns with Carrie Mortimer and on my own.

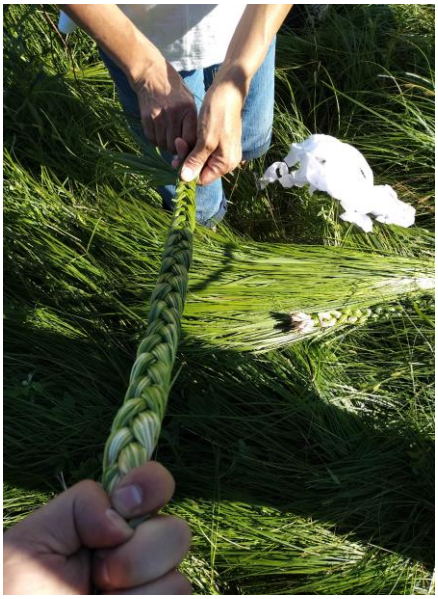

Fig. 2 & 3. Harvesting sweetgrass. Sweetgrass First Nation Reserve, Saskatchewan, Canada. Photos taken by me.

The method I use to advance my thesis interweaves narratives of the past and *kota* patterns,[27] with the narratives of contemporary knowledgeable Indigenous peoples and written records by anthropologists and ethnographers, such as James Teit, Franz Boas, George Hunt, Charles Hill-Tout, and Thomas Forsyth McIlwraith (Teit, 1900, 1906, 1912, 1930; Boas, 1912, 1916, 1934, 1966; Hunt, 1905, 1906; McIlwraith, 1948; Hill-

[27] Narratives of the past and *kota* patterns have been collected mostly from published texts written by Indigenous and non-Indigenous scholars and writers and also from encounters with knowledge keepers and personal participation in *kota* string-figure making.

Tout, 2000, 2013).[28] I use the terms stories and narratives interchangeably in this thesis to refer to oral tellings that involve past events – whether the recent, remembered past or ancient past millennia ago. Since Indigenous stories cannot be merely perceived as narratives that present a linear progression of events, transcending time and fastening themselves to places(Cruikshank, 1990; Cajete, 1994; Smith, 1999; Wilson, 2001; Battiste, 2002;King, 2003; Atleo, 2005, 2012; Maracle, 2007; Archibald, 1997, 2008, 2018, 2019; Armstrong, 2009; Kovach, 2009; Simpson, 2017),it has been necessary for me as a cultural outsider/visitor to obtain contextual background in a concerted effort to delve into the meaning of Indigenous stories of Northwest Coast First Nations, anchoring knowledge and memories to landscape and places. It needs to be remembered that a considerable number of stories recorded by ethnographers (James Teit, Franz Boas, George Hunt, Charles Hill-Tout, and Thomas Forsyth McIlwraith) are historically decontextualized narratives, presented in an a-historical past that need to be decolonized, bringing out from the margins and incorporating Indigenous relational worldviews, teachings, and perspectives that are necessary to interpret the findings deeply embedded in those stories.

Moreover, the storytelling method is employed in the narrative analysis of these stories to show how specific stories shape actions while influencing the social reality and establishing ecological knowledge. This research pays attention to analyzing repeated time-honoured stories, personal life experience stories, and *kota* string figures with regard to the creative and didactic power of narrative. Maenette Benham's work supports my use of story-based methodology, emphasizing how narratives serve as tools for learning, problem solving, and skill acquisition through the messages they convey (2007, p. 517).

[28] In my dissertation, I refer to the following ethnographic texts: James Teit, *The Thompson Indians of British Columbia; The Lilooet Indians; Mythology of the Thompson Indians; Ethnobotany of the Thompson Indians, British Columbia*; Franz Boas, T*simshian Mythology: Thirty-First Annual Report of the Bureau of American Ethnology; Geographical Names of the Kwakiutl Indian; Kwakiutl Tales;* and *Kwakiutl Ethnography*; George Hunt and Franz Boas' *Ethnology of the Kwakiutl* and *Kwakiutl Texts*; Thomas Forsyth McIlwraith, *The Bella Coola Indians*; and Charles Hill-Tout, *The Salish People: The Local Contribution of Charles Hill-Tout: Volume I: The Thompson and the Okanagan* and *The Salish People: The Local Contributions of Charles Hill-Tout. Vol. 3, The Mainland Halkomelem*.

Importance of cultural context

As a researcher, in designing this study, it was necessary to place creation stories along with particular updates as well as personal life experience stories and *kota* string figures in an Indigenous cultural context. Kovach (2009) states that "working with story as a means of making meaning requires that the research be presented in its contextualized form" (p. 131). She further adds that stories should "be read within the context of an Aboriginal worldview that honours qualities such as relationship, reciprocity, collectivism, and sacred knowledges" (p. 146). Pretty much along the same lines, Wilson (1999) observes that "interpretation of the context of knowledge is necessary for that knowledge to become lived, become a part of our collective experience or part of our web of relationships" (pp. 102-103). With that being said, as I sat with the stories longer, following such ethical guidelines, it was necessary to combine the narrative analysis (story) with the contextual one (storytelling act) in a concerted effort to put the analyzed phenomena in context and social arrangements and ensure that the embedded information and teachings were accurate. In line with this research approach, it is therefore essential in my work to provide sufficient contextual information in the dissertation. In this regard, it also allows me to put the contained information in particular social circumstances, explaining the relationship between telling creation stories, personal life experience stories, and *kota* string figures and the way specific practices of Indigenous ecological knowledge work along with the possibility of re-updating and making their interpretation contemporary (Wilson, 2001; Archibald, 2008, 2018, 2019; Kovach, 2009; Armstrong, 2009; Windchief &San Pedro, 2019; Archibald & Parent, 2019). It helps me to situate a highly-contextualized analysis and create space for Indigenous voices. Thus, the main objective of my research has been to "create entry points for Indigenous knowledges to come through" (Kovach, 2009, p. 7), leading to disrupting injustices and social transformation.

The ethical framework of my research is grounded in '4Rs" of Indigenous research (Kirkness & Barnhardt, 1991; Archibald, 2008), and hence relational accountability as discussed by Shawn Wilson (Opaskwayak Cree Nation), who reminds me that I "take on the responsibilities of the storyteller" that "[t]he relationship that we all build with an Indigenous research paradigm shape and redefine the concept", and that I am "accountable for how [I] use it" (2008, p. 126). I strove to meet my responsibility toward decolonizing research and the Indigenous communities throughout

the entire research process and trust that the study unfolded the way that my journey of self-development and self-discovery was meant to be.

3.4. Conclusion

By using the storytelling theoretical framework, as a decolonizing research methodology, this dissertation gives voice to the marginalized and their Indigenous knowledge systems. While relating and analyzing stories, I take into consideration their spiritual, emotional, and physical components, millennia old teachings, worldviews, lifeways, and spiritual values come to life, thus leading to knowledge making. My personal story reminds me of who I am and my responsibilities towards my research. I also use my personal story to remind me of my duties as a researcher centering Indigenous voices embedded in the analyzed stories.

Chapter 4

Importance of Storytelling for Indigenous Cultures With a Specific Focus on Northwest Coast Cultures

> *The Elders would serve as mnemonic pegs to each other. They will be speaking individually uninterrupted in a circle one after another. When each Elder spoke, they were conscious that other Elders would serve as 'peer reviewer' [and so] they did not delve into subject matter that would be questionable. They did joke with each other and they told stories, some true and some a bit exaggerated, but in the end the result was a collective memory. This is the part which is exciting because when each Elder arrived, they brought with them a piece of the knowledge puzzle. They had to reach back to the teachings of their parents, grandparents and even great-grandparents. These teachings were shared in the circle and these constituted a reconnaissance of collective memory and knowledge. In the end the Elders left with a knowledge that was built by the collectivity* (Augustine, as cited in Hanson, n.d.).
>
> **Stephen J. Augustine**
>
> Hereditary Chief and Keptin of the Mi'kmaq Grand Council

It would be shortsighted to argue that stories are a unique characteristic of Indigenous cultures since each culture demonstrates a need for storytelling. It stands to reason that different cultures employ different means to perform, transmit, and preserve their stories. Traditionally told by elders – known as Knowledge Keepers and community members who earned the title of the Storyteller ("Sharing through Story," n.d.) – Indigenous stories retain the history and plenitude of deeply held Indigenous knowledge of the past in general, and specifically, as argued in the chapter, land-based and place-based relational knowledge of Northwest Coast First Nations by means of passing their cultural information over the lifetime of many generations. For thousands of years, ecological knowledge, teachings, connection to the land, historical accounts, cosmologies, distinct worldviews, and ceremonies have been kept alive through the embodied practice of oral storytelling of incredible depth and diversity that was not

transcribed. Importantly, as said before, prior to European contact, every facet of Indigenous peoples' life was embedded with the tradition of storytelling that formed the foundation of Indigenous pedagogy and education. Namely, recollected stories containing intergenerational memory were utilized to retain and share an enormous amount of vital information to the next generation exactly as it was taught to the previous one. Given that, meaning was generated by the cyclical process of narrating and re-narrating those stories that interconnected the past, present, and future (Buckle, 2018, p. 10), which may suggest an ongoing and painful act of resistance and their refusal to disappear.

This chapter reflects on the uniqueness of Indigenous storytelling in general which I examine with a special focus on the strategies and protocols for telling Indigenous stories and for engaging with the world yet changing in accordance with generations. I also explore the importance of Indigenous storytelling for contemporary Indigenous peoples as the underpinning of their lifeways and the act of survivance in the present. The discussion is complemented by an in-depth analysis of the categories and intricacies of Northwest Coast stories, narratives, and themes. This chapter also provides guidelines how to decipher messages encoded in those stories in order to provide a basis for a discussion of Northwest Coast storytelling as a transmission mechanism of dynamic and land-based Indigenous ecological knowledge. I look at Indigenous stories in general as episteme, pedagogy, history, and acts of resistance/survival. I focus on stories as connected with themes related to Northwest Coast ecological knowledge and I show that the categories of Northwest Coast stories, such as stories of origin, transformation, transgressive behaviour, stories as maps, sacred stories, and life experience stories inscribe this kind of knowledge. It needs to be noted that each Indigenous nation has their own stories and oral tradition in other areas is similar yet distinct. Due to cultural protocols, throughout the dissertation I will use already recorded, published and available material in my analysis. The Northwest Coast stories used in this research are recorded in English translation. Some stories were never related in Indigenous languages. These translations of Indigenous content were made by anthropologists and scholars-allies who cooperated with Elders of Indigenous communities and were given permission to publish these translations. When possible, Indigenous versions of stories have been sought. Doing this has enabled me to explore Indigenous stories without fear of entrenching upon cultural protocols as they have already been in the public domain for a long time. Indigenous scholars and artists

themselves, when working with stories already published in English, choose those that have been given permission and approval of Elders; for instance, Floyd Patrick Favel, a Cree theatre theorist, director, essayist, and playwright, developed his pioneering ideas on Indigenous theatre and performance using translations of earlier published Indigenous stories (personal participation of the author in The Sacred Space: Indigenous Story and Theatre, an online seminar with Floyd Patrick Favel, 2023). I also made every effort to ensure that I work with translations accepted by Elders.

What follows is a synthesis of my research on Indigenous storytelling which I hope can serve as a compendium of knowledge on storytelling processes and protocols. Following such Indigenous scholars as Jo-Ann Archibald, Margaret Kovach, Shawn Wilson, and Lee Maracle, I draw attention to guiding principles for reading, listening as well as interpreting Indigenous stories. As a scholar, following the principles of Indigenous methodologies and embracing an ethical and respectful research practice, I have a responsibility to honor and provide a safe space to reclaim and support the voices and land-based knowledge of Indigenous peoples embedded in the analyzed stories, advancing the project of decolonization and indigenization.

4.1. Indigenous storytelling as resistance: A practice of decolonization and knowledge-making

Most scholars of Indigenous storytelling point out that not only does it express experiences of Indigenous peoples since time immemorial but it also validates their experiences, ontologies, epistemologies, axiologies as well as related knowledge systems. According to Shawn Wilson (2009), Indigenous ways of knowing are characterized by relationality (p. 58) and reality as "sets of relationships that make up an Indigenous ontology" (p. 73). This relationality is practiced through various forms of storytelling that are aimed to ensure "the holistic use and transmission of information" (p. 32) and this aspect of storytelling is foundational for my project. In "Indigenous Storytelling as Research," Judy Iseke (2013) observes that Indigenous storytelling, as a witnessing and remembering mechanism restored by the advent of a collective memory, connected to the past, located in the present, and future-oriented, may serve as a pedagogical tool for learning about life (p. 559), enabling younger generations to share and relearn Indigenous knowledge systems embedded in visual images and

geographical space, including Indigenous ecological knowledge. Yvonne Pratt, a Metis scholar, emphasizes the transformative and decolonizing potential of Indigenous stories by arguing that they can be used to indigenize and reclaim pre-colonial knowledges, facilitate the unlearning of colonial lessons, and help embrace a new relationship to the past (2021, p. 122). Stories have the power to bring historic legacies into the present moment in spite of suppression imposed by settler colonialism. In this way, they provide adaptive meanings and contribute to cultural renewal. When Indigenous peoples engage in sharing and listening to narratives, stories become a catalyst for resistance, "building a larger community of storytellers, defying divisive colonial inscriptions, and reinscribing Indigenous peoples and their epistemologies across the landscapes they historically inhabit" (Jackson & DeLaune, 2018, p. 37). In this section, I discuss how Indigenous storytelling, with a focus on the ecological aspect of Northwest Coast land-based storytelling tradition, serves as a means of reclaiming Indigenous knowledge systems, revising history, and resisting colonization.

Storytelling as an episteme

What is of interest to my exploration of Indigenous stories is that storytelling functions as an episteme – a venue for preserving and transmitting principles and information related to the place-based knowledge of Indigenous peoples, which is reiterated by a Cherokee scholar Emily Legg (2016) who poignantly describes the knowledge-making features of storytelling:

> the story, participants, environment, time, and place are active agents in the creation of a way of knowing, understanding, and relating [and, thus,] stories act as the thread to ancestors, places, and times between the lived experiences of the community as the stories are told again and again. It's not a nugget of information that is passed on, but a living practice that creates relationships between all relations. This indigenous practice of seeing all relationships within storytelling creates agency to re-tool dominant methods in existing colonial structures. So, the processes unfolding through storytelling are not just a way of doing things (e.g., we don't just tell a story). Stories aren't just static tools; they are productive forces that live and respond to outside changes and are networked with other active forces (p. 45).

These words make it clear that Indigenous stories make the embedded knowledge and cultural teachings and practices significant for generations to come. Other scholars such as Malea Powell, an American Indian and Indigenous Studies Professor at Michigan State University, and Cree Elder Tom McCallum show that this continuous relational thread of Indigenous storytelling is fundamental to the resilience and survival of

Indigenous peoples as it played a crucial role in preserving their history, knowledge and cultural beliefs during the era of colonization and forced assimilation practices (Powel, as cited in Legg, 2016, p. 68; McCallum, as cited in Iseke, 2013, p. 565). These oral traditions and storied historical/ancestral knowledges, as Judy Iseke tellingly observes, are used to analyze "current events and Indigenous understandings in ways consistent with traditional worldviews and cosmologies" (p. 559). I believe the process of witnessing in storytelling is of high importance here as it might be used to reflect the process and ways of ancestors in today's world and show how to live and understand the world – past and present.

Moreover, Flora Zaharia (Blackfoot Nation) and Sandra Krahn (Metis) state that stories are intimately linked with seasons, lifecycles of animals and plant organisms, and the rhythm of community life is based upon these cycles. Therefore, the specific location Indigenous peoples come from is the land base wherein narratives are the most important, for they are rooted in the local landscape (2016, pp. 436-444). From that standpoint, Indigenous stories coupled with complex layers of community experiences and a deep connection to the past stress the importance of local knowledges coming from the land in contrast to Western knowledge systems.

Focusing on the pedagogic aspect of Indigenous storytelling as a knowledge-constructing praxis, stories, to borrow Tom McCallum's words, are not only histories but they also possess spirits. Stories are a genuine record of Indigenous people's experiences that have been transmitted through generations, serving as means of imparting knowledge holistically. They leave a room for interpretation, enabling the listener to relate these stories to their experiences. Moreover, Indigenous stories also have a spirit, and experiences shared in these stories are alive (McCallum, as cited in Iseke, 2013, p. 565). Sharing one's experiences takes place within the process of pedagogical witnessing linking a series of communicative acts in a community wherein people share their knowledge and experiences while revisiting the past. Storytelling – which, as Thomas King argues, weaves together the speaker and listener into a single entity, creating an ecology of participation (King, as cited in Legg, 2016, p. 26) – can be a form of educational practice helping people envision the future in relation to the complex past, relive their past and reconsider their future (Iseke, 2013, pp. 568-572).

Stories as an oral record of history

Indigenous narratives as oral testimonies provide an alternative mode of time reckoning and understanding history and thus have played a vital role in court cases by drawing attention to their historical accounts and colonial violence and injustice in the lives of Indigenous communities. In this subsection, I deliberately choose stories related to Northwest Coast to discuss this aspect of storytelling. According to Paolo Fortis, a social anthropologist at Durham University, it is Indigenous historicity which, focusing on the authentic value of knowledge claims about the past, "[transcends] the Western 'ownership' of history and [includes] different forms of social praxis such as dreams, songs, performance and rituals in what counts as history" (2019, p. 13). Indigenous stories provide an alternative mode of time measuring, time reckoning and understanding history. Keeping an oral record of their history, Indigenous storytelling, creation stories in particular, has become really important in legal decisions as courts have allowed Indigenous stories to be used as evidence in land claims/unceded sovereignty over lands in Canada. In other words, oral history was acknowledged as an essential type of evidence that needs to be perceived and treated as equal to other forms of evidence. For instance, a very good illustration of this is the Provincial Supreme Court case Delgamuukw vs. British Columbia (1977) that seems to be the most famous example of oral history in a legal context. It was a breakthrough moment as it was the first case where the court – albeit Justice Allen McEachern having dismissed the given evidence as unreliable in the courtroom – accepted the oral transmission of Indigenous stories as admissible oral evidence in rights and titles cases (Hanson, n.d.).

In this case, the Gitksan and Wet'suwet'en peoples claimed that they had an Aboriginal title to their land located in the Province of British Columbia. For the sake of proving their title to the land, Gitksan and Wet'suwet'en hereditary chiefs presented their history by means of stories, performance, dances, and songs so as to demonstrate their evidence that they had lived in their territories since time immemorial. Even though the evidence was concluded to hold no legal weight, on appeal, these Indigenous nations were able to win a precedent setting victory. In effect, the success resulted in the fact that Indigenous stories, grounded in place-based practices, were eventually given weight as legal evidence acting as assertions of Indigenous land title (Hanson, n.d.) and "placed on equal footing with the types of historical evidence that courts are familiar with" (Wright, 2013, p. 107). What can be observed here, as I argue, is not only a

connection between Indigenous stories, land and Aboriginal title to the land that can be employed in the current era of land disputes, but also the fact that Indigenous peoples' relationship with and belonging to the ecosystem is largely dependent upon the knowledge of their stories developed over several hundreds of years.

Furthermore, with the formation of the Indian Residential School Truth and Reconciliation Commission (TRC),[29] Indigenous storytelling practices became recognized as reliable sources of information pertaining to the history of trauma and abuse that took place in the residential schools in Canada (Emberley, 2015, p. 17). For the purpose of "assessing the damaging effects of this government policy on Indigenous people" (p. 17), testimonies regarding the Indian Residential Schools were carefully gathered. Based on those testimonial narratives collected from residential school survivors, the commission investigated the abuses and deaths of Indigenous children that had occurred in the church-run residential schools. In effect, Julia Emberley acknowledges that using testimonial narratives as a trans-generational memory that bears witness to the historical wrongs, violence, and traumas can document the impacts of the most devastating government policy on the lives of Indigenous peoples. This process of documentation is acknowledged as a form of healing in the present-day reality (p. 17).

Storytelling as decolonization and resistance

Subject to cultural loss coupled with the collective experience of psychological and physical abuse at the hands of the Canadian state, Indigenous peoples demonstrated incredible resilience to survive and thrive and strengthen identities through stories (Iseke, 2013, p. 565). Indigenous stories, historically ignored or deliberately suppressed by the colonial narrative, hold first-hand historical accounts about Indigenous peoples' ways of life and perspectives that are aimed at recollecting their past for the sake of remaking the present and the future not only as a form of acknowledgment of the damaging effects of colonization on Indigenous peoples (Molenaar, 2020). True and valuable in and of themselves, they might be perceived as spaces of resistance to

[29] For further information on the Truth and Reconciliation Commission (TRC), its reports, key findings, and 94 Calls to Action, see Truth and Reconciliation Commission of Canada. (2015). *Honouring the Truth, Reconciling for the Future. Summary of the Final Report of the Truth and Reconciliation Commission of Canada*.

historical violence, oppression, subjugation, and other forms of power and their trail of affect (Iseke, 2013, p. 561) wherein the creative force of decolonization and re-indigenization of Canadian history might take place via storytelling as a form of testimony.

Iseke (2013) makes an important argument that, by learning from related oral land-based stories, which shed light upon who they are, where they come from, and how they belong, Indigenous peoples are somewhat enabled to launch into remaking themselves and making connection to the world. As she notes, by virtue of storytelling, serving pedagogical or witnessing functions, Indigenous peoples can take matters into their own hands and create a new story of their connections in the present (p. 573). By learning from stories, they challenge the dominant modes of thought linked with colonialism and a settler-oriented education system as well as various instruments of oppression (Timpson, 2010, p. 5), including the Indian Residential School System. Above all, and this must be repeated, stories allow Indigenous peoples to bring into the open who they are, where they come from, what they understand, and how they create and maintain their intimate relationship with the surrounding world and ways of living.

Emberley likewise suggests that Indigenous storytelling should be pondered over/rethought as grounding medium of Indigenous identity and a decolonizing practice because

> in its traditional oral mode or in written or visual forms combined with the varied possibilities that exist for creative expression [it] can also decolonize aspects of the national imaginary in ways that are noninstitutional, perhaps less evident and yet equally effective, in creating spaces within which they recognize, acknowledge, and transform the violence of colonial genocide (2015, p. 20).

According to Warren Cariou, Indigenous storytelling is "a performance of cultural sovereignty and community self-determination, first because the storyteller's act of telling the story is an affirmation of the continued value of Indigenous oral forms of knowledge, and second because the continued life of the story depends upon members of the community to do the work of remembering" (Cariou, 2016, p. 315). In effect, one can observe a collective performance of community identity (p. 315) as a refusal to disappear and as an act of living resistance against the genocidal history of colonialism across time and space. As a case in point, Secwepemc Elder Mary Thomas recalls that when she was taken to a residential school in Kamloops, BC, she could not learn the knowledge and lifeways of their parents and grandparents, including the place-based knowledge related to plants and ecosystems. Indigenous children were forced to turn

away from their traditional teachings and values and assimilate into the European lifestyle. Indigenous ways of knowing were deprivileged, devalued, and nearly eliminated. Yet, she retained the intergenerational knowledge of her ancestors (Thomas, as cited in Cherniack, 2013, p. 297). Significantly, such testimonies give voice to Indigenous perspectives of their history so as to challenge the colonial narrative and reclaim Indigenous ancestral lands and sovereignty.

It can be argued that Indigenous peoples use the power of storytelling to reconnect with Indigenous worldviews and their ways of life and show proper directions to make, interpret, and reinforce Indigenous knowledge systems. Indigenous intergenerational storytelling golds a great significance for the collective survival of Indigenous peoples. It serves as a means to reassert self-determination, social justice, and ethics of place and shapes good-quality Indigenous research based on Indigenous values and ethics.

4.2. Cultural protocols for telling Indigenous stories

Intimately connected to the action of storytelling are cultural protocols or guidelines for using and working with Indigenous traditional and life experience stories. The term protocol refers to different ways of interacting with Indigenous peoples and their traditional ways of being and it is a representation of their ethical system. Protocols for telling stories are unique to an Indigenous community (Campbell, 1985; Atleo, 2005; Archibald, 2008, 2012; Armstrong, 2009; Kovach, 2009) and, as Judy Atkinson observes, "by incorporating these principles […] into research, the researcher honours the worldviews of Indigenous peoples and does so with ethical responsibility and sensitivity (Atkinson, as cited in Wilson, 2008, p. 59). Each Indigenous community has specific cultural protocols for telling and working with stories; however, some protocols appear to be common among Indigenous groups of Turtle Island. These protocols are integral to their self-representation and identity. I recognize and extend respect to each Northwest Coast Nation whose land-based stories I work with for their cultural protocols and guidelines. In this chapter, I discuss the following protocols: oral footnoting/acknowledgment of sources; social protocols; and the framework of 4R's.

One of the major protocols surrounding a responsible and ethical approach to stories is the acknowledgment of the source of stories, thus naming the culture and context. There is a number of Indigenous scholars who give guidance and provide this

information, such as Skagit Elder Vi Hilbert, Stó:lō scholar Jo-Ann Archibald, and Secwepemc Elder Ronald Ignace. In terms of oral footnoting, as Hilbert emphasizes, it is crucial to acknowledge the source of the story and indicate which Indigenous culture is represented in the related story as well as how the story has come to the storyteller or researcher (Hilbert, 1985). This is stressed by Archibald who points out the significance of contextual background in telling a story. This may include information related to the cultural context from which the story comes or explaining how the story is used in a certain cultural context. Knowing the origin of the story as a protocol may aid in working with and using the story in a culturally appropriate and ethical way (Archibald, 2012, 2020).

In terms of this oral footnoting, stories are given authenticity and can be traced back through time and various generations (Kainai Board of Education, 2004, pp. 52-55). The acknowledgment of sources can be referred to as 'oral footnoting' as it is pointed out by the Secwepemc Elder Ronald Ignace. The sources of Indigenous stories have to be acknowledged, thus validating and authorizing their information. These cannot be separated from their culturally constituted meaning and experiences. Understanding that social and moral teachings may differ depending on the context, it is crucial to study and carefully explain the message encoded in the related story and identify storied factual information. In long-ago times, stories, with a focus on the ecological aspect, were a means of ongoing communication for the Northwest Coast First Nations, facilitating the exchange of Indigenous knowledge systems environmental knowledge and other types of knowledge. Through this process, they were able to apply and transmit storied knowledge accurately, as well as verify and update it for generations to come (Ignace, 2008, p. 28).

Another Indigenous scholar, Jeannette Armstrong, draws attention to social protocols ensuring the proper use and survival of stories passed down in family groups. She provides examples of social protocols deriving from her culture and foregrounds the important aspects of this report, stating what Syilx storytelling customs are. Embedded in stories, cultural protocols reflect the storyteller and his/her role in an Indigenous community and the knowledge he/she possesses. She relates that

> A living elder and storyteller, Andrew Joseph Sr. recently spoke at a public captikwł[30] session at En'owkin Centre in February of 2007. In his introductory talk in the language, which was

[30] In Nsyilxcen/N'silxchn (Syilx language), the culturally specific word captikwł means "oral stories/story systems/doctrine for the transfer of all knowledge." See Armstrong, J. (2009). Constructing

> interpreted for the audience, he reiterated the general Syilx storytelling custom to preface the telling with the information that he preferred to tell animal captikwł, rather than coyote captikwł. He explained that this was both because of being a public occasion as well as to suit his personal role in the community. The occasion was a formal community gathering convened Nation-wide to feature Syilx storytellers. His personal role in the Syilx territory is as a traditional holder of Syilx knowledge related to the land rather than as a leader concerned with social interaction. The example illustrates the way captikwł are usually selected to match the conventions of Syilx social protocols. The Syilx protocols for storytelling are practiced as custom to observe the purpose of (a) formal or public gatherings; (b) informal social occasions; (c) informal family centered gatherings; and (d) for individuals or select audience situations (2009, pp. 91-92).

Most importantly, in discussing the appropriate social protocols and respectful actions surrounding the telling of stories so that the cultural story knowledge is protected, the scholar explains that the rules dictate ways in which stories are related, by whom, and under what circumstances. These words reveal the importance of Indigenous storytelling as a source of essential cultural knowledge.

Another important protocol is articulated in the framework of 4R's (Respect, Relevance, Reciprocity, and Responsibility) (Kirkness & Barnhardt, 1991; Archibald, 2008; Kovach, 2009; Levac et al., 2018). In "Decolonizing research: Indigenous storywork as methodology," Jo-Ann Archibald, Jenny Lee-Morgan, and Jason De Santolo have written that "these four principles place the emphasis on the listener to become "story-ready […] and listen to Indigenous People's stories with respect, develop story relationships in a responsible manner, treat story knowledge with reverence, and strengthen storied impact through reciprocity" (Archibald, et al., 2019). With this understanding, as Archibald further states, it is important to establish learning/research relationships with cultural knowledge holders and storytellers, watch and listen to Indigenous peoples relate stories (2012).

The teachings of Indigenous scholars are foundational to non-Indigenous researchers. They are guidelines to be respected by everybody working with Indigenous stories. I follow these teachings and make sure that my actions are in line with them. I maintain and acknowledge the actual names of the Elders and storytellers who have related stories that are included in this research and state their origin. Such practice authorizes and validates the cultural information and knowledge systems embedded in the collected and analyzed stories. In the spirit of the given protocols, by recognizing the bearers of the knowledge and sources of the stories, I honour and acknowledge their contributions and engage with their teachings in a respectful manner.

Indigeneity: Syilx Okanagan Oraliture and tmixwcentrism. [Published doctoral dissertation]. University of Greifswald.

4.3. General strategies for Indigenous storytelling

Through the rich tradition of storytelling, Indigenous peoples use analogies and connections to ancestral teachings to create a transformative and meaningful learning experience. For this purpose, Indigenous storytelling, with reference to Northwest Coast land-based storytelling and its strong connection with ecology as crucial for my chapter, employs various strategies stemming from oral tradition. In the following section, I am particularly interested in how traditional storytellers, who are often respected Elders of a given community, use particular oral storytelling strategies to comprehend the natural world and reinforce ancestral teachings, values, worldviews, morals, ethics, and identities through the telling of stories.

Oral tradition

Oral land-based storytelling can provide an authentic, precise, and long-lasting record of long-term cumulative knowledge, heritage, and information for the sake of future generations (Maracle, 2007; Archibald, 2008; Armstrong, 2009). This argument is supported by Johnson's observation that

> each instance of storytelling is a unique performance. But from this, it does not necessarily follow that oral storytelling cannot also keep detailed and complex knowledge over long periods of time. Numerous First Nations stories provide accounts of ancient geological, hydrological, and astrological events that record changes in terrestrial and celestial landscapes, whose details and accuracy have been subsequently substantiated by Western scientists (2015, p. 51).

Indigenous storytelling is important for sciences as its accuracy predates Western knowledge systems. As noted by Kainai Board of Education, much of the communication of Indigenous ecological knowledge by means of storytelling occurred during an array of land-based activities or ceremonial practices. For the purpose of conveying the full meaning of stories, certain stories had to be related during a particular activity. What played an essential role in communicating the embedded wisdom was the sensory and experiential experience of carrying out specific harvesting activities, whether berry picking or root digging, at particular times of the year hand in hand with a variety of spiritual rituals and prayers pertaining to the activity (Kainai Board of Education, 2004, pp. 52-55). What can be inferred from this information is that Indigenous land-based storytelling transmission of knowledge is not frozen in the

media of print and writing, and that is actually an important mechanism for the transmission and systematic updating of Indigenous knowledge systems. It can be argued that each telling of certain stories takes into account new pieces of essential information. Thus, just as local ecosystems and related mindscape experience changes, so has Indigenous ecological knowledge been updated on a regular basis since time immemorial. I have come to realize that Indigenous stories provide detailed accounts of Indigenous ways of life and perspectives, climate shifts, and constantly adaptive land and resource management systems.

Lee Maracle's concept of transformative oratory can be useful for elucidating the importance of complex oral traditions in producing and transmitting Indigenous knowledge systems. According to the Stó:lō scholar and cultural producer, it is essential to acknowledge the intricacies of Indigenous knowledge systems as transmitted across generations through complex oral processes that are much more than a spoken word (2010, p. 92),. Following the intellectual tradition of her people, in "Towards a National Literature: A Body of Writing", Maracle (2010) makes a critically important observation that

> the object of story […] is to guide transformation and conduct. Thus, we discuss not how the story is, whether it really is a story or sociology masquerading as a story; rather, the discourse is about whether we see ourselves in the story, and how we make it right with creation. The discourse is about the lessons, the teachings, and the conduct that we must arrive at personally and collectively to make the story work for us and to work with the story. Our discourse centres on the sort of oratory that is largely unacknowledged (p. 83).

In the pursuit of genuine decolonization, the purpose of oratory is to retell and examine old stories first and then create new stories which are "designed to get us alter our direction of behaviour, clear old obstacles, and point us in the direction of the good life" (p. 85). In Maracle's sense, collective oratory is counter-hegemonic Indigenous knowledge held in the past and present (2007, 2010).

Drawing on Maracle's words, people should engage with stories that offer guidance and work with them as active participants in order to prepare for their future journey. As part of this process, they need to study the related story, analyse its context, view themselves through the story, and transform themselves in response to their understanding of the storyline. The means by which Indigenous peoples make the story work for them and work with the story is to learn the embedded lessons and teachings and arrive at the best human conduct personally and collectively (2007, 2010). As a rhetorically elevated form of storytelling, the concept of transformative oratory is

particularly important to my work as it directly links knowledge creation to Indigenous stories. It is a form of knowledge creation presented through story. For my research study, which is a decolonial project aiming at reclaiming precolonial oratorical knowledge as discussed by Maracle, it is essential to reconnect with the original oratory and uncover oratorical knowledge by removing the blinders of colonial history and resisting patterns of cultural domination.

Metaphors and symbols

Among other guiding principles for reading, listening as well as interpreting Indigenous stories, various forms of metaphor serve as ways of understanding educational and social contexts. The work of such scholars as Gregory Cajete provides insights in the role of metaphors and symbols in the translation of Indigenous knowledge in storytelling. Cajete (2000) points out that Indigenous science has its foundation in the metaphoric mind which perceives nature as animate and comprehends the world in a holistic manner "through abstract symbols, visual/spatial reasoning, sound, kinesthetic expression, and various forms of ecological and integrative thinking" (p. 51). The Indigenous scholar emphasizes that the metaphoric mind serves as the basis for place-based knowledge and has been instrumental in creating intricate oral traditions with nature-inspired characters, analogies, and representations. As a creative "storying" of the world, stories draw upon perceptual and imaginative experiences of a community's inner world (pp. 50-51). In this sense, metaphors and symbols provide Indigenous peoples of the study region with a way to discern their long-term holistic and intuitive land-based engagement with nature, ancestral territories, and its more-than-human entities.

There are other Indigenous scholars such Don Fiddler (Executive director of the En'owkin Center), Jo-Ann Archibald, Margaret Kovach, and Robin Wall Kimmerer who show that the metaphorical nature of storytelling effectively and efficiently communicates and shares the heritage of holistic ecological knowledge across cultures, space, and time. For instance, Fiddler makes a similar observation that in Indigenous storytelling "each of the characters and their interaction is a metaphor and symbol of how we relate to ourselves, loved ones and community [and] storytelling then relates to many levels layered in meaning pertaining to human behaviour" (Don Fiddler, as cited

in “The Trickster’s Web,” 1995, p. 6-7). Jo-Ann Archibald acknowledges that metaphors are “a nice bridge to making meaning with stories” (2012b). In her understanding of how meaning is made through storytelling, Archibald uses the metaphor of “unfolding.” She explains that Indigenous stories – situated within Indigenous epistemology and pedagogy – consist of several layers of metaphor and the text of the related story is infused with a clue which is required to somewhat unlock the involved metaphor. Apart from the so-called surface story, one may also identify another story that is included within the former one and there are required specifications encoded in the implicit text which are required to bring the embedded meaning into the light in an understandable manner. The meaning unfolds over time (2008, p. 84). In this light, Kovach cautions that Indigenous stories cannot be merely perceived as narratives that present a linear progression of events, but they transcend time and fasten themselves to places (2009, p. 96) – a point to which I will return.

Today, there are many voices calling for creating and embracing new Indigenous metaphors as a necessary and powerful way to reject the legacy of colonization and affirm Indigenous knowledge systems (Archibald, 1997; Kimmerer, 2013, 2016; Rout & Reid, 2020; Vowel, 2022). Kimmerer (Potawatomi) is a scholar whose work has been hailed in recent decades as she looks at the world through the lens of a scientist and spiritual lens of place-based Indigenous knowledge, advocating that there is a need to learn from the animate land *who* is a teacher. She also provides useful metaphors to create the right relationship between Indigenous knowledges and Western science. Since blending these knowledge systems does not work as it compromises the sovereignty of the former, it is essential, as Kimmerer states, to “bring together the wisdom of two great intellectual traditions of indigenous and western scientific knowledge for our shared concerns for our Mother Earth” (2013, p. 49). She proposes the metaphor of the Two Row Wampum (*Kaswentha*) which embodies a treaty of co-existence wherein

> the white ground of the belt symbolizes the river of life on which we all travel and two parallel rows of purple run its length. One of the purple bands represents the path of the canoe of the original people. The other stands for the ship of the newcomers. The belt conveys the treaty agreement in which the two peoples agree to travel side by side on this river of life (2013, pp. 58-59).

The scholar pays particular attention to the fact that these bands run parallel and never intersect, never interfere with each other. It seems to be a powerful and appropriate

metaphor of autonomy and co-existence of the two knowledge streams, recognizing "the inherent sovereignty of each epistemology and worldview, counter to the notion that a productive relationship between knowledge systems requires "blending" or "integrating"" (p. 59). However, Kimmerer stresses that colonization utilizes the powerful tool of 'linguistic imperialism' that objectifies nature, replaces the holistic web of relationships with 'it', and disrespects Indigenous science, which challenges that metaphor of co-existence (2013, 2016).

Kimmerer also proposes a metaphor of the Three Sisters Garden (corn-beans, and squash) to change the narrative and fight the objectification of the animate world. Consistent with the practice of Two-Eyed Seeing, the proposed metaphor represents knowledge symbiosis which is derived from Indigenous holistic thinking and rooted in the land. Kimmerer highlights the metaphor's embodiment of Indigenous worldviews, kinship, and reciprocity in a polyculture where the three crops grow together and support each other in a reciprocal way. Both knowledge systems contribute to the symbiosis without compromising each other's sovereignty. In this ethical space of mutual respect and intellectual pluralism represented by the squash, the land serves as the source of knowledge, the corn symbolizes the ancestral knowledge of Elders, the beans represent Western scientific knowledge, and the squash, guided by the corn and enriching the symbiosis that keeps changing and evolving with time. These knowledge systems are brought together respectfully into a polyculture (Kimmerer, 2013, 2016).

Kimmerer's teaching of the Three Sisters Garden metaphor is vital for my research. Reflective of that metaphor, my research study is the squash, the ethical space of engagement. In this space, each analyzed Indigenous story is a metaphor that contains other metaphors within that story and re-stories the world I look at. The story is the corn and ecological knowledge-making praxis guided by Indigenous principles, recognizing land as a teacher. Adopting this metaphor allows me to look at stories as embodying the idea of personhood of beings and reaffirm the animacy of the living world in the storyline. As an ally to Indigenous peoples and a gardener of the knowledge mutualism (fourth sister), I argue that the new metaphor underpins the way people speak about storied Indigenous ecological knowledge as a holistic epistemology that ethically guides the tools of Western knowledge (beans) for the well-being of the world.

Storywork

Jo-Ann Archibald's concept of *storywork* emphasizes the power of stories as a source of cultural knowledge to guide and prompt people to reflect on their behaviour, actions, and reactions. Archibald explains that "the power of storywork derives from a synergy between the story, the context in which the story is used, the way the story is told, and how one listens to the story" (Archibald, 2008, p. 84). In order to understand Indigenous stories, not only does one have to use the auditory sense but the recipient also has to visualize the protagonists of the story and their actions. She speaks of THE importance of "[listening] with three ears: two on the sides of our head and the one that is in our heart" (p. 8). In Indigenous thought, the storywork process is holistic as it engages all parts of humanness (heart, body, mind, and spirit) to create story meaning encoded in the story development and actions taken by a protagonist (p. 25). To bring meaning to the related story, it is crucial to activate the principles of synergy and interrelatedness between the story, storyteller, and listener. It requires active participation to connect the dots and bits of information to uncover and understand storied messages and revive experiences of the past, making them alive again in the present (see Chapter 2).

Mnemonic aids

Indigenous and non-Indigenous scholars-allies such as Gregory Cajete, Walter Ong, Johnpaul Jones, Vine Deloria Jr., Ronald E. Ignace, Gloria Cranmer Webster, and Carrie Mortimer explore the topic of mnemonic aids and draw attention to profound interrelationships between Indigenous stories and geographical locations (mnemonic aids) found in ancestral homelands. According to Cajete, Indigenous stories require an economy of words and symbols to evoke a wealth of embedded meaning (1994, p. 158). In this case, mnemonic aids have long been used by Indigenous peoples to recall and retain stories and embedded knowledge systems. According to Walter Ong, the incorporation of storytelling devices such as mnemonic aids may help to facilitate the memory of knowledge systems, spiritual beliefs, and important events. I agree with Ong who claims that people have to think in mnemonic patterns shaped for easy oral recurrence to retain and retrieve a carefully articulated thought. Human thinking process should be formed in a way that incorporates rhythmic and balanced patterns, repetitions,

epithetic expressions, and other mnemonic forms. Mnemonic aids, such as waterfalls, some walkways, mounds, exposed boulders, trees, flowing streams, and petroglyphs (Ong, 2002, p. 34; Jones, 2008, pp. 6-7), are loaded with metaphorical meanings and inscribed with cultural knowledge of a given Indigenous community.

As metaphors and symbols embedded in some Indigenous stories are drawn from ecological observations, local landscape features may serve as mnemonic aids, having certain stories and multi-layered meanings attached to them (Cajete, 1994; Cruikshank, 1999; Deloria & Treat, 1999; J. Johnson, 2015). Indeed, as Indigenous architect Johnpaul Jones (Cherokee and Choctaw) argues, "there is no place without a story. Every plant, every animal, every rock and flowing spring carries a message. […] We know the spirit of each living place" (2008, p. 1). In a similar vein, Standing Rock Sioux scholar Vine Deloria Jr. writes that if an Indigenous community "has lived on a particular piece of land for many generations, some natural features will have many stories attached to them" (Deloria & Treat, 1999, p. 252). It not surprising, then, that landscape features or cultural keystone places found within ancestral territories play a significant role in Indigenous stories as they are inscribed with cultural knowledge during land-based activities and ecological observation as an attempt to encode the multi-layered meaning of those related activities.

In the passage below, Cajete touches upon a profound interrelationship between Indigenous stories and geographical locations (mnemonic aids) found in ancestral homelands. The scholar gives a sense of how stories relate to landmarks found across a geographical space that bring memories of the activities that took place there. He states:

> Relating the stories associated with a particular geographic place is a way to begin developing a cognitive map of that place and of its concentric rings of interrelationships. Migration [stories], for instance, are tracking stories through a geographic landscape. In many Native American [stories], it is implied that the ancestors left representations of themselves in natural forms or phenomena to remind people how to act and how to relate to the natural worlds (1994, p. 121).

Chief Ronald E. Ignace (Secwepemc Nation) likewise ties the culturally specific land and its natural features to stories, for his ancestors marked the land with their deeds and gave names to different locations (2008, pp. 91-92). In his view, the link between the history of his people's connection to their homeland and their language is inseparable (p. 4). Indigenous knowledge keepers and storytellers thus make references to landscape features and place names (mnemonic aids) while relating stories to invoke meaning and

knowledge encoded within related stories that connect them to their ancestral territories (Cruikshank, 1990; G. Webster & C. Mortimer, personal communication, March, 2010).

In my conversations with Gloria Cranmer Webster (Kwakwaka'wakw), while recounting her life stories and creation stories, she frequently made references to various places or geographical features, such as boulders or trees, that could be found in the land of the 'Namgis Nation, thus transcending time from the past to the present. She was able to visualize their exact location in their land. Those locations acted as metaphors and helped her remember a lot of significant information and details related to various events that occurred in the history of her people and her life (G. Webster, personal communication, March, 2010). The views of all these scholars make it clear that landscape features and specific areas of a community's territory, serving as mnemonic aids and metaphors, are durable reminders of oral stories and teachings helping Indigenous peoples recall and authenticate their ecological and cultural knowledge systems and related land-based activities. They are relevant for Indigenous ecological knowledge in the present.

Oraliture

Oraliture is a term used to describe the incorporation of Indigenous stories into contemporary writing and the merging of written literature with oral tradition (Hagege, 1986; Petrilli & Ponzio, 2005; Armstrong, 2008). Indigenous scholars such as Maria Campbell, Thomas King, Jeannette Armstrong, Lee Maracle, and Jo-Ann Archibald reflect on the concept of oraliture. Maria Campbell (1985) stresses the importance of merging the spoken word and the written word and explains that Indigenous storytellers, as translators of the old way, must understand the English language and "use it to express their stories without losing the thoughts and images that are culturally unique to them" (i). Thomas King (2004) shares this sentiment and uses an example of Harry Robinson's collection of stories *Write It on Your Heart* which are told and written in English, yet they embody the metaphors, patterns, themes, and characters found in oral tradition (p. 186). With this important point, I believe that the merging of the spoken word and written word may actually meld the words and knowledges of ancestors and those of contemporary Elders and storytellers, thus updating their cultural knowledge on a regular basis to be used in a contemporary cultural context.

The issue of presenting orality in the form of writing is also raised by Jeannette Armstrong who integrates oral traditions and narratives, oral telling styles, Indigenous vocabulary and concepts, and traditional stories into her texts. Armstrong expands on *oraliture* as spoken literature utilizing various literary devices unique to oral story performance for the sake of providing context to the way stories are sources of ancestral knowledge. As stated by Armstrong (2009),

> Dramatic exaggeration, overt ribaldry and the macabre are used, both for entertainment value and as mnemonic device to aid memory recall in the story intent. The use of strategically placed story scripts as device to supply content, information and detail through inference and implied scenario allows for the listener to enliven the story from within their own knowledge level. The method of using story scripts to trigger deliberate inference, allows listeners of different ages, gender, custom and esoteric practice, access to the layers of meaning hidden between the lines (pp. 311-312).

In a similar vein, Lee Maracle (2010) says that it is crucial to "engage in the process of the creation of oracy as literacy and, at the same time, maintain the story structure of our longhouses […] from the vantage point of [our] philosophy and oracy" (p. 94). This shows that in this type of literary work arising out of oratorical foundations, oral literary vehicles actively engage people with the story and its depths of meaning contained as cultural knowledge and ensure their continued transmission for generations to come, which is vital to their survival.

Also, it is important to adapt the written mode of communication to combine it with and reflect Indigenous oral tradition. For instance, Jo-Ann Archibald (2008) focuses upon ways in which orature and literature can work together in a holistic manner:

> The oral tradition of the stories shaped and created a framework in which to place and use literacy. Transforming the orally told stories to another language and another form of representation so that the power and integrity of the stories remains requires that one know the essential characteristics of stories. I have heard Elders talk about the necessity of knowing the "core" of the stories. I believe that this means knowing the basic content of the story, the story genre's characteristics or nature, as well as the cultural teachings connected to the story. (p. 25)

When presented in the form of a written text, Indigenous stories are no longer purely oral. The transcription hinders the level of understanding, for it fails to capture the gestures, rhythm, and personality of the story-keeper. Nor does the transcription provide any explicit comment from the storyteller to enable the reader to fully understand the meaning behind the written words. Although the storyteller and the listener are separated from each other, stories can be transformed into a textual form if the storyteller possesses a deep understanding of their essential characteristics and the

cultural teachings embedded within. The transformation of Indigenous stories into a printed text needs to ensure the accuracy of the content. For that purpose, Archibald stresses the importance of approaching Indigenous stories from Indigenous cultural contexts and, thus stories should be accompanied by ethnographic information on Indigenous communities, essential themes, and types of Indigenous stories. The scholar also emphasizes that the experience of being a member of an Indigenous community and participating in the sharing of their cultural stories through oral tradition cannot be fully replaced by dry background information (pp. 17-30). Nonetheless, I argue this information is largely important for the cultural outsider to obtain some contextual background to study the meaning of Indigenous stories of Northwest Coast First Nations, anchoring knowledge and memories to landscape and places.

4.4. Ecological storytelling as embodied in Northwest Coast stories – Reflections on the genre

In this subsection, I move from general observations on stories to land-based storytelling related to the ecological knowledge of Northwest Coast First Nations that I have decided to explore. Indigenous ecological knowledge can be conveyed by means of different types of stories. There is an immense body of stories which place humans as active participants within environment and embody teachings that are preoccupied with guiding human behaviour towards the natural world (Turner, 2014b, p. 233). As Jo-Ann Archibald (2008) postulates, Indigenous stories related for teaching and learning purposes "can vary from the sacred to the historical, from cultural traditions to personal life experiences and testimonials. Some stories are just for fun, while others have powerful teachings" (p. 83). Whereas certain stories may be considered the property of particular individuals or families, some stories may somewhat belong to the public domains, which, in turn, enable anybody to relate these stories (p. 83). My interest is in Northwest Coast stories in relation to the ecological knowledge transfer.

Significantly, Indigenous stories provide teachings and principles aimed at shaping and guiding human actions towards the ecosystem and its resources. Gregory Younging (2018), an Opaskwayak Cree Nation scholar, points out that colonial discourses denigrate Indigenous storytelling and place it in the category of mythical/folkloric genres, as not based in reality and irrelevant (p. 57). The terms such

as legends and myths should not be used as a way of categorizing Indigenous stories and they need to be contextualized as a vessel for transporting Indigenous ecological knowledge. With reference to First Nations in Canada, the term mythology can be considered as a colonial form of categorizing Indigenous stories and narratives, being the creation of different cultural codes, which not only excludes a different form of their classification but it also stigmatizes Indigenous stories and narratives as marginal and, in turn, silences their pedagogical functions. Pertaining to Indigenous peoples, the term myth has become a synonym of lies and disinformation as it simplifies or entirely eliminates the actual message conveyed by Indigenous stories and narratives (Korff, 2021). This knowledge, as Armstrong (2009) articulates, was shaped by land via storytelling continuously living and informing the collective memory of Indigenous peoples (p. 52). Indigenous stories/oral traditions, as the record of their place-based knowledge and wisdom, serve as a vehicle for transmitting essential principles, practices, and valuable imperatives to manage the ecosystem while respecting all life-forms. They are not fairy tales or mythical stories as many Western scholars have been claiming and my project seeks to address this issue and expose colonial misrepresentations of Indigenous stories as myths/folklore.

As a culturally-nuanced way of knowing, Indigenous stories from the study region may be categorized into the following genres by the purpose of the imbued messages for different social situations: origin stories, narratives located in pre-contact times which remind Indigenous peoples of teachings relevant to their lives; transformation stories or trickster stories that are characterized by the presence of a trickster figure in the form of a coyote or raven that transforms the world; stories about Indigenous peoples' lives within their communities and lessons of what may happen if Indigenous peoples fall victim to disrespecting the natural environment and biotic resources they depend on; stories about Indigenous peoples' activities connected with hunting, fishing as well as root and berry harvesting which involved travelling from one locality to another – these stories are of my particular interest in this research study; sacred stories demonstrating guidelines for rituals, rites, ceremonies and their cultural protocols; and life-experience stories focusing on historical and witness events.

Origin stories

The first category of Indigenous narratives as an intergenerational knowledge transfer from the study region are the stories of origin that focus upon recounting how the world was created, how things were formed, and how they help Indigenous peoples to understand the world they live in. In the ancient times that are presented in origin stories, the stories take place in sites of important historical events, such as rivers, lakes, beaches, channels, grassy flatlands, forests, and mountains (Cordova, 2007, pp. 151-153; King, 2003, p. 10). Speaking about the setting of the stories of origin, Richard Atleo (2005) explains that "whenever one travels, one can be confronted with geographical landmarks associated with great events that provide orientation to, and explanation of, the nature of existence" (p. 3). Since the action of each story is situated in the home territory, Atleo says that their setting does not require any particular introduction. Following this line of thought, another reason why Indigenous stories of origin begin without providing the listener with details about the setting or background is the nature if Indigenous languages which, unlike English, are regarded as high-context languages. It results in the understanding that Indigenous words may be intimately linked with a historical or cultural context that is understood to everybody. Therefore, it is said that common understandings about meaning in Indigenous languages intimately linked with origins, creation, surrounding lands and waters as well as living creatures, do not require a lot of clarification (p. 4).

Since it is said that origin stories contain important truths, it is significant what themes these stories undertake. This genre of stories, characterized as multilayered in meaning, consists of life themes from sublime to ridiculous, heroic to loser, and they talk about foibles, experiences, and exploits of characters (Atleo, 2005, p. 4; Archibald, 2008). They inscribe the pluriversal and post-anthropocentric nature of reality characteristic of Indigenous ontologies, where transformation is the main principle of existence. Characters featured in origin stories are capable of transforming themselves into a human form while humans are enabled by some supernatural help to cross into the spirit world and launch into interaction with various animal societies. Stories from the region provide examples of sacrifice of supernatural beings in the form of plant and animal species, providing Indigenous peoples with teachings how to survive and avail themselves of specific resources and materials. Equally interesting themes include spiritual and supernatural characteristics of plant and animal species which shed further

light upon peoples' relationship with the natural environment and management practices based on gratitude and appreciation (Turner, 2014b, pp. 232-259). Moreover, families, Atleo (2005) explains, possessed their versions of a particular story with details differing from one family to another, but the themes did not undergo serious changes and, in effect, teachings encoded in these stories remained untouched. Significantly, origin stories from across the region convey these and other crucial and thought-provoking themes as a point of orientation to reality, allowing Indigenous peoples to manage their existence since time immemorial (p. 4).

Such land-based stories not only convey knowledge about the physical and ecological characteristics of species, but they may also cast further light upon various relational harvesting and management practices related to certain plant and animal resources and the animistic nature of the land. Haudenosaunee and Anishinaabe scholar Vanessa Watts's principle of "Indigenous Place Thought" states that "land is alive and thinking, and that humans and non-humans derive agency through the extension of these thoughts" (Watts, as cited in Todd, 2015, pp. 245-246). She also highlights that

> if we accept the idea that all living things contain spirit, then this extends beyond complex structures within an ecosystem. It means that non-human beings choose how they reside, interact and develop relationships with other non-humans. So, all elements of nature possess agency, and this agency is not limited to innate action or casual relationships (Watts, 2013, p. 23).

Drawing on this Indigenous ontology, these stories of origin also provide a spiritual kin-based understanding of environment and its natural resources and highlight the immersion of human beings in a wider world full of other-than-human sentient entities and things with agentic capabilities, thus questioning the human/animal/plant boundary. Informed by the ecological and relational understanding of the world, these stories move away from the human-centric discourses about the Anthropocene and reject the hierarchy of agency imposed by Euro-Western scholarship.

Transformation stories

Transformation stories from the study region employ plant and animal actors magically transformed from one state to another and having supernatural properties. The central protagonist of transformation stories is the so-called trickster figure, or the transformer,

such as Coyote, Raven, and Mink.[31] Albeit these culture heroes, as an archetype of the foolish side of human nature, are criticized for their gluttony, greed, and constant attempts to imitate other species and their natural talents, they can also be perceived as capable of various heroic deeds. They are held in high esteem for providing Indigenous peoples with lessons on morality by virtue of exposing their weaknesses that result in certain consequences. Although the characteristics of this character may vary from culture to culture, s/he[32]usually plays a similar role. Because their actions and follies creating unanticipated problems are over-dramatized, they are aimed at staying in the memory of Indigenous peoples, mediating certain social behaviours. Moreover, these comic figures are creators of animals and plants and they often have numerous adventures wherein they wander the land and, equipped with extraordinary powers, transform plants into other objects and individuals into rocks, visible landmarks. The purpose of these strangely formed landmarks is to remind Indigenous peoples of essential geographical localities in their territory and to embody lessons of what can happen due to human moral weakness and breaking cultural taboos. Wandering the land, the transformer – whilst s/he likes to take the easy way through life, cause mischief, and play tricks – likewise yearns to do great deeds and, thus, s/he takes recourse to fighting encountered people-eating monsters by virtue of an intelligent, transformative act into various plants and medicine (Atleo, 2005, 2012; Archibald, 1998, 2008, 2018; Armstrong, 2009, pp. 96-99; Reder & Mora, 2010; A. Robinson, 2018). I argue, following Atleo (2005, p. 59), that the transformer figures contribute to the diversification of biotic resources within ancestral territories. After careful examination, not only can these stories, replete with lessons for life, provide clues about different kinds of plant and animal species, but they can also identify roles the resources can have. Importantly, it should be noted that the activities of berry picking as well as fish and fishing are frequently alluded to in the traditional transformation narratives of the study region (Turner, 2014b, pp. 236-243).

[31] Indigenous stories featuring curious and mischievous trickster characters are very common among various Indigenous nations in Canada. For in-depth information on the complex and contradictory nature of the Indigenous trickster figure and its variability, see, for example, Reder D., & and Mora L. (2010). *Troubling Tricksters: Revisioning Critical Conversations*. Wilfrid Laurier University Press.

[32] In Indigenous cultures, the trickster figure is a shapeshifter characterized by a relatable identity, occupying spaces between traditional gender roles. Depending on the story, the gender identity of the trickster may change. It is both he and she (gender transformation). See Robinson, A. (2018). *Trickster*. The Canadian Encyclopedia. Retrieved November 11, 2021, from https://www.thecanadianencyclopedia.ca/en/article/trickster.

Stories of transgressive behaviours

Stories of transgression and consequences in day-to-day activities, featuring animal characters that take on human qualities, foreground the Indigenous concept of personhood granted to all of Creation and the idea of transformation as a foundational principle of Indigenous worldviews (Rubin, 1995; Archibald, 2008, 2018; Armstrong, 2009, pp. 99-100). These themes are prevalent in the story entitled "The Jealous Husband", to be discussed later in detail. Significantly, sometimes with some kind of supernatural help, certain punishments, such as an abandonment or death, may lead to the creation of certain plants, especially various berries, and, as I argue, these stories may provide the Northwest Coast peoples with guidelines where to look for particular plant species within their local ecosystem.

Stories as maps

This genre of Northwest Coast stories is concerned with linear accounts that undertake the themes of Indigenous peoples' activities connected with the practices of hunting, fishing as well as root and berry harvesting which involved travelling from one locality to another on a regular basis. Among the themes, one can point out challenges related to natural disasters, disease, subsistence living, and unusual phenomena. The stories are filled with characteristic and descriptive geographic reference markers, such as prominent physical land features easy to memorize, which can be employed as physical images and mnemonic loci enabling Indigenous peoples of the study region to recollect particular stories and use them as maps. That is, just as these detailed maps are accompanied by the information related to prominent geographic landmarks that can be identified on the travelled path, they also provide insights into the weather patterns that can be encountered on the trail, prime subsistence localities, and harvesting techniques of resources in the specific area conveyed in the narrative. An emphasis is likewise placed upon moral teachings that are embedded in the story along with crucial knowledge related to the land (Rubin, 1995; Armstrong 2009, pp. 100-101). I contend that this genre of Indigenous narratives of the study region is partly devoted to seasonal rounds Indigenous peoples used to undertake in order to move to different parts of their territory, characterized by different ecosystems and weather patterns, and gain access to the range of resources that were invaluable for survival. Resource harvesting areas were

often located far away from each other and the window of time for harvesting and processing of resources was often short. Hence, it seems reasonable to argue that these stories, apart from the information related to essential geographic landmarks and cultural keystone places, may convey both location-specific knowledge concerning various phenological indicators that determine the seasonal availability and expected distribution of resources, as well as detailed instructions for resource refined harvesting and processing.

Sacred stories

Sacred stories from British Columbia provide guidelines and protocols related to the use of religious items of dress or equipment and medicinal plants in ceremonies, rites, and rituals, such as puberty rites, sweat lodge, initiations, sacred dances, a ritual bathing as sacred pool and streams (Armstrong, 2009, pp. 102-103; Turner, 2014b, p. 44). These stories also demonstrate the importance of post-anthropocentric perspectives as the lines that divide human beings and animals are not clearly fixed. It is important to observe that the central objective of these stories is to instill respectful approach towards resource species in Indigenous peoples and to strengthen the inextricable relationship between human beings and all life forms (Atleo, 2005, 2012; Archibald, 2008, 2018; Armstrong, 2009; Kovach, 2009; Brown, 2009; Ignace & Ignace, 2017).

These sacred stories also illustrate the importance of spiritual practices for the Northwest Coast First Nations. Rooted in ancestral relational teachings and guided by commonly held values, they embody the kincentric philosophy and suggest proper guidelines concerning the recognition of plant and animal personhood. The also provide protocols for respectful harvesting of biotic resources, land stewardship, and resource harvesting techniques.

Life experience stories

Along with ancient stories and ceremonies as testimonies to management and resource harvesting, approaches promoting sustainable strategies for long-term resource use, equally important are “personal narratives of place, happenings, and experiences as [Aunties and uncles] experienced them and passed them along to the next generations

through oral tradition. [They] teach of consequences, good and bad, of living in a certain way" (Kovach, 2009, p. 95). Life-experience stories recount witness accounts rich in detail about places, names, events, and dates. They also transmit essential teachings to new generations (2009) such as information about local ecosystems, coniferous forests, mountains, rivers, tidal marshes, montane meadows, and prime harvesting localities. Additionally, they often document Indigenous practices and perspectives related to harvesting techniques, for instance, selective harvesting, ceremonial management, coppicing and pruning, and controlled burning practices to enhance the productivity of particular species (Anderson, 2005; Turner, 2014b, p. 228).

4.5. Conclusion

The main objective of this chapter was to demonstrate the general characteristics of Indigenous storytelling and the specificity of Northwest Coast stories related to my research, which serve as a major venue for the acquisition and transmission of Indigenous ecological knowledge across time and space. My analysis shows that Indigenous stories, the land-based repositories of knowledge, developed over the course of several thousands of years and rooted in a particular cultural context, are infused with cultural teachings that embody the posthumanist kincentric philosophy and appropriate cultural protocols related to respectful behavior and decision-making. They may also give fruitful insights into the ways in which successive generations of Indigenous peoples marked their land, which casts light upon the Northwest Coast First Nations' complex knowledge of geography and ecology.

Chapter 5

Storytelling as a Memoryscape of Indigenous Ecological Knowledge Systems

> *The traditional ecological knowledge of Indigenous harvesters is rich in prescriptions for sustainability. They are found in Native science and philosophy, in lifeways and practices, but most of all in stories* (Kimmerer, 2013, p. 177).
>
> **Robin Wall Kimmerer**
> Potawatomi botanist and educator

Northwest Coast First Nations communities have resided in the area of what is now called British Columbia as well as neighboring territories for thousands of years long before the arrival of Europeans and developed a direct, long-lasting, and unique kinship relationship with their lands and surrounding waters. These Indigenous communities have transmitted their dynamic and often complex stories concerning their ecological knowledge and experience of the land across generations and maintained the legitimacy of their oral narratives. Stories are not merely data as they hold and transmit sacred knowledges (Kovach, 2009; Clement, 2019). As encyclopedic compendiums of social, political, and ecological information, they are filled with time-honoured teachings that not only guide human behaviour and decision-making towards the land made of interacting sentient beings but they also compel Indigenous peoples to show respect and appreciation for the resources given to them as gifts due to the sacrifice of other living entities. In effect, these stories serve as a vehicle for storing information pertaining to Indigenous philosophies, relational ontologies and epistemologies, cosmology, protocols, close origins with ancestral lands, relational realities about Creation, and reciprocal kin-based relationships between plants and animals imbued with agency and people bound up in land. They also convey knowledge related to medicinal and technological uses of plants and animals, harvesting localities, stewardship of lands and resources, and sustainable management systems. With Indigenous philosophies at the heart of Indigenous ecological knowledge systems (Atleo, 2005, 2012; Armstrong, 2009; Kimmerer, 2013; Watts, 2013, 2016; Todd, 2016; Cote, 2019), these locally-

situated stories play a significant role in providing Indigenous communities with interpretations and understanding of the spiritual powers of the world,[33] simultaneously, conveying practical, moral, and social messages that are targeted at navigating peoples' ways of behaviour and decision-making with respect to the land and more-than-human beings. Such teachings, instructions, and ethics come directly from the land (plants, animals, waters). Using stories, the land – as a living and thinking agential being – needs to be restored as the first teacher to challenge dominant, colonial, and Eurocentric knowledge systems. The land and storied knowledge matter.

I envision this chapter as a compendium of various types of Indigenous stories which embody Indigenous ecological knowledge of Northwest Coast First Nations and serve as a holistic knowledge-making praxis guided by Indigenous principles and recognizing their land as a kin and teacher. This chapter affirms onto-epistemologies that address oral traditions, knowledge transmission, and ethical considerations (Graveline, 2000; Clement, 2019) that colonialism and land-dispossession have disconnected Indigenous peoples from over the years. I focus on Indigenous onto-epistemologies which encompass processes through which Indigenous communities develop, validate, transmit, and theorize knowledges (Kovach, 2009, pp. 56-63). This chapter is divided into sections where I explore stories with reference to the acquisition, transmission and regular updating of the storied Indigenous holistic knowledge of the land, deeply rooted in the relational worldview of relationships, kinship and reciprocity and related to their long-term holistic and responsible land-based engagement with their ancestral territories and resource use. By analyzing Indigenous stories, my research study examines how the more-than-human world of the land has contributed to the creation of land-based relational knowledge. I also discuss how the metaphorical nature of narratives provides Indigenous peoples with various ways to respectfully recognize the personhood of beings and reaffirm the animacy of the living world in the storyline, ethically connecting peoples to the landscape of their ancestors and guiding their behaviour, actions, and reactions with regards to all of Creation. It is my argument that the analyzed stories and embedded relational land-based practices revitalize ontologies of the land and together help revitalize reciprocal relationships with the more-than-human world. Engaging Indigenous intellectual traditions, I offer analysis and interpretation of origin stories, trickster stories, prayers, and life experience stories with

[33] For further information on Indigenous spirituality, see the Glossary section.

respect to Indigenous ontologies of the land, spiritual and animistic perspectives on harvesting, sacred fishing technologies in the context of Indigenous philosophies, and cultural burning practices and berry management techniques, which were obscured by settler colonialism. This chapter analyzes stories that aim to reaffirm the sacred connection between the land, human, and more-than-human beings to access precolonial epistemologies and ontologies bound up in stories.

In researching Indigenous stories from the study region, I draw on narratives that come from various sources and were collected and published by Indigenous cultural knowledge keepers and scholars as well as anthropologists and scholars-allies who cooperated with Elders of Indigenous communities, produced fine-tuning translations and transcripts of these narratives, and were given permission to publish them. Also, from my transcultural/interdisciplinary perspective of a non-Indigenous scholar-ally, I focus on stories by Indigenous Elders and scholars that are usually omitted and I honour them in this way. These include recordings and transcripts of place-based stories, prayers, and songs.[34] In this work, I employ the terms stories and narratives interchangeably to refer to oral accounts that encompass the past, remembered past, and ancient past (see Chapter 3, p. 18).Since the analyzed stories are presented in print, I have ensured the accuracy of their content and provided cultural background and technical information on storied Indigenous ecological knowledge and related place-based harvesting and management practices to study the embedded meaning. Finally, there are some commonalities among the discussed stories – such as the notion of animacy.

5.1. Cultural/historical context. A cycle of movement

Prior to the European contact, Indigenous peoples used to undertake regular movements over the surrounding waters and lands, known as "seasonal rounds" (Brown, 2009; Whyte, 2022), which were organized in tune with the seasons as well as geographical availability of resource species required for their collective continuance. These seasonal activities took place on a regular basis both on the coast and in the interior of what is now known as British Columbia. Indigenous harvesters were concerned with the availability of particular resource species often located in remote areas and, thus, they

[34] It is difficult to categorize the analyzed stories as they are intertwined and holistic.

learnt how to make use of the lifecycle events of particular plants and animals to predict the availability of other species. This land-based and place-based knowledge was created on the basis of spiritual relationships with more-than-human entities and observation of the physiological changes in plants and animals and interaction with the land over successive generations. As Secwépemc Elder, historian, storyteller, and politician Ronald Ignace (2008) points out, the realm of this knowledge is "connected to the memories of travel on the land, to practices and memories of ancestors who shared experiences on this land" (p. 49). Hence, oral tradition is honoured for conveying and retaining place-based teachings, kinship networks, and history of Indigenous peoples.

The importance of the cycle of movement in the lives of Indigenous peoples is well illustrated in the following life-experience story related by Secwépemc Elder Lily Harry of Xgattem (Dog Creek). In the following story, Lily Harry recollects an annual pattern for resource harvesting:

> Gustafson Lake was [also] the fishing place of the people long ago. When the rainbow trout ran, the people camped (lived) there. At Lac La Hache, they fished for rainbow trout, ling and squawfish. In fall, they would travel there for kokanee. The places that are called "Flat Lake" and "Muddy Water," these were also their fishing grounds. Over at Round Lake, Legwpelqsand Tsepe7 used to fish. It must be below the berry-picking ground, what they now call Timothy Mountain. Over there is where all the old people ("elders") were apparently. See, they traveled far out, when they went looking for things [resources]. When they went out, they found things and then came back. They wouldn't go off and return the same day. When they traveled, they traveled on horseback and with packhorses. They would camp overnight for several nights before they returned home. They were smart, the way they were. They had to remember lots of things. You had to know where your ancestors used to go and stay. Where they went and what they did. My mom went all over the country on the other side [of the Fraser River] with the hunters. Over there at the placed called "Hawkeye" that's where she used to go. Far away in the snowy mountains. When they went after marmots, that's where they went. In August is when the people [from here] always used to cross over, and they lived [camped] there until the marmots used to start hibernating, then they came down [the mountain]. Off the hills, at Blackdome Mountain and Red Mountain, these were their hunting grounds long ago. They hunted deer and mountain sheep over there. The place I'm telling you about is on the other side of Blackdome. There is a hill, another hill from there, and in between there is a lake. There are fish in there. Peoples used to fish there with a hook and line. The hunting parties lived [camped] in the snowy mountains. And that's where they got Indian potatoes. They used to gather glacier lilies, Indian potatoes; it's the glacier lilies and the marmots that they used to get in the far away places (Harry, as cited in Ignace, 2008, pp. 147-148).

The above testimony, which comes from Ronald Ignace's doctoral dissertation, concerning the ancient pattern of seasonal rounds practiced by the Secwépemc peoples may serve as an oral map corresponding to the landscape and well-established trails. It gives important information about the use of particular resource harvesting sites located within different habitats and ecosystems and, thus, demonstrates the extent of the territory that the Secwépemc peoples had to travel over the seasons to obtain important

resources. Not only does the above life-experience narrative shed further light upon what sort of resources the Secwépemc peoples harvested within different vegetation zones at different elevations but it also informs about their place-based activities and cultural keystone places which were particularly productive resource sites.

In her doctoral dissertation, Amy Deveau (2011) writes that Indigenous peoples were compelled to organize their seasonal activities and temporal settlements according to the seasonal as well as geographical availability of resources which were considered necessary for survival (p. 62). This asserts that harvest efficiency was intimately linked with the productivity, abundance as well as predictability of culturally important species. Since various harvesting sites were frequently separated from each other by a considerable distance, Indigenous peoples had to know their land very well to be able to predict the availability and optimal harvesting times of resources, knowledge of which has been carefully preserved in terms of stories. Nonetheless, the annual pattern of movement was not only about resources. Ojibwe scholar Brenda Child notes that a seasonal round "was a way of life passed down by the generations and required study, observation of the natural world, experimentation, relationships with other living beings on the earth, and knowledge-generating labour (Child, as cited in Whyte, 2022, p. 130). She furthers this point by adding that moral conduct and knowledge were regularly coordinated in seasonal rounds (p. 130). Given that, the cycle of movement and harvesting camps were a perfect opportunity to strengthen Indigenous peoples' relationship with the land and sentient beings, and to live and theorize about land-based stewardship and ethics, and systematically share relational knowledge.

Since Indigenous storytelling offers an accumulation of land-based knowledge, I have analyzed various stories with regard to different aspects of that knowledge, which can be read from the land. Importantly, these stories often convey themes related to seasonal rounds such as cyclical time, mobility, motion, change, transformation, and shape-shifting.

5.1.1. Reading and listening to the land

In order to decide upon the timing of the harvest and resource sites within a given territory, Indigenous peoples took recourse to land-based indicators (biological

indicators)[35] in terms of which the timing of events in lifecycles of particular species is bound to suggest the availability of other plant or animal resources (Turner, 2014b, p. 5). However, there was much more to the annual pattern of movement than accessing resources. Indigenous peoples were able to read the land and the physical embodiment of the land and seasonal rounds were crucial to the production of Indigenous ecological knowledge and phenological indicators. As observed by Anishinaabe and Haudenosaunee scholar Vanessa Watts (2013, 2016), the land – as an alive and thinking being – keeps knowledge, principles, and philosophies situated for people whereas nature and all its elements, animals, plants, and rocks possess agency and are not separate from place, maintaining communication with it. In a similar vein, Glen Coulthard (Yellowknife Dene) conceives of the land as "a way of knowing, of experiencing and relating to the world and with others (2014, p. 61). Potawatomi scholar Robin Wall Kimmerer (2013) adds that, within Indigenous traditions, the natural world and all animate beings – including animals, plants, rocks, forests, and waterways – are teachers Indigenous people should look to for guidance as "they've been on earth far longer than we have been, and have had time to figure things out" (p. 9). Their ideas, which were already discussed in Chapter 4, are also important in this discussion of the animated nature of the land and its resources (see Chapter 4, p. 29) Following the Indigenous scholars, I use this knowledge to interpret the selected stories, showing that animals and plants, as kins with humans, are agential beings who have a spiritual more-than-human dimension and inherent power to embody the role of teachers/land-based indicators for the sake of providing people with guidance and prescriptions for sustainability based on the concept of relationality between all things. Forming intimacy and respect with people, they teach people how to maintain a reciprocal relationship with nature and more-than-human world and decipher relational clues that are offered as a gift to predict the availability of other sentient species/resources.

[35] Non-Indigenous scholars-allies, such as Nancy J. Turner and Trevor Lantz refer to this place-based information as phenological indicators. For further information, see Turner, N. J., & Lantz, T. (2003). Traditional Phenological Knowledge (TPK) of Aboriginal Peoples in British Columbia. *Journal of Ethnobiology*, 23(2), 264-286.

Bird-plant-human relationship

A very good illustration of the relational linkage between a lifecycle event in one species and the onset of a lifecycle stage in another species is the intimate relationship between the singing of the migrating bird Swainson's Thrush, also known as the salmonberry bird, and the flowering stage of salmonberries. It is important to note that Swainson's Thrush[36] is a colonial name as imposed on the Indigenous term, thus representing a form of colonialism and linguistic imperialism which removes the associated land-based and place-based knowledge. It is argued that the melodic singing of this bird has a transformative power as it is responsible for making salmonberries ripen in the springtime (Clement, 2018, pp. 85-86). This land-based knowledge can be well illustrated by the following Saanich transformation story entitled "Salmonberry Bird and the Raven" told by W̱SÁNEĆ (Saanich) Elders Elsie Claxton and Violet Williams and transcribed by Nancy J. Turner with their permission. In the story, Salmonberry Bird invites Raven to his house for a meal:

> One time, Salmonberry Bird invited Raven to her house for a meal. She told her kids to take their baskets out to pick berries. She started to sing her song, and as she sang her children's baskets filled up. The children came home, and everyone had a wonderful meal of deliciously ripened salmonberries of all the different colours. Afterwards Raven said, "You come to my house tomorrow." So Salmonberry Bird came along the next day, and Raven gave baskets to his children and told them to go out to get the berries. Raven's children went out for their dad Raven sang and sang in his croaky raven voice. They waited and waited, but the Raven children's baskets never got full, and finally Salmonberry Bird went home without any berries (Claxton and Williams, as cited in Turner et al., 2005, pp. 87-88).

In the light of Indigenous transformation stories, at the heart of this story, there is Raven who is an envious trickster figure trying to imitate the melodious song of Salmonberry Bird but in vain, which results here in his failure, being unable to cause salmonberries ripen in later spring. This transformation story is infused with moral teachings about the W̱SÁNEĆ(Saanich) peoples' pride in their specific talents and warnings against imitating others (Turner, et al., 2005, p. 88). It may likewise teach Indigenous peoples that the arrival of this specific migratory bird to a particular location of the study region corresponds with the ripening of salmonberries in coastal ecosystems (Kuhnlein & Turner, 1991, p. 258).

[36] For further information, see "William John Swainson." *Wikipedia.* Retrieved April 23, 2023, from https://en.wikipedia.org/wiki/William_John_Swainson.

Fig. 4. Salmonberry. Photo taken by me.

In my analysis, however, I focus more on the philosophical context of the story and my argument relies on Watt's concept of *Place-Thought* (See Chapter 4, p. 29). As I argue, when thinking of agency with reference to *Place-Thought*, the story breaks the divide by emphasizing a bird-plant-human relationship as the following species are endowed with spirit and human agency. Within this understanding lies the contention that both Salmonberry Bird and Raven are shapeshifters that possess the ability to think, act, and communicate and I find this animistic nature of the land and the species as necessary to the formation of place-based knowledge. That is, my analysis is framed with an argument that the W̱SÁNEĆ(Saanich) transformation story can be regarded as a reflection of bird-plant kinship relationships providing the W̱SÁNEĆ (Saanich) peoples with practical relational knowledge – based upon observation of bird habits and particular plant species with their attributed supernatural and transformational powers – not only for the purpose of respectfully relating to and communicating with land and more-than-human species but also for identifying the right time to start collecting those berries. The story provides a different anti-colonial lens to look at and challenge the mainstream colonial narrative.

Interspecies communication

The ensuing life-experience story recollected by Secwépemc Elder Mary Thomas is another excellent illustration of how agency is circulated through human and more-than-human worlds in the creation of knowledge which is linked with the corresponding lifecycle events of species and with place. Recorded and transcribed by non-Indigenous scholar-ally Nancy J. Turner and ethnoecologist Jonaki Bhattacharyya, the narrative, as I want to demonstrate, indicates that agency is not exclusive to humans but birds are also agential beings capable of interspecies communication with edible roots, their relatives. In this vein, it thus sheds some light upon the importance of the robin's singing as a sign for the Secwépemc to start travelling to their particular edible root harvesting sites and launch into digging desert parsley:[37]

> Those [*qweqw'íle*] are, I guess, almost the first ones that would be ready to harvest. And I can remember my grandmother, when the robins first come in, they chirp and just chirp and call each other. Then all of asudden my grandmother would say, "Listen to the robin!" And you could hear it singing: "*tuweeeesa – teqweqw'íle!*" They have a little tune and the people would say, "Oh, those root edibles must be ready!" And that's when they'd get together and go up the mountain and start digging for the plant (Thomas, as cited in Turner & Bhattacharyya, 2016, pp. 737).

The above passage, as I argue, confirms that the Secwépemc possessed advanced knowledge related to the land and harvesting local recourses, which challenges the doctrine of 'terra nullius' justifying European sovereignty over Indigenous ancestral territories (AFN, 2018). Given the limited window of time and the distance between harvesting locations, the ability of the Secwépemc peoples to decipher the arrival of the migratory song bird robin in their traditional territory was crucial. This is because the bird's arrival coincided with the non-fruiting lifecycle of desert parsley (Turner & Bhattacharyya, 2016, p. 737). In this way, this complex and advanced know-how enabled the Secwépemc peoples to create a system of scheduling that regulated the timing of selective harvest so as not to miss the necessary window of time to collect sufficient quantities of these edible roots on a seasonal basis. It is at this point that this effective system of knowledge acquisition and transmission, guiding respectful harvesting and management practices, likewise recognizes the power of nature and

[37] Desert parsley, also called wild celery by the Secwepemc peoples, is a low growing herbaceous perennial which can be found on open rocky hills and plains. Its carrot-like roots were collected from female plants during a period of time in the spring prior to blooming as the plants with flowers were already too bitter. Characterized by a strong peppery-taste, these roots were consumed raw or cooked in pits and preserved for the wintertime. See Cooperman, J. (n.d.) *The Secwepemc use of wild plants*. Shuswap Passion. http://shuswappassion.ca/history/the-secwepemc-use-of-wild-plants/.

indicates the Secwépemc peoples' close identification with their ancestral lands and non-human world.

In the example of the interspecies communication, I want to highlight that the story is more than a teaching on timely harvesting practices. It directly extends to Indigenous philosophies and thoughts. Unlike in the Euro-Western interpretation of place and thought "where land is simply dirt and thought is only possessed by humans" (Watts, 2013, p. 32), the Secwépemc peoples perceive agency differently and relate not only to land but also human and non-human actors. In an epistemological-ontological frame, the life-experience story uses interrelated land-based indicators to instruct the Secwépemc peoples about the time and location of harvesting within their ancestral land. Hence, the embedded knowledge is locatable and the mentioned place (the mountain) serves as a site of knowledge-making praxis the Secwépemc peoples need to learn how to read and decipher its clues. The story conveys the reaffirmation of the sacred connection between human, more-than-human, and place, and being aligned and engaged with the animal world, plant world, and spiritual world maintains communication with *Place-Thought* and ensures survival. I want to emphasize that it is important in resisting this colonial epistemological-ontological divide and the on-going appropriation of land by settler colonialism.

5.1.2. Mapping and mnemonic devices

Many Indigenous stories indicate the sacred location of plant species within the ancestral lands of an Indigenous community (for more information on the concept of sacredness, see the Glossary). Some employ mnemonic devices in the form of geographical locations and landscape features as different mnemonic aids found in ancestral territories to invoke memories and convey place-based knowledge related to cultural keystone harvesting grounds and land-based activities undertaken during the annual cycle of movement (see Chapter 4, p. 20). Standing Rock Sioux scholar Vine Deloria Jr. writes that if an Indigenous community "has lived on a particular piece of land for many generations, some natural features will have many stories attached to them" (Deloria Jr. & Treat, 1999, pp. 252). Place names and landscape features teach about the land made of interacting sentient beings. Even though Indigenous territories were appropriated by settler colonialism, the stories examined below consist of

locations and landscape features presented in agentic forms that prevent Indigenous relational knowledge from becoming a thing of the past and Eurocentric ways of knowing the present, for the land is so vital to the formation of Indigenous knowledge systems.

A storied seaweed harvesting ground

The following life-experience story was given by a woman Elder of the Raven and Eagle Clans of the Gitka'a'ata Nation residing in Txałgiu (Hartley Bay). In describing how the Gitga'at women collected the seaweed in its pre-reproductive life stage that was exposed on the nearby rocks in key harvesting localities, the knowledge-bearer employs mnemonic devices (for more information on Indigenous mnemonic tools, see Chapter 4) to locate prime seaweed harvesting grounds in their ancestral territory and give certain instructions connected with harvesting skills she learnt from her grandmother:

> [...] out at the seaweed camp [Kiel], [...] you have to be fast to get off the boat and to jump on the boat because of the big waves, hey? Sometimes you'd find a place where it's good to just get off real easy. Sometimes the rocks are like this [gesturing pointed] and you have to put your foot in between and pick the seaweed. And there's a rock out on the island below the camp there. That's where we used to spread the seaweed for her. The [drying] rocks are supposed to go to the mother's side of the family, not to the man's side … Seaweed and halibut. Drying halibut. It's easier down there because birds don't get after them (Satterfield et al., 2012, p. 71).[38]

Arguably, I believe this personal testimony may serve as ongoing reminders of the importance of maintaining and passing on the intergenerational knowledge pertaining to the process of travelling to key harvest sites and harvesting the edible seaweed *in situ*. Indeed, it is crucial to reflect on this story as a sort of map using landscape features as a mnemonic aid to detail harvesting areas and, in turn, instruct the Gitka'a'ata peoples where to pick early seaweed and step by step move to consecutive seaweed beds until the last seaweed was collected.

[38] Gitga'at harvesters, having safely acquired good-quality seaweed at the right time of the day, began to spread out the collected seaweed in the shape of squares on trays made from cedar bark or on the bedrock heated by the sun. The combination of the heat generated by the sun and sun-heated rocks underneath the seaweed quickened the process of drying and no sooner did the sun start setting in the evening than the squares of the edible seaweed were dried altogether to be stored. See Turner, N. J., & Clifton, H. (2009). It's so different today: Climate change and indigenous lifeways in British Columbia. *Global Environmental Change*, 19, 184.

Anja Kanngieser and Zoe Todd, whose scholarship explores relationships among knowing and place, articulate that "land expresses a duality that refers not only to place as a physical geographic space but also to the underlying conceptual principles, philosophies, and ontologies of that space. [It] is conceptual experiential, relational, and embodied" (p. 386). Such a conceptualization helps me argue that, while relating the story, the storyteller deliberately makes references to and instrumentalizes those landscape features in the form of rocks to facilitate people's memory of those prime harvesting locations and inscribe them with the cultural place-based ecological knowledge of the Gitka'a'ata Nation. In this way, the Gitka'a'ata harvesters, their thoughts and actions are intimately connected to their ancestral territory. Apart from the mapping function, attention to land and place in this life-experience story is likewise vital to invoking memories of the activities that took place there. It encodes the multi-layered meaning of the seaweed harvesting activity and ecological observations, for it contains valuable information guiding the Gitka'a'ata peoples how to move on the seaweed picking grounds, which was invaluable to picking seaweed in an efficient and safe manner. In my understanding, without these landscape features, the story and the storied knowledge would disappear.

Spiritual locations of agential cedar trees

An equally interesting example, showing the spiritual creation of a cultural keynote plant species in the context of the land-based relational knowledge pertaining to their location during the annual pattern of seasonal rounds, is the Nuu-chah-nulth transformation story of the yellow cedar sites. The story was related by Hesquiaht Elder and cedar basket weaver Alice Paul:

> Three young women were down on the beach drying salmon. Raven came along and wanted their salmon, so he kept asking them if they were afraid to be there by themselves – if they were afraid of bears, or wolves or other such animals. They kept saying, "No" to everything he asked them about until he said, "What about owls?" At this they said, "Oh, don't even talk about owls to us. We are afraid of owls."
>
> Raven went away, but hid in the bushes nearby and began to imitate owl sounds. When they heard this sound, the women were so frightened they ran away into the woods. They kept running until they came part way up the side of a hill. They were so tired, they decided to stop and rest. They said to themselves, "We'd better stand here now on the side of the mountain; they will call us *Salmapt*." And they turned into yellow-cedar trees. Raven snuck out and ate all their dried salmon. That is why yellow-cedars are always found on the mountainsides, and why they are such nice looking trees, with smooth trunks and few branches, because they used to be attractive young women with long, shining hair (Paul, as cited in Turner & Efrat, 1982, p. 33).

Throughout Northwest Coast First Nations cultures, Raven, known under different names, is as a benevolent trickster figure, shapeshifter that symbolizes creation, transformation, and knowledge (for more information on the trickster figure, see Chapter 4, p. 29). His mischievous actions and exploits, told in hundreds of stories from the Kwakwaka'wakw, Haida, Tsimshian, Tlingit, and Heiltsuk, have shaped the world as Indigenous peoples know it. Cleverly deceiving others and causing havoc, s/he transforms the world, steals the light, and brings people fire (Brown, 2009; McCall et al., 2017; D. Brown, 2020). In this story, Raven is represented as a teacher and provider in the lives of Indigenous community members. By means of physical/spiritual interaction with them, s/he transfers important messages and practical information so as to physically or spiritually guide people where to find necessary resources, whether its physical sustenance as food or various tools, and how to live in a collective harmony with one another. The power of the animal agent in this specific role – offering a perspective that provides insight – is amplified when connected with cultural ways of relating with Raven by means of the story and its language, its visual and auditory pathways. Understood in these terms, acting as a teacher and provider, Raven takes recourse to deceitful nature in order to avail herself/himself of the dried salmon and successfully manages to scare the three young women by imitating the sounds of owls they are apparently afraid of. As a result, because of the fear of owls, they decide to take shelter on the mountainside where they are transformed into yellow cedar trees whereas the cunning Raven is able to consume all the dried salmon left behind on the beach.

The concept of metamorphosis is an important theme of interest that runs through the story. I argue that since human beings are presented here in a transformed state, this motif of transformation may be regarded as a didactic tool teaching not only that plant species ought to be treated with appropriate respect during the process of harvesting, but also to treat everything as their relatives as a form of collective betterment. It is important to notice that Raven and the transformed trees are animated and, in this light, they are referred to as relatives, not as objects, as he/she and they, not it. I am using now the concept of kinship in the sense defined earlier in relation to people's relationship to the land and non-human beings. Along with the underlying sacred ties of kinship of those beings and supernatural qualities of yellow-cedar trees with their role as a provider for humans, it might be observed that the story also provides details where yellow-cedar trees of the finest quality – with smooth and unbranching trunks – may be found on a regular basis. Equipped with such essential knowledge conveyed from one

generation to another by means of the above transformation story, the Hesquiaht peoples were able to identify and memorize prime yellow-cedar harvesting sites located both on mountainsides and far away from the ocean and its salt water.

My research led me to discover that these storied mountainsides and their characteristic location are used as mnemonic aids, as metaphors to facilitate the memory of the embedded place-based knowledge of cultural keystone places of yellow cedar trees found within ancestral territories. They bring memories of the activities that took place there and marked the land with peoples' harvesting activities of yellow cedar trees. I contend that this knowledge, rejecting and challenging the Euro-Western ontological split between nature and culture, is situated in ancestral land and its features used as metaphors, which do not function here merely as a geographic space but most importantly as a living and relational being that embodies that lived knowledge system encoded within the above story. And again, resonant with Watts' conception of *Place-Thought* (2013), the imbued knowledge accumulated over generations comes directly from the landscape (Creation).

Kin-based guidance from the oldest sentient teachers

The Nlaka'pamux peoples' story entitled "Made Her Sit Down On a Seat (lkw6'patem)" illustrates how stories, special resource-harvesting sites, and resource harvesting activities come together on the sacred landscape. The story was recorded and published by anthropologist James Alexander Teit (1912). It was paraphrased and abridged as follows:

> A man lived with his wife in an underground house which formed one of a group of such houses. His relatives lived with him in the same house, while most of his wife's relatives lived in one of the adjoining houses. His wife went gathering *sto'ats* (the inside bark of cedar) every day, and always came back loaded with the very best kind. She went oftener than was necessary, and generally stayed away all day. She dressed herself in her best clothes, and took much care with her toilet before departing. These actions aroused the suspicions of her husband, who made up his mind to watch her.
>
> He followed her into the forest next day until she stopped in front of a tall, shapely cedar-tree. Then he hid himself and watched. The cedar changed itself into a man, tall and good-looking, and approached the woman, who received him affectionately and embraced him. They had sexual intercourse with each other, and lay together all day. Towards evening the man gave her a large bundle of the finest cedar-bark, which she put on her back to carry home; and when she departed, he changed himself back into the tall cedar-tree.
>
> Having obtained full evidence of his wife's guilt, the husband hurried home, and next morning told her that he would accompany her to gather cedar-bark. He took her to the same tree which had changed itself into a man the day before, saying to her, "This is a fine tree, and has nice bark. Let us climb to the top of it and start stripping the bark from there." When they reached the

> top, he cut it into a sharp point, and, making the woman strip herself naked, he placed her on the top with the sharp point inserted in her privates. After tying her securely, he stripped the bark off all around the tree for a considerable distance down, and then, descending, went home.
>
> She cried to her youngest brother for help (his name Xox6lamE'ya) but he did not hear her at first. At last he heard her cries and found where she was; but, seeing that he was unable to render her any assistance, he ran home and told the people, who at once hurried to the scene.
>
> She was dying then from the effects of the hot sun, loss of blood, and the great pain. She said to the people, "I am dying. You cannot rescue me. The sun is hot, and you may be thirsty; but do not eat the berries which you see growing underneath (or at the foot of) this tree, because they are drops of my blood." The berries were blackberries.
>
> The people began to climb the tree to try to rescue her; but none of them could pass the barked part, because it was so slippery. At last they got Snail to attempt it; but, although he was able to climb over the barked part, he took so long to reach the top, that the woman had expired before he got there. He released her and took the body down, and the people buried it.
>
> Now, it happened that the woman had another brother who was exactly like herself in height, build, complexion, voice, and features. He dressed himself up in her clothes, and a few days afterwards he repaired to the husband's house. He said to his brother-in-law, "I am your wife. I was not really dead, although the people thought I was." The brother-in-law, as well as the other people in the house, believed this story, so the supposed wife went to bed with her husband; but when the latter wished to become too familiar, the former pushed him away, saying, "You must desist for a few days. That was a terrible injury you did to me. You surely don't expect me to be healed yet."
>
> One night, after his brother-in-law and all the people were asleep, he pulled out his knife, which he had concealed on his person, and killed his brother-in-law by cutting his throat. Then he suddenly left the house. Next morning, before it was quite light, a boy in the house said to his grandmother (the husband's mother), "I will go to my elder brother's bed and lie down with him for a while" (the boy had been in the habit of doing this some morning); but the old woman, hearing a subdued sort of noise, said, "Do not bother your elder brother this morning. Don't you hear him? He is making a nephew for you."
>
> The sound she heard was that of blood gurgling and dripping from the dead man's wound. As the sound continued, the mother thought to herself, "He remains long having connection with his wife this morning!" then she said, "Get up, child, and wash yourself. It is morning;" but still the sound continued. When it was really light, the people discovered him lying dead with his throat cut (pp. 285-287).

There are three themes of interest for my project in this story. The first is that the above Nlaka'pamux ancient story, in which one can see connections between the human world and the non-human world, views the land and plants as teachers and sources of Indigenous ecological knowledge. It refers to cedar bark harvesting and explains the origin of a specific type of food, particularly blackberries. The plot of the lengthy story gradually reveals that it is through human counterparts and their actions that plant species, blackberries in this case, come to the human world. Upon discovering that his wife is unfaithful to him, the jealous husband accompanies her to the forest and impales her upon the sharp top of the cedar tree as a punishment. As a result, reminiscent of transformation, the blood which runs down the tree trunk from her wounds turns into blackberries, growing at the bottom of cedar trees. I interpret the following situation as a transformation into relatives coming into the human world and thus having certain responsibilities to the Nlaka'pamux peoples.

The story of the furious man disrespectfully stripping the cedar bark off the whole tree also demonstrates an act of breaking the cultural protocol related to cedar bark harvesting: one is allowed to harvest only a specific part of the bark so that the tree is capable of regeneration. The story encodes then a teaching about respectful and sustainable harvesting practices, thus functioning as a guide and a memory tool for the Nlaka'pamux peoples.

The story also stresses the importance of the ontological unity of all Creation and demonstrates the complex interrelatedness of all natural things by acknowledging the animate nature of land, trees, and berries. Watts' and Kimmerer's concepts of agency and kinship (Kimmerer, 2012, 2015, 2016; Watts, 2013, 2016) again are useful for me to interpret the story as encoding the Indigenous concept of personhood and metamorphosis as a foundational feature of Indigenous worldviews. Plants are represented as persons possessing an inherent power and agency to transform and create other things; they decide how to interact with other more-than-human entities. I propose a metaphor of two sisters' garden, the cedar trees and berries growing together, that encapsulates the teaching encoded in the story. As agential beings, the yellow cedar trees and blackberries are holders of knowledge and teachers. The yellow cedar trees take the non-living (human blood) and turn it into food (blackberries), growing together afterwards, which precisely indicates the location of the blackberries. In the light of Kimmerer's grammar of animacy (2012, 2015, 2016), I have come to realize that the story privileges relatedness to land, more-than-human world, and beings that occupy that space and, thus, invites people to recognize their kinship ties with the cedar trees and berries and to stop treating them as a resource in order to maintain ecological balance with nature and the spirit world. It is learning from the earth, respecting human and more-than-human beings and promoting responsibility for knowledge.

The Indigenous stories recounted here embody the Northwest Coast First Nations' holistic knowledge of the land, geography, and ecology of the study region, integrating spiritual, historical, and factual information, clues, and mnemonic aids that helped to remind Indigenous peoples – spending their seasonal rounds travelling within their ancestral lands, plant-gathering– to recognize essential species/more-than-human beings in the landscape and identify various ecological and spiritual interconnections between them. Whether explicitly or implicitly conveyed by these stories, the holistic understanding of the seasonal distribution, behaviour, and interspecies communication of particular species used as land-based indicators was essential for planning the annual

pattern of their seasonal rounds, camping, and harvesting. For Indigenous communities, it was important to read the land in a relational manner. These stories also convey crucial lessons about respect and proper treatment of the land as an agential being and its resources/more-than-human entities needed for survival within different ecosystems across time and space.

5.2. Knowledge of honorable harvest embedded in stories

To gain a better understanding of the relational and spiritual nature of Indigenous respectable resource harvesting practices, I have analyzed stories that are linked to sustainability and embody prescriptions for Indigenous peoples' proper and acceptable conduct with respect to the lived relational world of the land, teaching respect and restraint against overharvesting. Aware of the fact that one's individual health is intimately linked with the healthy condition of the land, Indigenous peoples are characterized by their holistic understanding of the delicate balance existing between harvesting, consumption, and conservation and make sure that any development is supposed to be carried out in a responsible and sustainable manner. For that purpose, along with the social context of responsibility for animal and plant species as more-than-human beings, Indigenous peoples as active caretakers have brought to life an entire range of diverse honorable practices, methods, approaches, and technologies both congruent with the holistic approach and targeted at selective harvesting, promoting resources and their habitats over millennia. Interestingly, in order to achieve sustainable resource harvesting and increased productivity, effective management practices are connected with peoples' understanding of the relational aspects of the growth promotion and special timing and scheduling of harvesting practices. These stewardship practices, guided by Indigenous ontologies and relational world, are important to the reciprocal relationship between humans and plants and animals. In this section, I focus on stories that inscribe relational land-based knowledge in sacred pre-harvesting prayers and protocols, sustainable kinship-based resource harvesting practices, sentient technologies as well as interrelated Indigenous axiology, enabling people to move beyond colonial practices and communicate and share Indigenous knowledge in an anticolonial manner.

5.2.1. Prayer as a relational and animistic knowledge-making praxis

As a sacred part of Indigenous ceremony, prayer can be considered a way of gaining and sharing holistic ways of knowing. Margaret Kovach (2009) explains that participating in the cultural catalyst activity of a prayer is a means for accessing inward knowledge (p. 50). The Cree/Nêhiýaw scholar also states that "this epistemology emphasizes the importance of respect, reciprocity, relation, protocol, holistic knowing, relevancy, story, interpretative meaning, and the experiential nested in place and kinship systems […]" (p. 67). Tewa scholar Gregory Cajete (1994) develops this point when he speaks that "the understanding of [the] dynamic balance in the natural order was maintained on a regular basis through ceremony, through the proper execution of prayer […]" (p. 108). Moreover, I would like to note that prayer, as a way of relating to the world, might be infused with animistic sensibility attributing the quality of being animated to a wide range of more-than-human beings. Vanessa Watts (2013) states that "to be animate goes beyond being alive or acting, it is to be full of thought, desire, contemplation, and will" (p. 23). Drawing on these examples, since human action and thought are derived from ancestral land (by this I mean all of Creation), I believe it is important to reflect upon the prayerful act of knowledge-making based upon the holistic and kin-based relationship between human and animated more-than-human beings within the sentient land. I argue that a prayer acts as a portal for gaining storied placed-based ecological knowledge as a central and integral component to how Indigenous peoples of the study region approach plants and animals as animated spiritual non-human beings and, with that in mind, carry out their sustainable harvesting practices in an ethical manner. I have decided to analyze two different prayers to illustrate the accumulation of Indigenous relational knowledge and prove that its creation has been a long process based upon observation and experience, not a random one-time occurrence. I want to point out that this Indigenous epistemology is validated in these texts, which contrasts with the mainstream rational western epistemologies.

Prayer to a cedar tree

An interesting example that hints at how practical knowledge related to honorable harvesting practices and spiritually-derived teachings directing proper human behavior towards animated species may work together, can be found in the following story about

partial harvesting of a tree bark for material, which can be considered a form of resource harvesting and management. The ensuing "Prayer to Young Cedar" was recorded and translated by ethnologist, Franz Boas' informant and interpreter George Hunt ('Maxwalagalis and K'ixitasu), son of Robert Hunt, a Hudson's Bay Company fur trader, and high-ranking Tlingit, *Gaanax.ádi* clan woman Mary Ebbets (Ansnaq) (Berman, 2000). Speaking both English, Tlingit, and Kwak'wala fluently, Hunt worked as an interpreter and research assistant for anthropologist Franz Boas in the Kwakwaka'wakw territory, collecting and translating oral stories for him. In the related prayer, which is an example of an honorable harvest, a Kwakwaka'wakw woman beseeches the spirit of the western red cedar tree before harvesting *its/her* bark for the purpose of basket making:

> Look at me friend!
> I come to ask you for your dress.
> You have come to take pity on us,
> for there is nothing for which you cannot be used,
> because it is your way that there is nothing
> for which we cannot use you,
> for you are really willing to give us your dress.
> I come to beg you for this, Long Life Maker,
> for I am going to make a basket for lily roots of you.
> I pray, friend,
> to tell your friends about what I ask of you.
> Take care friend.
> Keep sickness away from me that I may not be killed
> in sickness or in war, O friend (Boas, 1921, p. 619).

The prayer reveals the importance of place-based, spiritually-derived knowledge as the spiritual significance of the western red cedar tree is intimately connected with Indigenous worldview and relationality in terms of which human lives are based on ethical relations with other non-human entities. This worldview, at the heart of which lies the Nuu-chah-nulth expression *hishuk-ish t'sawalk,* meaning that all things are one, is directly tied up with egalitarian discourse that encourages Indigenous peoples to situate themselves in an inextricably bounding relationship – based on consent, recognition, respect, and continuity – with all non-human creatures. In the words of Richard Atleo (2003), "the origin of species is in, and from, the first people. Other species […] are produced from the first people, but they themselves remain essentially like the first people throughout the ages" (p. 200). From this holistic perspective, the spiritual interconnectivity with the realm of biodiversity bestowed upon Indigenous communities instills them with the obligation to foster the mystical unity of existence,

simultaneously, securing the natural harmony (Atleo, 2005, 2012; Cote, 2019). Again, both humans and other living creatures are prominently considered to be equal. With that understanding in mind, I believe that the carefully chosen wording of the prayer, invoking respect and reverence, inscribes both Indigenous views on human and non-human relatedness as well as knowledge on sustainable and selective harvesting practices. Robin Kimmerer (2013) says that when Indigenous peoples encounter a plant, they address it, ask for permission, introduce themselves, and tell it what it is they have come for. In this light, before beginning to pull a narrow strip of fibrous bark from the selected cedar tree, the Kwakwaka'wakw woman, holding the tree in the highest respect, addresses the tree as an agential being and relational family and makes an appeal to *its/her* spirit in order to express her humility, and gratitude for *its/her* sacrifice and explain what the bark would be used for. Thus, the western red cedar tree is acknowledged as kin and proper respect is offered for *its/her* sacrifice. Asking the tree for permission to harvest shows respect for *its/her* personhood. Through this prayer, which strongly focuses on the animated spirit of the tree, the harvester acknowledges the benevolent hand of the Creator in their land and positions the animated spirit of the tree as an equitable partner in an interwoven human and non-human network in which holistic wellness, both spiritual and physical, is understood and preserved. In this regard, the prayer is an example of an ethical space wherein plant-human relationships as well as the spiritual role of the tree in the lives of the community are respected and strengthened. In this way, the Kwakwaka'wakw peoples see everything in relation to Creation and, recognizing that all life has spirit, they share kinships or brotherhood of sorts with sentient cedar trees and act as the guardians of their ancestral lands and more-than-human lifeforms to uphold the spiritual and ecological balance and harmony of life. Unfortunately, there is no escaping the fact that dishonorable harvest has become a way of life of Western society, disrupting the mutually respectful and reciprocal agreement and bond between humans and more-than-human beings.

Apart from the earth-based spiritual approach towards the life-giving cedar and *its/her* harvesting inscribed in the prayer, the prayer is also one way of gaining knowledge on Indigenous epistemologies. For instance, Margaret Kovach (2009) suggests applying the Cree concept of "*miyo-wicehtowin* (good relations)" to the process of searching for knowledge. Citing Metis Elder Irene Calliou, Kovach remarks that

> Showing respect for the earth, of reciprocity, and of the importance of observation and attentiveness in learning as knowledge is transmitted through kinship relationships. The importance of land is tied with the value of collective responsibility and stewardship. A prevailing teaching is that an Indigenous research framework must solely be an intellectual construct, for it cannot be understood in the absence of its practical manifestations, which involve living life in a wat that reflects goodness […] (Calliou, as cited in Kovach, 2009, p. 63)

Viewed in this way, I believe the prayer is a practice of reciprocity with a non-human agent. That is, the harvester, searching for knowledge, becomes a participant engaged in a relational co-constituting entanglement with the agential being of the cedar tree, which is a respectful prayer and harvesting. As Stewart (2009) notes, the process of bark-stripping – which was mainly carried out by women – likewise required specific know-how. It could take place only in the spring and summer as the running sap made the process much easier (p. 113). Not only could a specific size of a tree be chosen for selective harvesting but also Indigenous peoples could take only two-hands width of the bark so that the tree was capable of survival and healing itself in the long run (Brown, 2009, p. 31). Shishalh Nation artist Dionne Paul (2015) notes that western red cedar trees, in the light of the "keeping it living" philosophy, were only partially harvested so that most of the tree was not only left intact but it was also capable of regeneration in the long run. Such trees, demonstrating visible evidence of human use and modification, are commonly referred to as "culturally modified trees"[39] (CMTs) (Stryd & Fedeman, 1998, p. 7). It may be put forward that this prayer demonstrates the importance of western red cedar for Indigenous peoples as a source of materials for a diversity of extensive applications necessary for survival from one generation to another and provides instructions for a proper respectful behaviour and appreciation towards western red cedar trees, teaching restraint against overharvesting.

Nuu-chah-nulth storyteller Wish-key notes that "the cedar tree was like the real tree of life. […] Our everyday life was surrounded by cedar. So right down from our baby cradle and our baby blanket, our mode of transportation was a dugout cedar canoe. The house that we lived in was a cedar longhouse" (Boyce, n.d.).[40] It can be implied that Indigenous peoples understood their interdependence between themselves and all of Creation, recognizing that the destruction of their land and its resources would put their lives in jeopardy. This awareness resulted in practices invoking restraint against overharvesting, such as the spiritual practice of bark stripping.

[39] Personal and participatory observation/witnessing of the author, Stanley Park, Vancouver, 2015-2022.
[40] The brief interview with Wish-key was transcribed by the author of this dissertation.

Fig. 5. Culturally Modified Tree (CMT) in Stanley Park, Vancouver, BC. Photo taken by me.

Prayer to a salmon

Much in the same way that the above prayer was said to the spirit of the great cedar tree before harvesting *its/her* bark, such a relational and animistic approach on the part of Indigenous peoples toward plant and animal species in the face of harvesting can also be identified in the following prayer of a Kwakwaka'wakw fisherman to jumping salmon, proceeding to their spawning grounds in spring. "Prayer to the Fish Running in the Rivers" was recorded and translated by George Hunt and published by Franz Boas. It gives an insight into the life of the Kwakwaka'wakw peoples, their holistic ways of knowing, and food sovereignty. In other words, after living on the previously processed and stored resources during the winter season, the Kwakwaka'wakw looked forward to the beginning of salmon run (H. Stewart, 2008, p. 163). As a sort of supplication for success in fishing, simultaneously, showing gratitude and respect on the part of the Kwakwaka'wakw fisherman, the fisherman – with his life based upon the holistic harmony and natural rhythms of the surrounding environment – demonstrates an animistic sensibility and attributes sentience to the jumping salmon by communicating with *its/his* spirit:

Haya', haya'! Come up again, Swimmer,
that I may say haya', according to your wishes,
for you wish us to say so when you jump, Swimmer,
as you are speaking kindly to me
when you jump, Swimmer.

Welcome, friend Swimmer,
we have met again in good health.
Welcome, Supernatural One,
you, Long-Life-Maker,
for you come to set me right again
as is always done by you.
Now pray take my sickness
and take it back to your rich country
at the other side of the world,
Supernatural One (Boas, 1930, pp. 184-185).

The prayer to the first salmon of the season is of interest to this study as it inscribes the idea of animism, relationality, and dependence on animal resources. It seems that the fisherman is a steward/guardian who, by means of demonstrating his thankfulness to the life-giving fish for *its/his* return he encountered while paddling in his canoe, validates the idea that he has a kinship relationship with the salmon and that his health is inextricably connected with the well-being of salmon. This emotional and spiritual scene depicted in the text clearly conveys the Indigenous epistemological idea of holism. Seen in this light, I believe that the prayer places the fisherman as the younger brother of salmon who, with agency, vitality, a life force, and personhood, provides essential teachings, thus removing the hierarchy of beings in the Western tradition. Since animals as animate beings are to be respectfully treated as relatives and teachers offering land-based teachings on sustainability (Atleo, 2005; Kimmerer, 2013), the following prayer is a knowledge-making process. It weaves ecological teachings into the social and spiritual context of Kwakwaka'wakw cultures and situates their stewardship in land to develop an ethic of mutual respect between humans and the more-than human world which is aimed at at maintaining spiritual and ecological balance. With that in mind, the prayer informs that the sustenance of the Kwakwaka'wakw was intimately connected with the return of the migrating species of salmon and, thus, they were compelled to treat it with due reverence for their role in peoples' life and so they made sure that enough was left to seed the cycle of life's renewal, with salmon returning the next season.

5.3. Animated fishing technologies as a gift to humans

The selected Indigenous stories and life-experience narratives may serve as reliable repositories of the relational knowledge of numerous innovations and technologies related to managing and harvesting an array of important fish. These stories, aimed at staying in the memory of Indigenous peoples as the underpinning of their lifeways within their ancestral lands, serve to connect cultural, historical, and factual information and transmit essential instructions about the origin, development, and operation of sustainable fishing technologies. Indicative of Indigenous peoples' long-term residency within their ancestral lands, the stories embody their relational place-based knowledge related to the behaviour of particular animal species/more-than-human beings and their kin-based interspecies communication to which certain fishing technologies were accommodated according to animistic perspectives. Seeing with Indigenous wisdom, I put forward that these stories that the land holds teach people that there are other intelligences than our own. Importantly, as I want to illustrate, these stories present both animals and fishing technologies as animated wise beings, as teachers of place-based knowledge systems who are endowed with a mind, body, emotion, and spirit, and, thus, share relational knowledge and land-based technologies by means of what they say and do, thus invoking sensory and experiential activities. I have analyzed Indigenous stories which embody relational place-based knowledge of fishing technologies such as salmon fishing weirs, stone and conical basket traps, sophisticated halibut fish hooks, and kelp gardens. Importantly, I have used several life-experience stories to validate the storied Indigenous ways of knowing outlined in the analyzed ancestral narratives.

Salmon weir – a knowledge gift from ancestors

The following Ts'elxweyeqw (Chilliwack) narrative entitled "The Origin of the Sts'iyaq (Siyak)" was recorded and translated by ethnologist and anthropologist Charles Hill-Tout. It is a powerful story focusing on a sustainable salmon fishing method which uses the salmon weir made of cedar branches and inscribes the holistic worldview, recognizing the interconnectedness of all living things. The Ts'elxweyeqw peoples, whose traditional territory rich in resources is located in what is known today as the Chilliwack River Valley (Ts'elxweyeqw), believe that it was T'amiya the wren who

instructed their ancestors how to use the limbs of young cedar in order to construct the salmon weir (Teillet, 2014, p. 25):

> In salmon-fishing the Chilliwack mostly used the sts'iyaq (siyak), or salmon-weir. They believe their syewal (ancestors) were taught how to construct this by Tamia, the wren. He instructed them on this wise. He bade the limbs of the susekw' (young cedars) twist themselves into withes, and stout branches to sharpen one of their ends to a point and place themselves firmly in the bed of the stream in the form of a tripod, fastened at the top by the withes, two feet being down the stream and one up. He then called upon other boughs to wattle themselves in the lower legs of these tripods, till the weir or dam thus formed spanned the whole stream, at the foot of which the sth'oqwi (salmon) soon congregated in great numbers. He bade the people make their salmon-weirs thereafter in like manner (Hill-Tout, 2000, p. 56).

The story exemplifies relational knowledge as coming from ancestors and thus considered sacred. Kimmerer (2013), for instance, reflects on this non-western perspective on knowledge creation which is connected with a circular concept of times, as non-linear in nature in which stories function as "both history and prophecy, stories for a time yet to come. If time is a turning circle, there is a place where history and prophecy converge – the footprints of First Man lie on the path behind us and on the path ahead" (p. 207). Following this line of thought, as Leanne Simpson asserts, Indigenous ways of knowing are not a product yet a process that is cyclical and thus central to the understanding of Indigenous peoples' interdependence with all of Creation, all of their relations (Simpson, as cited in Starblanket & Stark, 2018, p. 183). Arguably, the story, shedding light upon the origin of a very sophisticated fishing gear bestowed upon the Ts'elxweyeqw peoples, embodies cyclical knowledge, passed down by ancestors, connecting the past with the present, on how to construct step by step the ingenious latticework sections of the salmon trap at the mouths of their salmon streams to improve their fishing efficiency. Invoking the sensory experience of building the salmon weir, it informs what sort of material – cedar tree branches – ought to be used, how the branches are supposed to be connected together to build the desired framework, and where in the river the finished fence weir should be placed. This way, the story conveys land-based knowledge grounded in a specific location. It is interesting to note, following the observations made by Greg Knox's, Executive Director of Skeena Wild Conservation Trust cooperating with the Nisga'a Nation, that salmon, migrating upstream and driven into such fence weirs targeting specific sizes of fish, were carefully inspected and then harvested selectively while bycatch or non-target species were released unharmed back into the river to preserve the lineage. In order to ensure healthy future runs of salmon, these ingenious traps were opened at regular intervals so

that sufficient escapement of fish was allowed back into the river and salmon could reach their spawning grounds (Knox, 2008, p. 11). This example illustrates that Indigenous peoples exercise a caretaking responsibility to their fish relatives, which asserts that the non-human beings of salmon are also endowed with agency and intelligence. It might, then, be understood that this helps fish relatives to exercise their reciprocal responsibilities and offer themselves to humans as a gift.

I have come to realize that the following story, related from one generation to another, works in a cyclical/relational pattern that regularly introduces new or updated themes or ideas focusing on the salmon weir technology grounded in the relational worldview, and then returns to these ideas at certain intervals and with different levels of understanding. In this way, not only does it ground the place-based knowledge in the relational worldview but it also transcends time and melds several generations of place-based knowledge related to the fishing technology, thus updating it on a regular basis. This refined relational harvesting practice featured in the oral text proves to have been an ingenious millennia-old technology of the Ts'elxweyeqw peoples utilized to catch considerable quantities of fish. What I find increasingly admirable is the deliberate choice of Indigenous fishers to refrain from exploiting a fish stock in a non-sustainable way although they had the means to do so. This illustrates their role as stewards of their ancestral lands, ensuring the holistic health of the marine-based ecosystem and their communities.

Basket traps – animals as teachers

Indigenous narratives have also preserved know-how on a variety of salmon and trout basket traps[41] which – working with conjunction with a fishing weir arranged in parallel rows or held in place by rocks (Prince, 2005, p. 73) – comprise another efficient and sustainable fishing technology skilfully developed over thousands of years along with holistic knowledge related to its intricate construction and functioning. Franz Boas explains that they were made of red-cedar wood and placed in the shallow water,

[41] The purpose of basket traps was to allow fish to get into the trap from downstream, funnel them into the tapered end, and then prevent them from escaping through the small opening. Since the tunnel section of basket traps was narrow, they were neither able to find the small opening to escape nor they were able to turn around to go back downstream. These open trays of woven sticks were usually used in conjunction with fence weirs and placed in a shallow, fast flowing stream. See Stewart H. (2008). *Indian Fishing: Early Methods on the Northwest Coast*. D & M Publishers, 110-111.

frequently installed at the ends of the grid-like structure of wooden stake weirs installed across shallow rivers (Boas, 1916, p. 400). The Tsimshian (Sm'algyax) peoples, traditionally living in their territories around the Skeena and Nass Rivers in what is now known as coastal British Columbia, devised sophisticated basket traps, frequently custom-made for each fishing site, and would anchor them along the shallow waters of the Skeena River (Matson & Coupland, 2016, p. 34). The following Tsimshian narrative "The Supernatural Beaver" vividly describes the origin of the trout basket trap and its complex construction. It was related by Tsimshian Elder Don Gosling at Port Simpson, recorded and translated by Hereditary Chief of the Tsimshian Nation William Beynon (Gusgain).

> There came a time of famine on the whole land and all the people were perishing, there being no food. Those that had some food went to their various camping places, away from the others, thus making their scanty food supply go further, those who had hunting territories were safe. But a man named Hlekus had no hunting ground, thus he had nowhere to go. He was gradually getting weaker, and his wife gave him her breast. Her milk was the only food he got. The woman, who was much the stronger of the two, went about gathering what food she could. But there was never enough for them both, just enough to keep her alive. The severe winter was about over and it was getting milder. Then Hlekus remembered a very distant valley which he had once seen; it belonged to no one, as everyone was afraid to go there. It was considered an abode of a supernatural monster. Hlekus and his wife went down the ice of the Skeena from the Kitselas Canyon. Very weak, they travelled slowly. He was still being fed by his wife through her breasts, and he was not strong. They journeyed for several days and then they came near the mouth of the Ksemgawt River. Here they made a camp and during the night, a heavy snow came and the man and his wife could travel no further. Here the woman gathered firewood and they made a hut from the branches of the spruce, and took shelter under a great spruce tree,
>
> Their food was gone and the snow was falling, making it harder to move about. So the woman began to weep and mourn, knowing that they soon would perish. She began to sing her dirge song while she yet had the strength. Her husband was getting weaker every day, as she no longer could nourish him. While she was thus crying, she went to sleep where she sat by the fire, and when asleep, a vision came to her. "Why do you weep? My father is annoyed at your continuous crying. He cannot sleep. So he has sent me to tell you that the stream opposite is full of trout, and there you may find much food." "Oh! Supernatural One, how can I catch trout?" The being in her vision then said, "Gather roots and weave a basket, with frames inside, to hold it rigid, and put a trap entrance at one end. Lower this into the stream and you will catch the trout." The man in the vision showed her how to make this wicker trout trap.
>
> So she now went about and gathered stout roots and made them into a basket-like fish trap. After she had finished it, she went across on the ice and, finding a break in the ice, she sank her trout trap into the stream. Then she waited, and soon she was able to see down into the clear stream. Lifting her new-made trap, she found a few small trout. She sank it down again, and then went and prepared the small trout. She was very happy and, although there was only a small quantity, she and her husband now had food. This type of fish trap goes back to that time. (Gosling, as cited in Barbeau& Beynon, 1987, p. 322).

On the one hand, the story, once interpreted within Indigenous research frameworks such as "transrational knowing"/"two-eyed seeing", validates the concept of non-anthropocentric personhood, Indigenous concepts of kinship, and knowledge coming

from visions/dreams and from animals/ancestors. The text gives insight into Tsimshian ontology and epistemology (onto-epistemology). Kimmerer and Atleo's teaching on the agential spirit of animals is helpful in understanding the implication of the above story (Atleo, 2005; Kimmerer, 2013); the narrative of the trout basket trap highlights the significance of the wonderful more-than human being of the beaver *which/who* embodies the qualities of a teacher, looking after people. As a wise being given the voice to speak, the beaver has *its/his* own sovereignty and intelligence and shares step-by-step instructions on how to build a selective and ingenious trout fishing device. The story teaches about and validates Indigenous ontologies where the animate world is not objectified, where more-than-human beings have intelligence/knowledge.

On the other hand, the story also demonstrates the advanced development of the Tsimshian cultures, illustrating their practical skills and knowledge in building intricate fishery structures. Just as the story provides information concerning the required material for the construction process – roots, probably of western red cedar as they are flexible enough for weaving basket-like structures – it may also serve as a sort of construction manual providing guidelines and advice that point Tsimshian fishermen in the right direction of planning, design (basket-like structure consisting of frames and an entrance at one end), and construction steps of trout basket traps. On closer inspection, the narrative also sheds some light upon the orientation and alignment of the basket-like wicker trap in the river yet it does not provide further details. What plays an essential role here is that the story invokes the sensory and experiential activity of constructing a trout basket trap for the sake of encouraging the listener to understand the fullness of the story and revive the embedded experience of the past harvesting activity.

Relational stone fish traps

The Heiltsuk "Mauwash Story" told by Heiltsuk Elder Angus Campbell inscribes land-based knowledge on stone fish trap structures that teach stewardship positioning to the Heiltsuk peoples as caretakers of their resources. This traditional stewardship practice clearly promotes sustainability as opposed to the colonial tradition of resource exploitation. The main objective of such trap wall formations[42] was to intercept fish

[42] Such stone fish traps were built of various size beach cobbles and either placed in narrow streams or on open tidal flats. They were targeted at catching large quantities of fish at one time. Such traps can be divided into simple and complex semicircular stone wall formations. Simple structures, characterized

migrating upstream during their spawning season. With the tide rising, the flow of the water pushed salmon closer to the shore above the top of the trap only to be stranded behind the stone formation when the water receded (Pomeroy, 1980, p. 104). Knowledge of and references to these alignments of stone placed in streams to create traps capturing stranded salmon[43] can be found in the ensuing narrative:

> There used to be fish in Mauwash, Namu as it is called today, all year round in the olden days. The most important food for the First Generation was smoked and dried salmon. These could be used later on when other fish started running.
>
> When people from other villages ran out of smoked and dried salmon, they would come to Mauwash and ask my great-great-great grandfather to fish there. There were three salmon traps in the creek at Mauwash. When they had enough salmon, they would give thanks and head back home. Even those people with big rivers like Bella Coola, Rivers Inlet, Kitimaat and the Nass River would come and ask to smoke salmon there.
>
> When they were tired of smoked or dried salmon, they would go out digging for clams, cockles, mussels, abalone and other sea foods. They would soak them overnight in salt water and then heat them. The old people used to use hemlock bark. They would peel off sections 8by 12 by 1with a knife and cook it and eat it. When the old people got deer or goat, they would smoke and dry it if they had too much. Ordinarily, they would cook it when it was fresh. They also used hair seal the same way.
>
> The First Generation always had plenty to eat. They used to make stink eggs with dog salmon (chums) eggs just before spawning. Granny used to dry eggs before she put them into a wooden keg and then leave it for three weeks. After three weeks it was ready to eat. The eggs would really stink but it was good eating, and it kept a person full for as long as ten hours. Only once in a while when they had sea lion would they dice it and cook it over an open fire for five days, then put it into an "Indian" box. When they wanted a change of diet, they would bring it out and soak it overnight.
>
> The First Generation always had a change of food in certain months, so they never hungered for anything. In May, in the olden days, they would go out for halibut. They would dry the halibut too and smoke it. We call this dried halibut, duluce. Then came herring eggs. They would smoke and dry herring eggs when they started spawning. The old people would fell small hemlock trees and they would put them into the spawning grounds and leave them for a couple of days. After two days they would go back and pick them up and hang them on the trees to dry. They liked to put them in the trees when it was really stormy with a strong wind but no rain.
>
> When we had everything we needed – seaweed, fish, eggs etc. – we would send some to our relatives at Bella Coola, Rivers Inlet, Kitimaat, and the Nass River. When it was their time, when the eulachons and herrings started running, they would send up smoked fish and grease.
>
> This trading back and forth was the way of our people, and the First Generation. This is the reason we never knew hunger (Campbell, as cited in Brown, 2009, p. 45-46).

The story exemplifies the annual pattern of seasonal rounds practiced by the Heiltsuk peoples. Not only does the story explain details of the seasonal movement of the peoples from one food gathering camp to another within their land, but it also sheds some light upon an array of various resources that were collected during different times

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by a bow shape pattern, consisted of a single alignment of rocks and they were commonly found at the mouths of small streams, in coves and lagoons. See Pomeroy, J. (1980). *Bella Bella: Settlement and Subsistence*. [Published doctoral dissertation]. Simon Fraser University.

[43] For the past decade, I have been studying fish weirs at multiple locations throughout Indigenous territories in British Columbia. From this research, I take a better understanding of their design and use. Personal and participatory witnessing of the author, Capilano River, North Vancouver, 2011-2022.

of the year, such as salmon, halibut, seafood, and seaweed. It also informs about different food processing methods but it does not provide any references to the construction and functioning of the three stone salmon fish traps mentioned in the text.

The place-based relational knowledge related to the selective mechanism of stone fish traps is validated in another text by Heiltsuk Elder Clayton Mack who shared relevant information about the location, structure, and functioning of stone fish traps in the following personal experience narrative:

> Old peoples make it with rocks, build up a big stone fence about three or four feet high at low tide, at high tide, fish go in there and people close off the opening, when the tide go out the fish are trapped, when they get enough fish, open the trap, let the rest of the fish out (Mack, as cited in White, 2006, p. 26).

The personal account gives insight into the advanced knowledge the people had on fish trapping which has been transmitted orally throughout ages. The elder provides such useful details about the rock alignment with a certain opening (Moss & Cannon, 2011, p. 86) that allowed salmon to swim inside the pool enclosure only to be trapped inside the walls at ebbing tides.[44] Upon harvesting sufficient quantities of fish – not more than they needed – they open the trap and released the rest of the fish back into the river.

Fig. 6. Stone weir at the mouth of the Capilano Rover, Vancouver, BC. Photo taken by me.

[44] Another reason which might account for such an opening is the fact that Indigenous fishermen might have been provided with an access to salmon at different stages of spawning maturation and, as a result, they were able to harvest stranded salmon selectively, taking only the lean and dark coloured salmon for smoke drying. See White, E. (2006). *Heiltsuk Stone Fish Traps: Products of My Ancestors' Labour*. [Published master's dissertation]. Simon Fraser University, 132-133.

Moreover, since the story is grounded in specific locations on the Nass River, it sheds light upon the stewardship exercised by the Heiltsuk peoples, illustrating ownership and systematic and careful management of the land and trap formations.

For the past decade, I have been studying fish weirs at multiple locations throughout Indigenous territories in British Columbia, and I have studied their cultures using decolonial perspectives which expose the absurdity of such racist Eurocentric doctrines as *terra nullius* as legitimizing the western concepts of land ownership which led to the racist treatment of Indigenous peoples. The story affirms their presence erased from the land and debunks the doctrine of *terra nullius* that states that the land was vacant and not efficiently cultivated by Indigenous populations and, thus, it served as a justification to dispossess them of their territories by settlers and the state (Coulthard, 2014). The colonial narrative justifying the occupation of the land, as pointed out by UBC History Professor Arthur J. Ray (2016), asserted that any lands that were not cultivated in a 'civilized way' or did not have houses built on could be acknowledged as waste and, therefore, suitable for colonization (p. 186). Dene scholar Glen Coulthard (2014) adds that "because Indigenous societies were considered so low on the natural scale of social and cultural evolution, settler authorities felt absolved in claiming North America legally vacant, or *terra nullius*, and sovereignty was acquired by the mere act of settlement itself Indigenous" (p. 100). It comes into focus that it was an attempt to by-pass Indigenous understanding of the environment and dispossess them of their intricate connection to the land, which was driven by white racial superiority, the idea of progress, and binary logic of civilized and savage populations. This, I think, was the ultimate goal to erase Indigenous knowledge of time and space. The above Heiltsuk narrative proves that the Heiltsuk peoples, as the land's stewards, have in fact been managing and taking care of their ancestral lands and resources much longer than the colonists, and they have acquired a holistic understanding of the land that determined the use of the sustainable practices of salmon stone traps.

Significantly, in the pursuit of a better understanding of the functioning and relational nature of such stone wall formations practiced by the Heiltsuk peoples for millennia, it is worth taking into consideration the following personal account of Heiltsuk elder Pauline Waterfall who elaborates on the purpose of the stone wall formations:

> Each fish-bearing river or creek system had a stone fish weir (trap) that was placed strategically near the mouth of the water body. During high tides when salmon were migrating up these water

> systems, they were caught inside these traps. Knowledgeable fishers then inspected the catch and made decisions on which to take and which to release in order to ensure sustainability. It is said that those chosen were the ones that did not seem the strongest or fittest, thus ensuring that future stocks would retain these qualities (Waterfall, as cited in Brown, 2009, p. 47).

Used together, these oral narratives may serve as important repositories of local knowledge related not only to the relationship to the marine environment and land but also to the structure, building material, and operation of highly-specialized semicircular stone wall formations aimed at trapping migrating salmon. These narratives transcend entertainment value, often associated with the process of storytelling, because they teach and invoke the importance of respectful treatment of animal agents upon whom Indigenous lives depended.

Following Indigenous scholars (Atleo, 2005; Kimmerer, 2013; Watts, 2013), I also hope that my project will contribute to the decolonization of western thinking about Indigenous cultures and their practices. I foreground the complexity of Indigenous knowledges and practices that reveal how advanced the cultures have been in the understanding of the land and demonstrate the strength of their 'ecological consciousness', the term used in critical discourses today. It is clear that these texts share a holistic perspective on the treatment of natural resources that goes beyond the widely accepted conceptions of humans and their relationship with nature. Living on reciprocal and respectful terms with Creation, salmon harvesters shower respect to the spirits of salmon to be accepted as a gift to ensure harmonious relations (personal and participatory witnessing of the author, Capilano River, North Vancouver, 2011-2022). Moreover, these narratives impart the knowledge about specific ecological contexts where such traps could be strategically placed and describe how tidal action helped to trap migrating salmon within these tidal enclosures. As documented, the above discussion of the method and my first-hand observations on the Capilano River in North Vancouver, the ingenious trap – guided by relational ecology and underlining Indigenous peoples' keen observation of marine life – seems to be a very productive fishing device that enabled large quantities of fish to be harvested at one time when the salmon runs were at their peak. This is a testimony to Indigenous long-term stewardship of the land contributing to environmental preservation and rich biodiversity.

Kelp gardens and supernatural herring. Dreaming and metamorphosis

Since the concept of metamorphosis plays an essential role in the animistic worldview wherein animals and plants take on agency, dreams serve as a transformative setting where these agential beings move between the human and more-than-human worlds. Margaret Kovach (2009) perceives dreams as "portals for gaining knowledge" (p. 67). According to Anishinaabe scholar Amy Shawanda (2020), dreams are an important element within Indigenous intellectual frameworks used to transmit information and validate Indigenous ways of knowing. Shawanda articulates that dreams allow Indigenous peoples to "transcend into Sacred space and return to [their] Ancestors' land [where] time is no linear, so dreaming allows [them] to co-exist within the same domain as the Ancestors, that is in the past, present, and future simultaneously" (p. 39). In her article "Stories, Dreams and Ceremonies: Anishinaabe Ways of Learning," Leanne Simpson (2010) expands on the importance of dreams and dream knowledge. She notes that "knowledge is often transmitted from the spiritual world to humans through dreaming and visioning" (p. 6). Simpson (2011) also emphasizes that dreams and visions propel resurgence as they also transmit vital "processes for realizing those visions" (pp. 34-35). Because Indigenous knowledge is derived from the spirit world, Indigenous people use dreaming to transcend to the sacred space and gain this knowledge from sentient beings.

Similarly, Tim Ingold (2004) describes dreams for the Anishinaabe peoples as human encounters with "the grandfatherly protagonists of myth, and carry on activities with them in a familiar landscape, albeit viewed from an unfamiliar perspective, revealing secrets of the environment that one may not have noticed before" (pp. 41). Dreams are examples of Indigenous ontologies which parallel the everyday life of humans and allow them to move between the earthly and cosmic realms of ordinary existence (p. 41). With these observations in mind, it might be argued that through such dreaming experiences Indigenous peoples create a relational bond with more-than-human entities and engage with the natural world wherein plants and animals, endowed with human capacities and living in the human-person world, impart essential knowledge. In this subsection, I feature the voices of Indigenous Elders who understand the relationships between humans and the environmental as relational and reciprocal, which need to be met to ensure harmonious relations.

One Heiltsuk story "Gift of the Herring", told and transcribed by Hereditary Chief of the Heiltsuk Nation Frank Brown, explains the origin of harvesting herring eggs through a dreaming experience. The story is concerned with a sustainable technology used for catching other varieties of forage fish for food and economic purposes, simultaneously, promoting sustainable fishery management; namely, harvesting the spawn of Pacific herring from kelp fronds or hemlock branches.[45] Traditionally, Heiltsuk men were responsible for harvesting herring spawn on the fronds of kelp or hemlock branches, dried the branchlets covered with herring spawn for about six days, and, then, the dried herring spawn was wiped from hemlock by women (Newell & Ommer, 2000, p. 126). As Brown (2009) vividly recollects,

> The Heiltsuk people had been suffering for a long time and were hungry because of the extremely long and dark winter. One grey day two Qvuqvayaitxv brothers were walking along the beach at Qvuqva, when they heard calls for help coming from a tidal pool. Trapped inside the pool was a small school of supernatural young herring that had become stuck as the tide had gone out. The water continued draining out and soon it would be empty, then the herring would die. This is when the two boys heard the calls for help and began packing the herring down to the ocean, inside abalone shells, to set them free. Afterwards, the boys lay exhausted on the beach and soon fell asleep.
>
> While they were sleeping, the young herring visited them in their dreams and told them to gather hemlock boughs and go bathe in the ocean and wash the boughs on a rock near by the kelp bed. When they woke up the ocean had turned a milky white, millions of herring were flashing up the beach, they began to lay golden eggs and this caused the sky to brighten. The halibut, ling, red and rock cod came in from the deep, many birds such as the ravens, eagles, kingfishers, seagulls, saw bill and black ducks all flew in and began to feed, also the seals, sea lions, whales and the spring salmon came in from the ocean and thus began the first seasonal cycle and the beginning of the New Year.
>
> The children were told by the herring to quickly gather small hemlock trees, gigalis, and yaggi (kelp) and anchor them to logs in the ocean near the shore where they were spawning. As if by magic great schools of herring converged on the hemlock trees and kelp began to lay their eggs.
>
> The people saw the radiating light and heard all the activity down on the beach and went to see what was going on. The boys showed them the trees and the kelp filled with golden roe of the herring. They brought it into their uncles' house and told the people the story of the stranded herring and they had a great feast (xvii).

Similar to my earlier reflections, it is the Indigenous concept of animacy that is foundational for my analysis. I have gained an understanding that the ancestral story uses the language of agency that posits the more-than-human being of herring as an agential being that is endowed with the powers of personhood, intentionality, and purpose and actively reaches out to and engages with the local environment. Speaking,

[45] For instance, harvesting the spawn of Pacific herring (*Clupea pallasii*) either from kelp (*Egregiamenziesii*) fronds or hemlock branches laid out for this purpose in the quiet ocean bays during the spawning season enabled Northwest Coast First Nations to collect herring eggs without catching and killing the fish en masse. See Gauvreau, A. (2015). *"Everything Revolves Around the Herring": The Heiltsuk-Herring Relationship Through Time*. [Published master's dissertation]. Simon Fraser University, 11-12.

sharing his land-based teachings, and imparting detailed harvesting instructions are aspects of his engagement with the land. All that deliberately takes place in the dream in which there is no separation, dichotomy between the human and non-human world. Thus, it is not a fable, but a real story of real people and real events. Also, the Heiltsuk children also seem to be isomorphic with the supernatural herring in the harvest. They are entities of equal being. Applying the notion of dreams as reality and episteme, this is what I take to be the central task of this story: to authenticate the storied intergenerational knowledge based upon the accurate first-hand observation and on-going sensory participation in the Heiltsuk peoples' ancestral landscape and behaviour of animal beings. Experiences of that sort seem to be formative, for they determine human's relational and respectful attitude to the land.

With this understanding in mind, the narrative seems to be a very good illustration of the annual behaviour of spawning herring and the ecological knowledge related to the spawning locations and harvesting technology. The oral narrative, as a memory carrier and cultural process for transmitting essential ecological information across generations, sheds light upon the origin of kelp gardens as a management system for Pacific herring which, in the light of the story, included placement and setting of branches, particularly hemlock branches as the story indicates, so that spawning herring could leave their eggs on them. This method was bound to ensure a sustainable harvest since some of the branches were not removed but left in behind in the river so that remaining eggs could hatch.

The relational knowledge presented in the ancestral narrative can also be found in the life-experience story related by Clan Chief Adam Dick (Kwaxsistalla) and transcribed by T. Abe Lloyd.[46]Throughout his childhood, Kwaxsistalla used to help his grandparents with collecting their seasonal food and he vividly remembers harvesting herring spawn near Kingcome:

> When herring are starting to spawn you leave the clams alone. You can't touch the shellfish for a month after the herring spawn. You come out to Wassillas in [Kingcome] Inlet. They call it Wassillas because wass means "spawning". Limo wassa [means] "it's spawning now." Wassillas is between Charles Creek and Wakeman sound. The herring spawn was a very short season, a couple hours only.
>
> You tie two hemlock boughs together and hang them over a log. Each is about 4 feet [1m] long. The log is anchored down so it doesn't drift. The herring come and spawn on the branches. You

[46] For more information on Clan Chief Adam Dick, one of the most significant and influential Kwakwaka'wakw cultural leaders, see *Kwaxsistalla*. (n.d.). Retrieved July 21, 2022, from https://www.kwaxsistalla.org/.

> just lay on the beach [and watch], then you push out [in your canoe] and lift up the branch to check it.... If it is not thick enough, then you push it back down. When it is the right thickness you rinse it in the ocean to get the scales and fertilizer [milt] off. You don't want to have it too thin, too light. You don't want to have it too thick or it won't dry right.... If you could handle two logs, then you have two logs. I've seen lots of them anchored, so you don't have to go look for them on the kelps – on the seaweed (Dick, as cited in Lloyd, 2011, p. 32).

Kwaxsistalla's vivid recollection may actually serve as a body of detailed land-based instructions on how herring spawn was harvested by the Kwakwaka'wakw peoples across generations. He also points out an important spawning location on the map of Kingcome Inlet area, *Wassillas*, which might be an important implication of Indigenous relationship to and sovereignty over their lands and resources. The story encompasses the preservation of the Kwak'wala language as coming from the land, philosophy, and culture. For me, reclaiming Kwaxsistalla's first-hand experiential knowledge from the past and bringing it back now is crucial as it offers a window into Indigenous science, which might inform new ways of resurgence and engaging with the land. As a result, ancestral knowledge and memory of harvesting berries embedded in place might be relearned and become contemporary in an ongoing effort to engage in resistance efforts to protect their homelands and contribute to Indigenous holistic wellness. By its very nature, such land-based education also holds valuable lessons and insights for people beyond Indigenous communities, for non-Indigenous people have forgotten how to engage with the land in a respectful and reciprocal manner, much to the detriment of our living world. For the sake of land protection. Indigenous philosophies await validation in the contemporary world – and it is important to repeat that the land is sacred and not a resource to be exploited.

Halibut fish hook– an animated gift to people and an Indigenous concept of gift

A halibut fish hook is another Indigenous advanced technique of fishing testifying to the creativity, intelligence, and sensitivity to all Creation. With the holistic thinking as guiding the process of inventing fishing gear, Indigenous peoples devised the halibut fish hook as an ecological tool[47] for resource harvesting in marine ecosystems and cleverly devised to catch only specific sizes of fish species, thus, precluding drastic

[47] The practice of making halibut hooks has been carefully handed down through generations. To make hooks, Indigenous stewards used their hands and precisely determined dimensions so as to catch only specific sizes of fish. Such hooks were usually baited with an octopus, or devil fish, which was a common bait for this sort of hook, and it sank to the bottom. See Stewart H. (2008). *Indian Fishing: Early Methods on the Northwest Coast*. D & M Publishers, 33.

resource depletion. An intriguing reference to halibut fish hooks in the study region is the following address (prayer) of a Kwakwaka'wakw fisherman to a sentient halibut fish hook in the face of fishing. Having cleansed his hands with hitherto plucked seaweed to get rid of the human scent and wrapped the bait on the fishing gear, the halibut fisherman uttered the following words both to the fish and the hook:

> O Old woman! Look at my work on your behalf.
> Now this is clean, my younger brother,
> With which I am going to catch you... Yes, yes!
>
> Top bladder, go on, Old Woman!
> Crawl up to it. Now it is well prepared.
> This is your sweet food,
> You, Wrinkled-In-Your-Mouth!
> You, Squint-Eye! Go on, go on, go on,
> Else I may be stiff when I leave this place,
> Old Woman!
>
> This is what I was wishing, Old Woman,
> Not to wait long on the water for you.
> Now hold this my younger brother.
> Don't let go this my younger brother (Boas, 1909, pp. 476-478).

The above Kwakwaka'wakw prayer to the hook and fish, which was collected by Franz Boas, is a good example of an outward form of respectful and reverent treatment of fish species as more-than-human beings. The prayer is a powerful ceremony which, as Robin Kimmerer (2013) explains, "is a vehicle for belonging to – a family, to a people, to the land" (p. 37) and which "coalesces [one's] attention, mind, body, emotion, and spirit, and that attention can become intention which can become action" (2017).[48] With that conceptualization in mind, the prayer allows the speaker to communicate with the sacred spirit of the animal to invite *her* to the human world and express gratitude for *her* knowing return and benevolence. To do so, as I contend, out of respect, the fisherman addresses the animal by *her* different names. This naming practice is significant because in Indigenous philosophies "names have real power as independent agents: they are living, affective, agential entities who exist in relationships with other agents and have real, concrete power in the world on their own terms. […] Names, along with thoughts, dreams, and stories, as well as manner of persons (human, plant, animal, etc.) count as animate, as agents" (Sinclair, 2022, p. 100). Speaking to the animal in such a relational manner, the fisherman creates and recognizes kinship with the fish, which counts as animate, as an agential being displaying traits of personhood. I understand that once

[48] Robin Wall Kimmerer's lecture "What Plants Can Teach Us" was transcribed by the author of this dissertation.

people start to perceive the world as gifts[49] offered by more-than-human relatives, they will express gratitude and respect for the gifts of the land.

It cannot go unacknowledged that the Kwakwaka'wakw prayer is resonant with the themes of Indigenous non-human agential ontologies as well as the current development of the new materialist philosophy, both of which acknowledge an emergent agency between the fisher and the hook. That is, it is not only the halibut fish that is animated but the fish hook is also anthropomorphized as the younger brother in the relationship between humans and more than-human beings of animals. I bring into discussion the theory of new materialism to show another aspect of colonialism as it affects academia. The new materialist scholars Karen Barad, Jane Bennet, Lisa A. Mazzei, and Alecia Youngblood Jackson (Barad, 2007; Bennet, 2010; Jackson & Mazzei, 2012) explore the actant qualities of the material and non-human worlds and focus upon relations between objects and humans. However, their thought is built upon colonial ideologies of racism and Eurocentrism, and they borrow from Indigenous relational philosophies without acknowledging Indigenous scholars already working with Indigenous agential ontologies and contributing to the on-going settler-colonialist erasure of Indigenous thought (Deloria, 1999; Tompkins, 2016; Todd, 2016; Rosiek et al., 2020). Their perspectives on the sacred nature of natural resources are little discussed (Gergan, 2015). Indigenous scholar Sarah Hunt (2014) points out that "Indigenous knowledge is rarely seen as legitimate on its own terms, but must be negotiated in relation to the pre-established mode of inquiry" (p. 29). This perspective highlights the importance of recognizing Indigenous relational worldviews as the basis of that knowledge. For, as Gergan (2015) notes, animistic ontologies, which acknowledge the agential nature of living entities and objects, provide valuable insights to the materialist interest in more-than-human agency. From the perspective of Indigenous animistic ontologies that needs to be drawn into the conversation: it follows that the Kwakwaka'wakw fisherman, addressing the hook as his younger kin, capable of self-awareness and action carrying a moral dimension, perceives the hook as a sentient being endowed with agency. The hook is a metaphor of the Kwakwaka'wakw peoples' engagement with all of Creation. It is not a thing but a kin-based relation. I believe this agential ontology of objects has implications for the conduct that is required for engaging in appropriate relationships with all of Creation, both human and non-human

[49] The Indigenous concept of gift is described later in this section.

agents, thus challenging Western epistemologies of human/nature dichotomies and settler domination over nature. Restoring the balanced order of beings as equal partners, this practice, as I put forward, can be regarded as a mode of resistance against settler coloniality. The prayer itself can serve as an educational tool for sharing knowledge on halibut fishing, as well as skills and ethics required for this relational activity.[50]

As a further investigation into the origin of the traditional fishing gear of fish hooks used to catch one of the largest fish along the Northwest Coast and the holistic knowledge associated with its use, it is worth pondering over the Haisla transformation story "The Raven and the Fisherman Story" recollected by Haisla artist Lyle Wilson:

> One day, Wigit heard about a fellow called Kwaganoo. Now Kwaganoo owned a special hook that he never let anybody see, let alone use. This hook was used to catch a very tasty fish called the mumugazu. Being constantly hungry and so lazy, Wigit always tried to find food with the least amount of effort – so he decided to trick Kwaganoo out of his special hook. At first, he succeeded in getting it, but when he tried to use the hook to catch his own mumugazu, Kwaganoo retaliated by swimming underwater and yanking Wigit into the sea. Kwaganoo then proceeded to try to drown poor Wigit.
>
> Using his supernatural powers, Wigit ended surviving Kwaganoo's revenge – but only barely! The Haisla people learned to fish for mumugazu because Wigit remembered how the hook was made and gave it to them to use. But Wigit himself never used it again because he was so afraid of Kwaganoo (Wilson, as cited in Danielson, 2018).

The recollected trickster story is used as another educational material on the functional example of selective and sustainable Indigenous fishing gear. Raven (Wigit) steals the halibut fish hook from the supernatural fisherman named Kwaganoo to catch fish for herself/himself. Despite Raven's selfish behaviour, her/his actions may be considered heroic and credited with not only providing the Haisla peoples with the halibut fish hook during the time of hardships but also shedding light upon its application in their fishing activities. It may be argued that since her/his actions and follies, replete with the information about the sophisticated fishing gear, are overdramatized in the plotline, they may be aimed at inscribing it in the memory of the Haisla peoples.

This is where, I suggest, the fish hook is given to the Haisla people as an animated gift by the trickster figure of Wigit. Importantly, the notion of gift-giving offered by Robin Wall Kimmerer is not an object within a commodity-based exchange system but a way of relating with more-than-human beings in which "gifts require a giver, a being with agency. Gifts invite reciprocity. Gifts help form relationships" (Kimmerer, as cited

[50] I would like to note that the prayer also touches upon the durability of such hooks required to haul the impaled fish to the surface without losing the catch, especially when the average weight of a halibut caught by longline gear ranges from 5 to 91 kg. See McCaughran D. (1987). *The Pacific Halibut: Biology, Fishery, and Management*. The International Pacific Halibut Commission, 11.

in Tonino, 2016). Making similar points, Mohawk scholar Marlene Brant Castellano (2000) notes that Indigenous knowledge is

> handed down more or less intact from previous generations. […] In some of its forms, it passes on technologies refined over generations. [It is] acquired through dreams, vision, and intuitions that are understood to be spiritual in origin. […] Sometimes knowledge is received as a gift at a moment of need; sometimes it manifests itself as a sense that 'the time is right' to hunt or counsel or to make a decisive turn in one's life path (pp. 23-24).

The notion of the gift plays an essential role in building holistic relationships and maintaining a healthy balance of reciprocity between Indigenous peoples and the sentient land. Kimmerer (2013) asserts that "humans and non-humans are bound to each other in a reciprocal relationship that creates duties and responsibilities. Just as all beings have a duty to me, I have a duty to them. If an animal gives its life to feed me, I'm in turn bound to support its life. If I receive a stream's gift of pure water, then I am responsible for returning a gift in kind" (p. 115). Reciprocity, as Potawatomi philosopher Kyle Powys Whyte (2022) observes, "is understood through the gift-giving and -receiving relationship in which each party has a special contribution to make [and] to become a party in a relationship, one must be transformed into a relative with reciprocal obligations […] through ceremonies and other formal activities" (p. 133). I have found the ideas of the gift and reciprocity laid out by those scholars particularly useful to my analysis of the story. To read the story this way, I contend that recognizing the gift of place-based knowledge offered at the moment of need, the fisherman is bound to acknowledge the agency of the non-human giver, the fish hook. Remaining mindful of the gift relations with the non-human being of the fish device is an embodied practice both manifesting reciprocity with the sentient land and reflecting the intimate bond of respect and dependence on the natural world. This ethical reciprocity between the Haisla peoples and the agential actor of the fish hook is arguably an enactment of Indigenous ontologies. Drawing upon these findings, the story exemplifies relationality serving as an important way of knowledge-making in the world.

5.4. Does the land, conceptualized as the interactions of sentient beings, listen to the voices and activities of Indigenous peoples?

Aside from the comprehensive role of stories in relation to sustainable harvesting practices of animal species[51], I also want to focus on narratives that explore storied sustainable management strategies and technologies grounded in the holistic worldview and used for intensifying the productivity of existing resources and improving their quality in a reciprocal fashion. It is likely that these narratives illustrate how the ecological knowledge, informed by the need for an ongoing kin-based relationships with animals and plants, is inextricably linked with such management practices, giving clues about instructions necessary for their proper applications within different ecosystems to achieve desired results. I also argue that these texts and storied knowledge on land-based management systems provide further insights into the human and more-than-human relationships based on agency and kinship that contributed to the knowledge that informed the use of such management systems. It is my argument that the land as a living entity and its resources listen to and respond to human intentions, words, and activities. In this section, I analyze storied resource management techniques, as examples of non-western paradigms, which show advanced ecological knowledge validated and reclaimed currently along with Indigenous philosophical and scientific concepts. I demonstrate the importance of Indigenous ecological perspectives for the contemporary world and environmental movements.

The sacred gift of fire

Fire has been used by Indigenous communities for generations to heal, bond together, begin sacred ceremonies, and conduct cultural burning. It is a sacred gift from the Creator, a living being, and a spiritual and respectful conduit that opens to the spirit realm, ancestors, and creation so that Indigenous peoples can communicate and connect with their ancestors through fire.

[51] As discussed above, these detailed instructions enabled successful harvesting of an array of marine resources and, simultaneously, ensured that they were not subject to overharvesting and subsequent depletion but preserved for the use of generations to come.

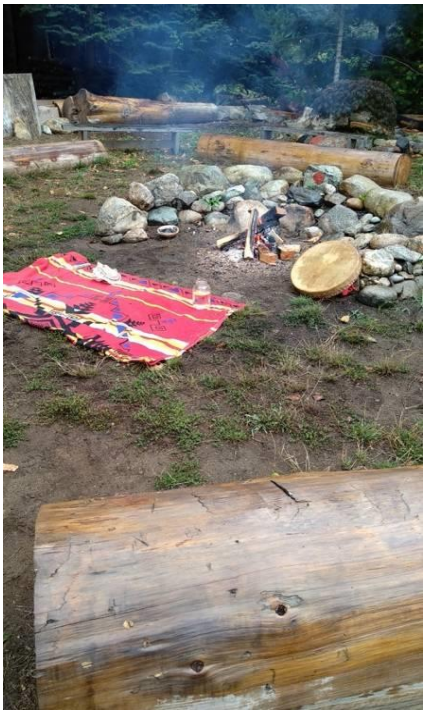


Fig. 7 & 8. Blessing of the Land Ceremony. xʷc̓ic̓əsəm Garden at UBC Farm. Photos taken by me.

As the fire is lit, tobacco goes around for people who offer to the fire with their intentions and prayers. Instead of being left alone, the sacred fire is always built, maintained, and attended by a knowledgeable firekeeper (personal witnessing and participation in the Blessing of the Land ceremony held by the St'át'imc Chiefs' Council at the Xaxli'p Indian Reserve in Lillooet in 2015; L. Brown, personal communication, 2015 and 2019); personal participation in a sacred peyote ceremony held at the Poundmaker Indian Reserve, 2018; personal participation in the Blessing of the Land ceremony held by the Tu'wusht Peoples and Vancouver Native Health Society at xʷc̓ic̓əsəm Garden at UBC Farm, 2019).

Some Indigenous stories are concerned with the Indigenous craft of cultural burning targeted at enhancing local habitats and keeping destructive wildfires at bay in summer months.[52] For example, the Nlaka'pamux peoples appreciated the gift of fire as given by the sacred spirit of Beaver to deliberately set fires for the purpose of direct and respectful resource management. It should be noted that the controlled use of periodic

[52] The Indigenous craft of fire stewardship, as a healthy component of functioning ecosystems, was purposefully and routinely utilized not only to clear the build-up of flammable wood or dead grass but also to promote desired landscapes and enhance the growth of particular plant resources, including various medicinal plants. Unfortunately, colonial policies banned the practice. However, in the wake of recent wildfire seasons, there has been a gradual revival of traditional fire stewardship and associated intergenerational teachings in British Columbia. For further information on revitalizing traditional burning, see: Boutsalis K. (2020). "The art of fire: reviving the Indigenous craft of cultural burning." The Narval. https://thenarwhal.ca/indigenous-cultural-burning/.

burning as a management tool undertaken with care was aimed at maintaining open ecological structures promoting favoured resource species, and, in this way, enhancing the flowering and fruiting period of berries and edible roots (Proctor, 2013, p. 134). An interesting reference to the origin and significance of the gift of fire technology is the following Nlaka'pamux narrative "Matq" wherein Beaver, as an agential being, bestows the gift of fire upon the Nlaka'pamux peoples:

> Long, long ago the Indians on Fraser River had no knowledge of fire. Beaver, who travelled about a good deal in the night prospecting the rivers, learnt from some source that away in the far north there lived a tribe who knew how to make a fire. He determined to seek out this tribe and steal some of their fire and bring it back to the Stalo (i.e Lower Fraser River) Indians. He told his brother Eagle to wait for him at a certain point on the Fraser while he went down the river to the coast to tell the people of the settlements along its banks that he was going to steal the fire for them in the far north. When he reached the coast he met a large tribe there. He begged from them the gift of a part of clam shells in which to stow away the fire he should steal. The gave him the shells and he then returned to his brother, and the two set out together for the far north. "You go through the air," said Beaver to Eagle, "and I will travel by water." They continued their journey in this way for many days and nights., Beaver travelling by the Fraser. When they arrived near the village of the people who possessed the fire, Beaver called his brother to him and told him his plan of action. "Tonight," said he, "I will build a dam across the water, and then burrow from the dam along under the ground until I come up under the house where the fire is kept. They will spear me sooner or later, and take me to the village, but although they will spear me they will not be able to kill me. In the meantime I shall build myself a house in the river, and when they see it they will come out and spear me. When they have speared me they will take me to the house where the fire is kept to skin me. I shall put the clam shells inside my skin, and when the knife is nearly through to the shell beneath I shall open my eye and you will see a great flash of light in the sky. You must be close by, and when you see the flash you must fly over the house and attract their attention. They will leave me for a moment and run out to try and shoot you. When they are gone I shall seize the opportunity and open my clam shell and fill it with fire. I shall then clear away the soil from above the passage I have made from the river to the house, rush down it, and come out in the deep water of the river above the dam."
>
> Eagle approved of the plan, and promised to do his share according to his brother's instructions. All that night Beaver worked at his dam and the passage. By morning all was ready. When one of the women went down to the stream to fetch her water next morning she found to her surprise a large lake where before was only a small stream. She dropped her pail and ran home, and told the people that a beaver was in the stream. Everybody rushed for his spear, and all made for the stream. Someone suggested breaking the dam and catching him in that way. This they did; and when the water was getting low Beaver came out of his house and swam about as if trying to get away. He played with them for a little while before he would permit them to spear him. Finally they speared him and carried him with great rejoicings to the house. Everybody now wanted his teeth, or his tail, or his claws. They presently set about skinning him, but as the point of the knife touched the shell hidden beneath the skin of his breast Beaver opened one eye. Now, the boy who was holding his leg saw the action, and told the others, who only laughed at him. Just at that moment Eagle, who had seen the signal, came soaring over the house, making a great noise, which diverted everybody's attention from Beaver. "An eagle! an eagle! Shoot it! kill it!" shouted everybody, and all ran for their bows and arrows except the boy who was holding Beaver's leg.
>
> This was the moment Beaver had planned for. Shaking himself free from the boy's hold he took out his clam shells, quickly filled them with fire, and before the boy had recovered from his astonishment plunged head foremost down the passage hole and made for the river. The boy's cries speedily brought the people to him, and he told them what had happened. They now tried to dig out the hole down which Beaver had disappeared, but they no sooner tried than the water rushed up and stopped them. Beaver reached the stream safely, and from thence made his way to the Fraser, where he was joined by his brother Eagle. As they returned down the river, Beaver threw fire on all the trees they passed, but mostly on the cottonwood trees, and thus it was the wood from these trees was the best for making fire with from that time onward. He continued to do this till he had reached the coast again and all his fire was gone.

> After this he assumed a human form and taught [Indigenous peoples] how to make fire by means of the drill worked between the hands. He also taught them how to preserve the fire when once secured in the following manner. He procured a quantity of the inner bark of the cedar tree and made it into a long rope. This he then covered with the bark of some other trees which burnt less readily. When one end of this rope was lighted it would continue to smoulder for several days, according to the length of the rope. When the Indians were travelling and likely to be away from camp several days they always carried one of these fire-ropes, called by themselves *patlakan*, coiled around their shoulders. After this great gift to them the Indians thought very highly of Beaver, and he was usually called by them "our head brother" because of his wisdom and goodness (Hill-Tout, 2013, pp. 101-102).

This trickster story is used to convey Indigenous intergenerational knowledge on the role of cultural burning as a land and resource management system and teaches how fire practices affect biodiversity in a given ancestral land. One of the key features of the story is that it presents how the sacred gift of fire is obtained. Beaver – as a cultural hero yearning to do great deeds – is evidently credited with bringing the gift of fire to the human world and providing the Nlaka'pamux peoples with fire technology. In the story, one can notice again a close connection between human beings and more-than-human beings. And it is important to consider, again, Kimmerer and Watts' combined perspectives on the Indigenous notion of animacy and gift (Kimmerer, 2013; Watts, 2013). Having assumed an agential human form, Beaver acts as a transformative teacher and presents the Nlaka'pamux peoples with this invaluable gift, simultaneously, providing guidelines on how to kindle fire by means of a fire drill and then, for the purpose of seasonal movements, preserve it as a slow match made of a cedar bark rope, which supports the concept of agency and sentience. Hence, this narrative seems to be a pivotal one, for it apparently details a crucial innovation in the collective history of the Nlaka'pamux peoples – the invention of fire and peoples' ability to control it as well as the slow match[53] which enabled them to successfully secure fire while they moved from one seasonal camp to another. In the story, the connection between Beaver's agency and the Nlaka'pamux peoples and their reciprocal relationship are a vital component, for working together resulted in acquiring the gift of fire. The knowledge and expertise linked with maintaining fire with the technology of the slow match was obtained from more-than-human persons in the non-human world. As a form of gratitude for the gift, the Nlaka'pamux peoples held the trickster figure in high regards as their relative, their

[53]A slow match was also made from *posâkan* which is a birch fungus that grows on paper birch trees. Once lit, the smouldering fungus was wrapped in clam shells and carried between various locations. See Cuerrier, A., & Turner, N. J. (2022). 'Frog's umbrella' and 'ghost's face powder': the cultural role of mushrooms and other fungi for Canadian Indigenous Peoples. *Botany*, 100(2), 192.

"head brother", which maintained the respectful relationship, once again revealing the kin-based connection between the two, human and animal.

Moreover, it should not come as much of a surprise that various Indigenous stories undertake the theme of fire and prescribed burning practices as a widely practiced form of managing and enhancing existing plant resources and habitats within the study area. As a case in point, there is documented evidence that Indigenous peoples possessed knowledge that burning berry bushes encouraged the growth of new shoots, and therefore, allowed for the more effective growth of plants (Burton, 2012, p. 12). Nlaka'pamux elder Hilda Austin provides the following detailed recollection of the maintenance of productive sites through prescribed burning carried out by a traditional fire manager, which confirms the importance of fire as a management tool:

> Yes, he burns it. So the *mecekw* [Rubusleucodermis – blackcap] can grow there, the *c'elc'ala* [Vaccinummembranaceum – black mountain huckleberry] can grow there... He looks at the place [to see if] it's good to burn it, and he burns it... [NT: he would carefully choose what the best place to burn was?] Yes. If it's going to burn too much he just stops it [implying a fire of low intensity, easily extinguished]. [He would] just watch it. [NT: what other plants would grow well after they burned it?] I guess, those onions, *qwelewe7* [Allium cernuum], they grow there. *Caw'ak* [Lilium columbianum – tiger lily], he grows good, after it's burned, he grows in that... There's places, you know, are burned a lot. Sometimes, you know, it'll be burn and burn, and now the *c'elc'ala* [black mountain huckleberry] grows good in there. *Caw'ak* [tiger lily] grows good in there, after they burning... That's where I was picking the *c'elc'ala* this year. Up at Thompson Mountain (Austin, as cited in Turner, 1999, pp. 192-193).

As the detailed recollection of landscape burning accompanied by Nancy J. Turner's translations of plant species from the Nlaka'pamux language (the Interior Salishan language)[54] into English reveals, this management technique was applied to various berry species and edible roots to enhance their growth and maintain highly-productive harvesting localities. As noted throughout the above description of the management of various berry and roots species by the Nlaka'pamux peoples, what comes to the fore is that these Indigenous peoples were skilled in application of fire technology, knowing how to burn and avoid extensive wildfire. Indeed, the application of periodic burning evidently required in-depth knowledge related to the ecological characteristics of the plant species and climatic features of the ecosystem; albeit, the evidence-based narrative does not touch upon particular conditions on the basis of

[54] The Nlaka'pamux peoples speak an Interior Salishan language named nɬeʔkepmxcín, often transliterated as the Nlaka'pamux language. It is spoken in British Columbia in Canada and Washington State in the USA. For further information on the language, see *CitxwNlaka'pamux Assembly*. (n.d.). Citxw Nlaka'pamux Assembly. Retrieved December 22, 2021, from https://www.cna-trust.ca/.

which the fire manager determined whether a particular site was suitable for applying the fire technology.

It is certainly true that fire suppression in British Columbia can be acknowledged as a colonial process that continually dispossessed Indigenous peoples of their ancestral lands, for without prescribed burning, Indigenous peoples had a limited access to their sustainable food. Without Indigenous food sovereignty, they did not travel to essential harvesting locations to carry out sustainable harvesting and management practices. It is through this interaction with the landscape by means of such sustainable practices and spiritual ceremonies that Indigenous ecological knowledge was shared. It follows that their spiritual connection with the land, which is central to their identity, was severed. In this regard, I think revitalizing this lived knowledge of cultural burning, obfuscated and criminalized by settler colonialism, and respectful relationships with Creation, is an important stage in reclaiming Indigenous epistemologies (the Nlaka'pamux peoples) that challenge Eurocentric knowledge systems and empowers the Northwest Coast First Nations to bring to light their ways of knowing. Reviving this craft of fire marks their presence on the land. It is a medicine that strengthens their sense of identity as caretakers and stewards of the land. It teaches and heals. Bringing back cultural burning might be a solution to massive wildfires in the Province of British Columbia. However, revitalizing this epistemology and ontology of land through cultural burns requires reconciliation beyond the human dimension which, as articulated by Blackfoot Elder Reg Crowshoe, relates not only to Indigenous and non-Indigenous Canadians, but also to the natural world: "If human beings resolve problems between themselves but continue to destroy the natural world, then reconciliation remains incomplete" (Crowshoe, as cited in TRC, 2015a, pp. 18).

Understood as such, this relational knowledge, which counters Western epistemologies of human/nature dichotomies, is likewise important for the entire world. People have forgotten how to engage with the land, being merely interested in commodifying and extracting economic value from land-as-property. Reclaiming such relational Indigenous land-based practices and viewing land through the lens of Indigenous ontologies help to reshape the ideas of land and resources that underlie settler colonial domination over nature. Teaching long-standing forms of relationality, continuity of life, respect, and care for the land, can function as a medicine for environmental devastation all over the world. It is important to return to the indigeneity

globally, thus reclaiming the pre-contact knowledges, validating them, and bringing these perspectives into a dialogue with contemporary environmental movements.

Sentient berried landscape – Eco-protocols and naming

A landscape constructed through stewardship-based land management practices to enhance berry habitats can be acknowledged as sentient, made of interacting sentient berries that can listen, feel, and respond to human words and actions. Closely tied to the value of care and respect are good intentions. While tending to plants, morally-upright Indigenous harvesters, as caretakers of Mother Earth, are required to offer proper respect and begin their harvesting with a pure heart and good intentions, being constantly aware of what they will use the harvested plants for; otherwise, those plants lose their properties due to negative emotions and improper speech and cannot be used, for instance, as medicine plants (J. Sparrow (Sulseemiah), personal communication, 2019). Anthropologist Regna Darnell writes that showing plants respect through proper speech is necessary (Darnell, as cited in Baker, 2020). Such a cycle of reciprocity is well exemplified by the Nuxálk story "The Woman Who Befriended a Wolf", collected and transcribed by anthropologist Thomas Forsyth McIlwraith (1948):

> Not many hundred years ago, *Ksninsnimdimut*, a woman of Nulteax, was picking blueberries. As she started to climb a steep. Bank to a shelf where she saw the fruit was plentiful, she heard one of the berries speaking to its companions.
>
> "Let's hide," it said, "that foul-mouthed woman is coming."
>
> The berry was speaking of *Ksninsnimdimut* and applied the epithet "foul-mouthed" because of her habit of munching berries as she picked instead of putting all in her basket for future consumption.
>
> *Ksninsnimdimut* hurried up the bank so swiftly that many of the berries were unable to hide, and she saw them in their human forms, a host of goggle-eyed little boys sitting on the berry shoots. On that occasion she obtained more than any of her companions. Thanks to her sight of the berries in human forms, she was thenceforth able to see them in their hiding places and was accordingly fortunate. She respected the wishes of the fruit, never eating as she picked, but chewing dried salmon instead.
>
> On a later occasion, the same woman happened to see a wolf giving birth to its cubs. In some way the delivery was being retarded so that the mother wolf was in agony; *Ksninsnimdimut* unhesitatingly went to her assistance, an evergreen bough in each hand. First she drew forth the four cubs, one after the another, and finally the after-birth. The grateful wolf gave her midwife the power of a shaman.
>
> This ability helped *Ksninsnimdimut* to assist a wolf on another occasion, when the animal was chocking to death on the knee-cap of some animal it had slain. All around were other bones which it had cracked successfully, but this one had someway become wedged in its throat, an accident not uncommon to wolves. The woman inserted her hand and drew forth the bone; from these two experiences she received shamanistic power from wolves (pp. 691-692).

The Nuxálk story indicates that the berried-landscape is made of interacting sentient

beings, having agency in the relationship between humans and berries. Reminiscent of the kin-based philosophy (Atleo, 2005; Kimmerer, 2013; Watts, 2013), most often aiding humans, berries are also endowed with a human personhood and ability to see, hear, and respond (for details, see Section 5.1.1). The line "a host of goggle-eyed little boys sitting on berry shoots" acknowledges their personhood and agency whether they consciously decide to come to the harvester or not. This kin-based entanglement, as the story shows, informs the powerful and ancient relationship between Nuxálk harvesters and sentient berries and prescribed actions.

I think, however, there is more to consider. The story is also a manifestation of the importance of proper protocols when harvesting plants, with an emphasis on good intentions, gratitude, and pure heart. This example illustrates how the negative attitude towards the sentient beings of berries and failure to show proper respect might prevent successful harvesting. Berries require special attention and care from their human counterparts. Berries *listen* and *respond* to human actions, intentions, and speech accordingly. If disrespected or mistreated, those more-than-human persons might decide not to show themselves in the forest, produce fruit, and thus provide further abundance to human beings. As noted in the story, if the harvesting practice is not handled properly as *Ksninsnimdimut* falls victim to her improper behavior in the berry patch, thus offending her more-than-human counterparts and violating the cultural protocol, the agential beings of berries do not allow themselves to be gathered, simultaneously, affecting the well-being of the Nuxálk community.

It can be argued that the more-than-human persons of berries *listen* and *respond* not only to human words but also to their behavior and actions. For example, the Kwakwaka'wakw peoples intentionally pruned berry shrubs to produce higher concentration of resources. Kwakwaka'wakw Elders and cultural specialists Chief Adam Dick (Kwaxsistalla) and Daisy Sewid-Smith (née Sewid) speak about how salmonberries, red huckleberries, and stink currants responded to the practice of pruning:

> As soon as they clean that tree out [i.e., pick all the berries], we *tl'exw7id* [break off], we breaks them so... [the berries would grow plentifully later] See, a lot of people think we never touched the wild... berries. But we did. We cultivated it. We pruned it... Especially the *gwadems* [red huckleberries], when they finished picking the *gwadems*, you know, they pruned them. They break the tops off. Salmonberries too. So, when the *gw'alhem* [salmonberries], it's done, after you pick it, tl'exwiiy ["breaking the tops off"] they called that. My grandma tell me that if you let it grow this high [two meters or so], then it doesn't produce much berries. You know. But when you keep it down and, she says, the water, it's hard going up there. I guess, when it's too tall (Dick & Smith, as cited inTurner et al., 2013, pp. 120-121).

The Elders' account highlights a number of important things that inform my understanding of the reciprocal relationship with sentient berries. Their reflections corroborate the relational knowledge that is conveyed in the Nuxálk story "The Woman Who Befriended a Wolf" and reinforce the understanding that the agential beings of berries take action and respond to their surroundings, listen to and respond to the careful act of pruning carried out by the Kwakwaka'wakw harvesters and, consequently, decide to offer themselves as food and produce more fruit in future years. Based on the recognition of the person-like attributes, the act of pruning appears to serve as another form of offering respect, for it ensures their return as a gift to the human world. The narrative provides an explicit illustration of the management technique of pruning that was applied to salmonberries and red huckleberries to stimulate vigorous regrowth and higher productivity of these species in the following years.

In addition, it is important to note that this life-experience story decolonizes and exposes lies about the Kwakwaka'wakw peoples as lacking plant management skills, which are relevant to the modern world as have been for thousands of years. Moreover, there is one more aspect of colonial practices that I want to foreground. It relates to the use of English language and colonial naming – linguistic imperialism. As stated by non-Indigenous scholar Rebekah Sinclair (University of Oregon), "controlling the proper names of human or nonhuman persons – that is, the name that is ethical or appropriate – is one way in which settler colonialism and environmental management practices erase Native American knowledges and ontologies" (2022, pp. 94). This way, as scholars Megan Bang (Ojibwe Nation) and Ananda Marin (Assistant Professor of Qualitative Research Methods in Education at UCLA) observe, not only are Indigenous names and lands along with the embedded knowledge placed in the past but settler colonialism also erases crucial relational realities about the land. Western names do not reflect Indigenous philosophies (Bang and Marin, as cited in Sinclair, 2022). Naming is claiming the world, as posits Linda Smith (2012, p. 81). I argue that renaming the berries, birds, and animals of the Kwakwaka'wakw peoples in the English language contributed to the appropriation of the land from the Indigenous community. In this sense, the Kwakwaka'wakw berry-related vocabulary used and affirmed in the life-experience story, as I claim, is a decolonizing act of renaming that carries the Kwakwaka'wakw ontologies and epistemologies and ethical values of their ancestors imbued in those names, thus making them one with Creation and ensuring their survival beyond the human My observation is that Dick and Smith's act of renaming disrupts the

settlers' naming of the berries and ancestral land. This move brings back to life relational ties between the Kwakwaka'wakw peoples and more-than-human beings of berry plants.

Fig. 9 & 10. Harvesting tobacco and sweetgrass. xʷc̓ic̓əsəm Garden at UBC Farm. Photos taken by me.

It is essential to use Indigenous naming in the stories as it is a decolonizing and indigenizing strategy aimed at revitalizing Indigenous onto-epistemologies and ways of managing the land represented in those names. Christina Gray (Ts'msyen and Dene-Metis legal scholar) and non-Indigenous scholar-ally Daniel Ruck (University of Ottawa) note that "just as colonial place names and naming practices have helped to construct colonial stories about the land and its inhabitants, Indigenous places names [and naming practices] are also powerful vehicles for narrating history and inscribing the landscape with meaning" (2019, para. 5). These acts of naming found in the analyzed stories are not merely words, for they carry deep cultural and spiritual significance and connect Indigenous peoples to their cultures and ancestral land. Their connection to nature, as Gloria Cranmer asserts, "is evident in the names given to sites of significance to our peoples" (Cranmer, as cited in Brown, 2009, p. 28). In fact, such use of Indigenous names is crucial as it is "a humble, communal, educational enactment of the ways in which [Indigenous peoples] know and relate to their world and each other […] [and resist] settler colonialism and its extractive, eradicatory, domesticating violence on Native communities, creatures, and lands precisely through radical acts of naming and renaming" (Sinclair, 2022, pp. 93-95). Naming the land and its important

features reinforces Indigenous peoples' connection to all of Creation, preserves their cultural identity, and raises awareness of ongoing harms settler colonialism imparts on Indigenous communities (Cajete, 2000; Brown, 2009; Cranmer, as cited in Brown, 2009). As Linda Smith (1999) suggests, "Indigenous names carried histories of people, places, and events." (p. 157). She adds that "by 'naming the world' people name their realities. For communities there are realities which can only be found in the indigenous language; the concepts which are self-evident in the indigenous language can never be captured by another language" (pp. 157-158). Therefore, using Indigenous names in stories, the place-based knowledge and related cultural practices, obscured by Western naming, are enacted and passed on to wider communities and future generations. This way, Indigenous peoples reinscribe Indigenous names and histories on the land and teach the importance of respecting all of Creation to which these names refer to in resistance to settler ways of knowing and practices of land occupation and use. It is important to recognize the connection between the language and land. The first step towards reconciliation and change is awareness.

It is here that I want to provide details of my lived experience of respectful plant harvesting. During my volunteering sessions at the xʷc̓ic̓əsəm Indigenous Health Garden at UBC Farm from 2015 to 2020, I was privileged to participate in a harvesting of sage and stinging nettle plants. Prior to the harvest, within the cultural setting, Medicine Collective members Jerri Sparrow and Lee Brown who run garden workshops generously shared their land-based teachings on protocols related to harvesting plants with the workshop attendees. Having acknowledged the unceded ancestral territory of the hən̓q̓əmin̓əm̓-speaking xʷməθkʷəy̓əm (Musqueam) peoples, I was instructed to follow the ethic framework of the "4R's" (Respect, Relevance, Reciprocity, and Responsibility) and approach the sage, tobacco, sweetgrass, and stinging nettle plants to be gathered with good intentions, positive thoughts, vocalised gratitude, and pure heart as they could hear me. The Elders taught me to avoid anger when being in the garden. Doing so would ensure that they would maintain their healing power and properties. It was also crucial to share my intentions and plans for their usage. I was able to take only what I needed in a way that minimized harm to those medicinal plants. Once picked, they were dried and shared with the local community as the Earth had shared with us. This hands-on experience is a perfect illustration of how the storied knowledge is reclaimed in the present and used to gather and make medicines for local communities. I perceive this initiative, sharing those teachings, and reconnecting Indigenous and non-

Indigenous people to the land as a way of decolonizing and indigenizing education (personal participation and witnessing of the author, 2015-2021).

5.5. Conclusion

Taken together, the compendium of the discussed stories may serve as an excellent example of how Indigenous ecological knowledge comes from the land in which it has been attained, lived, preserved, and, subsequently, updated on a regular basis by virtue of storytelling in British Columbia. It has been demonstrated that these texts, embodying the Indigenous concept of metamorphosis, dreams, ceremonies, and prayers inscribed in them via Indigenous metaphors and mnemonic tools, convey knowledge of the animate and interrelated nature of Creation, based upon deep and long-term land-based experiences and astute observations of previous generations. Along with documenting Indigenous epistemologies and ontologies of the land and harvesting and management technologies, I have also shown that the analyzed stories bring forward Indigenous perspectives, hitherto obfuscated by settler colonialism, and prove that Indigenous communities have developed different spiritual and social conventions to guide their holistic, cyclical, respectful, and reciprocal relationships with the land and sentient beings. The stories prompt an understanding that Indigenous peoples perceive the land and natural resources as more-than-human beings, as their teachers and kins endowed with agentic capabilities, wisdom, and person-like features, which challenges Western epistemologies of human/nature dichotomies and settler domination over nature. Viewed in this way, the stories efficiently and effectively share and communicate a number of long-standing cultural protocols, embedded in the notion of kincentricity, place-thought, and animism. They are used to guide Indigenous peoples' socially acceptable behavior and decision-making with reciprocity and respect to the sacred land and all of its sentient entities. These cultural norms linked with the proper use and care for the land – discouraging disrespectful and wasteful treatment of resources and promoting a sense of responsibility and conservation – are reinforced by means of the stories. The profound implications of this notion are reflected in a number Indigenous narratives which equip Indigenous stewards with valuable imperatives towards all of Creation and determine the sustainable and conservative application of kin-based harvesting and management technologies that are based upon locally

referenced knowledge. As a reflection of Indigenous ecological knowledge, these Indigenous stories can be acknowledged not only as links in a chain that connects the past with the future, one generation with another but also as tangible evidence that the land and all of its life forms have mattered to the long-residents of this vast part of North America for countless generations. These stories, featuring voices of Indigenous knowledge-keepers and vocabulary from Indigenous languages for landscape features and species specific to their homelands, are crucial as they assert Indigenous sovereignty over their territories and resources and offer a corrective to the colonial version of history that needs to be rewritten.

Chapter 6

Kota – String Figure Storytelling as a Map and Teaching Tool of the Integrated Knowledge of the Ancestral Land

> *We need to find a way to use kota as a way of teaching Kwak'wala and the culture and language it thrived. There are so many lessons to be learnt from kota* (Shaw and Webster, 2013).
>
> **Gloria Cranmer Webster**
> Kwakwaka'wakw knowledge-holder, activist, and writer

String figures, with illustrative shapes varying from culture to culture and even within the repertoire of a particular culture, enjoy the reputation of being one of the most widespread forms of amusement in the world as more cultures seem to be familiar with the string activity than with any other game all over the world. Created by means of intricate hand motions pulling a loop of string around one's palms and fingers in an effort to illustrate a variety of natural and artificial objects in a state of rest or motion, intricate string figure patterns were independent of one's artistic ability and, thus, they could be played by everybody (Haraway, 2016, p. 10). Not only can the string activity be regarded as a form of amusement but, as research shows, it may also serve as a device for passing on a culture's cosmology and knowledge (Averkieva & Sherman, 2000, p. 434). In fact, Northwest Coast First Nations, in particular the Kwakwaka'wakw peoples inhabiting the coastal areas of northeastern Vancouver Island, used illustrative string figures as a form of amusement – considered humanity's oldest game (Haraway, 2016, p. 13) – and as a vehicle for self-expression which enabled them to illustrate various stories that accompanied the transformation of the string figure design as it progressed.

During my research trip to Alert Bay ('Yalis) located on Cormorant Island in 2010, I was introduced to the traditional pass-time of *kota* by Carrie Mortimer, who taught me not only how to make certain intricate string figures but also perform created patterns and accompany them with related narratives. My imagination was piqued as to

why certain figures presenting natural environments and botanical imageries are presented in string whereas some are not, which led to me to further exploration of *kota*, starting with this preliminary research question. In this chapter I argue that certain *kota* string figure patterns along with their associated descriptive narratives, chants, and prayers may indeed serve as a sort of cultural archive of relational knowledge of reciprocal resource harvesting and management practices carried out by the Kwakwaka'wakw peoples. My detailed analysis of the Kwakwaka'wakw string figure repertoire shows that their subject matter can reveal associated knowledge deemed worthy of preserving for the use of future generations. My interpretation of *kota* is grounded in both the previously recorded ethnographic data and fieldnotes as well as in my own research data which I use to illustrate that string figure stories of the given culture are deeply associated with various aspects of their land-based knowledge, in particular seasonal rounds, sentient plant and animal management techniques, and reciprocal plant and animal resource harvesting methods. I also focus on the spiritual and philosophical aspects of *kota* and I reflect on string patterns as incorporating Indigenous worldviews foregrounding kinship ties between humans and other beings. The examination of string figure patterns that follows focuses on a number of narratives and chants and brief instructions for making these figures. I also provide visualizations of *kota* in the form of illustrations showing the final form of each figure extended on the hands. I analyze *kota* string figures as a form of pattern literacy and a way of knowing that has its roots in the land. I argue that that these *kota* serve as an epistemological tool and mnemonic device used in the process of ecological knowledge production. Reclaiming *kota* as a pattern literacy is an act of resistance and sovereignty.

6.1. A link to the past: Reflections on the development and diversity of string figures across time and space

The activity of string figure making has a long history recounted by anthropologists and ethnologists for almost every region of the world within diverse societies of oral tradition. It is usually performed by a single individual or sometimes executed by two participants and somewhat resembles the actions of knotting, weaving, and netting. This performance art consists of applying a number of successive operations to a string knotted into a loop by means of using the movements of one's fingers, assisted by mouth and toes, when necessary, in order to produce geometrical forms. As discussed by

non-Indigenous scholar-ally Dr. Robin McKenzie (Australian National University), the loop of string has been employed in various degrees of complication in order to represent objects, fauna and flora of a given locality, human activities, stellar formations, and vernacular and mythological stories (2011, p. 2). Across the study region, as elsewhere in the world, generation after generation – in some cases, for thousands of years – Indigenous peoples, living in their home localities, practiced and built up the activity of string figure making over millennia. This wide distribution of string figure all over the world seems to derive in good measure from the novelty of one being able to construct highly complex designs instantaneously and also in a reproducible fashion using readily available materials, such as plant fiber, leather, or even plaited human hair. I have come to realize that practicing the activity of string figure making is reclaiming pre-contact literacy.

6.1.1. Global perspective

What are some of the relevant findings about string figures throughout the world? Much of what is known about string figures is drawn from the written journals, letters, fieldnotes, and other accounts of European chroniclers: ethnographers such as Alfred C. Haddon, W. H. R. Rivers, Franz Boas, and Julia Averkieva. Their observations were in some cases very detailed providing descriptions and drawings and finished string figures practiced all over the world. Hence, drawing on diverse sources of information, ideas, and findings from the fields of anthropology and archaeology, it should be noted that related records are rife with examples of string figure designs from widely separated lands. Particularly important cultural contexts from which string figure patterns were most readily recovered and which can provide an especially comprehensive understanding of this activity in particular contexts include the Torres Strait Islands, the Hawaiian Islands, New Zealand, Japan, China, Papua and New Guinea, and North America (Jayne, 1962, p. 324). Not surprisingly, due to such a wide distribution of string figures, each Indigenous group would probably have its own specific modes of string figure formation and its mechanisms for transforming and innovating string figure patterns.

Finished string figure patterns have been created by geographically and culturally distant societies around the world, which results in the fact that string figures are

specific to definite localities. Nonetheless, the methods of construction employed by different Indigenous peoples in making string figures fall into two common categories – Asiatic and Oceanic, as proposed by Alfred C. Haddon. They are determined by the type of opening position and moves that follow. In Asiatic string designs, two strings, before a number of secondary loops can cross from the fingers of one hand to the fingers of the other one, must pass around the back of one's hands and, then, the crossing loops are taken up by the middle fingers. Contrariwise, in the Oceanic version, there are no strings at the back of each hand and the crossing loops are picked up by the index fingers. The differences also relate to their functions. The Asiatic type of string designs is considered a mere pastime depicting natural objects whereas oceanic string figures – illustrating people, incidents, and spiritual objects as well as events – may function as narratives and chants (Jayne, 1962, xii). However, my research has led me to challenge the classification proposed by Haddon as it does not seem to be an entirely natural grouping of string figures based strictly upon the Asiatic and Oceanic localities since various patterns all over the world could have been independently invented by unrelated cultures and identical patterns may have actually been made by more than one method of construction even at the same location. Besides, early collections of string figures might not have been very comprehensive, failing to include all the possible string figures of a given locality along with those beginning with a different opening.

To show the complexities of pattern literacy and foreground its importance globally, I am discussing the worldwide distribution of string figures woven in various manners. Yet, I am not providing references to string figures all over the world nor am I focusing on ways they were invented. To make the material more accessible for the sake of this thesis, I have sorted the activity of string figure making according to their distribution. The practice has been discovered around the world, featuring representations of men and women, various natural phenomena, articles of dress and commerce, daily activities of Indigenous peoples as well as animals and plants with their names being conditioned by the fauna and flora of a particular locality (Jayne, 1962, p. 3).

Korean, Japanese, and Chinese string figures

Addressing the Asiatic group, one can point out Korean string figures that are called "woof-taking" and the game is acknowledged to have been played mostly by girls.

Among the names of the formed patterns, American ethnographer Stewart Culin (1991) listed the following string figures: "1. *Sang-tou-tou-ki*, "cover for hearse;" 2. *Pa-tok-hpan*, "chessboard;" 3. *Tjye-ka-rak*, "chopsticks;" 4. *Soi-noun-kal*, "cow's eye-ball;" 5. *Tjyel-kou-kong-i*, "rice-mill pestle" (p. 30). In a similar vein, Japanese string figures, regarded as an elegant game suitable for Japanese girls, are called *itotori* – which means taking up a string (Shishido, 2001, p. 21) – have been practiced for at least 340 years and require two or more players. Interestingly, despite the westernization of Japanese culture, the Japanese have been able to maintain their interest in string figures primarily because they treated uninterrupted metamorphosis of string patterns as a pastime; they were particularly fond of cyclic string figures whose sequence of moves is bound to return the maker to the opening pattern (Saito, 2004, p. 266). Until today a wide variety of string figure patterns has been practiced in Japan. In China, the cat's cradle was called "a well-rope" and it was said to be an amusement of girls, but, apparently, the activity of weaving strings between one's hands was also practiced by most Cantonese labourers (Culin, 1991, p. 30). As the information on Chinese string figures is very limited in English language descriptions, further research on them was conducted by a string figure researcher Will Wirt (1998) who in 1997 was able to collect such new patterns as turtle, bridge, fish, feet of the chicken and the tiger, and double net (pp. 126-137).

European string figures

From what is known, the appearance of string figures in Europe is limited to Western Europe (Brewster, 150, p. 102); yet, the fact that string figures were not recorded in other areas of Europe does not suggest that the activity did not exist elsewhere. Significantly, paying particular attention to the naming of the string figures presented above as there are no drawings showing their final patterns, the striking feature of the above distribution of string games is the fact that a large portion of those patterns seem to be directly or indirectly related to each other. I suspect that while certain traditional figures have vanished, some figures are handed down from one generation to another and certain variations of traditional figures continue to evolve, thus, prolonging the life of the practice.

The range of the string figure naming seems to include diverse objects encountered in a daily life, with the motives for naming of the created patterns lying in the natural environment as well as material culture. Culin did not give any social or spiritual connotation to any of those figures, which may suggest that those string figure designs served almost entirely the purpose of amusement. Another reason for that might be his colonial perspective that deliberately did not address the spiritual aspect that is so important for Indigenous peoples. It is also significant to note that Culin did not record the movements required for the construction of the above figures. Neither did he provide pictures or drawings of the final patterns, which might be employed to reconstruct the patterns in question. Therefore, I can only speculate which methods of construction were used to construct those figures. Since it is not essential to provide more references of the distribution of string figures over this vast area, the above instances suffice to shed light upon their universal occurrence. Evidently, some close social relations existing between these regions encouraging long-term social interaction as well as integration played a pivotal role in influencing their final string patterns. They might have been subject to the intermittent social contact which resulted in the fact that only the visual image of the finished string figure could be transferred and preserved whereas the transmission of embedded knowledge, spiritual practices, and the methods of construction did not take place. Hence, I suspect that the maker, in the face of reproducing a particular figure, had no other choice but to invent his own method of construction. Unfortunately, the aspect of knowledge transmission, deeply encoded in the step by step construction and final pattern, came to an end. There is every likelihood that the finished string figures might have been acquired by cultural diffusion from a currently unidentifiable source.

Although I have not been able to identify any string figure patterns practiced in Poland, as a child, I used to play string figures with my friends, showcasing our weaving skills. We spent hours making complex patterns by weaving the string in a mesmerizing motion, mastering various techniques and patterns. This performance art became our gateway to the world of our imagination. We would imagine creating complex and visually captivating shapes, animals, and bridges. Unfortunately, no stories accompanied our mastered patterns. String figure making was a social activity for us to bond and connect, sharing the joy of our collective achievement. It was a meaningful experience that nurtured my childhood creativity and social connections.

Australian string figures

There is also much to learn about the extent and nature of the string figure repertoire of the Oceanic group. The Oceanic string figure making is still alive in Australia, where the practice – functioning as a form of amusement – can be found throughout the northern part of the state of Queensland. The ethnographic research expeditions carried out among Indigenous communities living in the area of North Queensland by British anthropologist Dr Walter E. Roth and British ethnographer Kathleen Haddon included textual records documenting the sequence of movements by which figures are made, photographs and mounted specimens which show that these peoples know how to make numerous figures with a loop of string (K. Haddon, 1975; McKenzie, 2011, pp. 191-194). While, during his fieldwork in the Torres Strait Islands during 1898-1899, British anthropologist and ethnologist Alfred C. Haddon focused upon a comparative study of string figures and tricks to gain insight into the origins and evolution of this practice. (Vandendriessche, 2015, p. 15; Haddon, 2018). In collaboration with British anthropologist W. H. R. Rivers, Haddon created a descriptive system and specific terminology used to record construction techniques for string figures. This system remains in standard use nowadays (Brewster, 1950, p. 101; Haddon, 2018). I want to emphasize that Roth, Haddon, and Rivers restricted themselves to the recording of string figures patterns and the collection of the techniques of production, variation in their patterns and distribution of certain patterns yet they never touched upon potential spiritual and onto-epistemological significance of string figure-making among Indigenous peoples of the region.

In contrast to the discussed scholars, my research approach addresses the spiritual aspect of string figures and I seek to examine the enlivened world of string figures and associated narratives disrupted by settler colonialism and positioned as mistaken ontology by Eurocentric knowledge systems. As a relational epistemology and ontology, a way of relating to others as not humans, animism is central to this discussion. As examined earlier (see Chapter 5), Robin Wall Kimmerer suggests that “there are intelligences other that our own, teachers all around us” (2013, p. 58) while Tewa scholar Gregory Cajete (2000) emphasizes that

> Everything is viewed as having energy and its own unique intelligence and creative process, not only obviously animate entities, such as plants, animals, and microorganisms, but also rocks, mountains, rivers, and places large and small. Everything in nature has something to teach humans. This is the Indigenous view of "animism," the anthropologically defined, superficially

> understood, and ethnocentrically biased term used to categorize the Indigenous way of knowing the world (p. 21).

As I have come to understand, not only does animist relationality affect Indigenous peoples' ways of thinking but it also works as a relational ontology accounting for people's relationships with everything within Creation, including objects. Importantly, speaking for all the Indigenous peoples for the Turtle Island, the Haudenosaunee peoples go further, explaining that rather than being a thing of the past, this relational knowledge can manifest itself in material form (Lyons et al., 2005, pp. 125-126; Arnold, 2018, xiv). One of the gifts the concept of animism has given me is that it has allowed me to see the land as full of other voices and acknowledge other beings as subjects, not objects, having their own will, agency, and intelligence. I argue that *kota* string figures are agential beings conveying the living knowledge of the Kwakwaka'wakw peoples.

Engaging animism as a way of knowing with an ontological turn to things, I also concur with Christine VanPool and Elizabeth Newsom (2012) who conducted research on the animism of Pueblo pottery and observes that "people imbue their surroundings, including tools, with a "life essence" that makes them active objects" (p. 243). Within this ontological framework, it is important to note that "the influence of objects on human behaviour reflects the object's performance characteristics and learned physical/behavioral/emotional responses of their users" (p. 245). As the above statements make clear, objects are accorded agency and personhood and have a meaningful reciprocal relationship with people (Cruikshank, 2005; VanPool & Newsome, 2012). One crucial point that French art historian Henri Focillon makes is that during the creation process the artist/maker invests the object with an inner essence, thus initiating a reciprocal exchange/relationship with it (Focillon, 1989; Focillon, as cited in VanPool & Newsome, 2012). I find myself in sympathy with the insights from the scholars as they fit the *kota* case. I argue that *kota* string figures played an active role in Kwakwaka'wakw communities as a form of knowledge-making praxis.

Here, I expand on the concept of animism by arguing that *kota* string figures are like a story, having a life of its own. It is a 'being' endowed with agency. A key point that I want to make is that the string, consistent with the animistic viewpoint, has a mind of its own and will establish a reciprocal relation with the maker only if he/she has a pure heart and true intentions to form a string pattern and embody certain place-based knowledge. It is in this context that I place Indigenous string patterns within Indigenous

worldviews and philosophies to show their importance in preserving knowledge systems.

Yirrkala string figures

Some anthropologists and ethnologists launched into exploring how string figures may be embedded within different cultures. During his expedition to Yirrkala in 1948, Australian anthropologist Frederick McCarthy collected over 200 string figure patterns, which is considered the largest collection of string figures ever assembled from a single community (McKinty, 2011, p. 3). While collecting finished figures, such as "two dingoes," "kangaroo track," "running creek," "granite boulder," "crab hole," and "Wawalik sisters standing up" among many, he was able to gather data regarding the customary aspects of Yirrkala string figures denoting "various prohibitions and lore concerning figure making, including regulations that applied differentially to men, women, and children" (McCarthy, as cited in McKenzie, 2011, pp. 202-204). He also brought to light that certain string figures practiced by the Yirrkala peoples were accompanied by creation stories involving various plants and animals as well as the peoples' activities (p. 205). Given that, it seems plausible to argue that the Yirrkala string figures, representing a range of different subjects, possess more value than merely serving the purpose of amusement as certain figures might be related to the oral traditions of the peoples, providing certain guidance or even a lesson in morality to the observer.

Māori string figures

In Aotearoa[55], British anthropologist Edward Burnett Tylor collected muttered chants, songs, and narratives accompanying string figures practiced within the Oceanic classification, which sheds further light upon the cultural context of this practice in different Indigenous societies. Tylor paid close attention to the manipulation of a six-foot cord stretched between the fingers common to the Māori people, who have been residing in New Zealand since time immemorial. The activity of making string figures,

[55] Aotearoa is the Māori name for the country of New Zealand. For further information, see *Aotearoa.* (n.d.). Retrieved February 15, 2018, from https://www.maori.com/aotearoa.

which was a pre-European usage in the ancestral territory of the Māori people, is generally termed *he whai*. Intricate patterns of their string figures are said to be closely connected with their ancient traditions. Māori string figures in the form of the outlines of houses, figures of men and women, and canoes – albeit frequently lacking realism – also relate to crucial events from their history marked by the means of changing shapes. Tylor tellingly notes that the intricate shapes made with a loop of string "are said to be different scenes in their mythology, such as Hine-nui-te-po bringing forth her progeny, Maru and the gods, Maui fishing up the land" (Best, 1975, p. 75). Māori writer and historian Ross Calman (2018) observes that while certain intricate patterns were formed, certain songs were chanted or words muttered to the movement of the hands. Indeed, trained in complex patterns and stories behind them, each Māori nation, referred to as *iwi*, brought to life their own repertoire of string figure patterns that depicted a number of traditional stories, such as "Māui catching his great fish Telka a Māui" and "The ascent of Tāwhaki and Karihi to the heavens" (Whai – string games section, para. 3).

Hawaiian string figures

Following Tylor's statement that some supernatural motifs and associated knowledge can be expressed by means of Māori string figures and highly informative narratives and chants, I would like to direct the attention to Hawaiian string figures. In traditional Hawaiian society, the making of string figures, referred to as *hei*, belonged to Hawaiian storytelling tradition (Akana, 2012, p. 4). The practice was believed to have been brought to life by the trickster figure of Maui, who was credited with creating knots and string figures (Small, 1994, p. 12). Creating evocative images with a loop of cord, Hawaiian string figures served as visual representations of characters and objects that can be observed in daily life, such as mountains, houses, fishnets, animal life, people, as well as those that are often embedded with spiritual significance and possess references to mythology. According to Hawaiian cultural practitioner Kalani Akana (2012), this visual principle of memory development among the Hawaiians played a pivotal role in Hawaiian performative memory developing their memory culture by knowledge keepers. Certain figures, functioning as a mnemonic device associating certain images with objects whose names sound like the object to be remembered (p. 54), are often

accompanied and intensified by informative chants and stories that are full of geographical references and memories attached to landscapes. In addition, while a particular story is recounted by the maker, the string figure might be in motion, being subject to several transformations taking place with each succeeding stage (Dickey, 1928, pp. 10-11). Interestingly enough, as Akana (2012) adds, the figure maker, assisted by key words in the story, is somewhat capable of recognizing the sequence of moves by virtue of a sort of muscle memory based upon repetition and it is believed that this ability can be passed on to future generations as a hereditary trait (p. 60). Akana states that "*he*i uses structural depth to strengthen the visual association to the images of the chanted text" (p. 56). Why are Hawaiian string figures significant? Hawaiian string figure activity might aid to one's memorizing essential ancient memory and collective wisdom as sedimented in and transmitted via the string performance of these stories to ensure cultural continuity from generation to the next. Thus, it is becoming apparent that these string figures are more than a mere pastime but a visually pleasing and wonderfully tactile way of learning and transmitting knowledge. It needs to be considered a form of somatic pedagogy.

6.1.2. Turtle Island

The short survey of the distribution of string figures around the world leads me to the discussion of string figures among Indigenous peoples occupying the vast territory of Turtle Island, at present referred to as North America. String figure making is generally widespread throughout North America and it appears to be both a very old form of entertainment and also, as I argue, a medium of place-based knowledge transmission. I would like to note that during the colonial period when Indigenous peoples were relocated to reservations located far from their ancestral territories and Indigenous children were sent to residential schools aimed at eradicating their ways of life, and obliterating Indigenous cultures, their relational knowledge systems. Yet, Canadian ethnologist and natural historian Frederick Waugh and director of the International String Figure Association Mark Sherman (2001) explain that in some areas, due to the remoteness of territories or difficult access to them, the contact with European newcomers was somewhat delayed or minimized, and hence the activity of string figure making along with associated knowledge remained intact long enough to be passed on

to further generations as well as recorded by anthropologists (pp. 46-47), thus providing a view of lifestyle prior to contact. Nonetheless, these scholars did not focus on string figures as a form of knowledge making and preserving**.** The following subsection provides an overview of Indigenous string figure on Turtle Island.

These regions apparently included the Northwest Coast, the Arctic and the Southwest. In 1900, Canadian archaeologist and ethnologist Harlan I. Smith collected a number of string figure patterns from the Salish peoples of the Thompson River in the Province of British Columbia, simultaneously, providing illustrative drawings shedding light upon consecutive configurations of the string. Canadian-American archaeologist Dr G. B. Gordon, during his fieldwork in Alaska in 1905, was able to collect 75 string figures among the Inuit peoples, who practiced the activity only during the wintertime. Among the objects represented by the braided sinew fashioned into a loop were the caribou, the eyes and mount, the paddle, the crow's foot, the bear, and the ears and nose. Some of these can be identified under different names among other cultural groups in North America. According to non-Indigenous string figure scholars David Titus and Mark Sherman (1999), of special interest may be the fact that Gordon, upon closer examination of the relationship between string designs and recited chants, discovered that some Inuit string figures were accompanied by corresponding verbal formulas recited to the consecutive movements of the cord which, repeated in time, ensured that the string maker was able to finish a string figure. In other words, recollected chants enabled the maker to finish their string figure patterns (p. 111). Similarly, chants and narratives serve as an accompaniment to string figures in the Arctic and on the Northwest Coast. Franz Boas, for instance, documented not only examples of string figures practiced by the Tsimshian and Tlingit peoples but also accompanying stories related by the string maker. Those stories described what the figure depicted, step by step, loop after loop (Jayne, 1962, xix). Within this context, I emphasize that the underlying place-based message and hence knowledge of any nature persisted in one's memory not only as a recollected story but also as a woven string figure pattern, a form of a mnemonic device.

Digging deep into ethnographic data, I have found that there are numerous other examples of string figures in North America. Haddon points out that string figures must have spread over the whole territory of North America, for a great variety of similar or nearly identical string patterns can also be found among the Kwakwaka'wakw, Nuu-chah-nulth, Omaha, Cherokee, and Diné peoples (Jayne, 1962, xix). The prevalence of

string figures among the Diné peoples was established at the beginning of the 20th century by Alfred C. Haddon, Stewart Culin, and Caroline Furness Jayne. It should be noted that American ethnologist Caroline Furness Jayne published, including Haddon's collection, not only examples of Diné string figures56, replete with astrological information pertaining to stellar formations and accompanied by recollected ancient coyote stories that related to the origins of the Diné people, but she was also able to provide written directions, trying to capture three-dimensional movements with pictures and arrows, which may imply that the Diné peoples were very keen on making string figures. Remarkably, although her collection was believed to be comprehensive, in 1999-2000 during a series of visits to the Diné reservation, further research was carried out by Will Wirt, who expanded the collection by several dozen additional patterns (Sherman, 2000). For the Diné peoples, string figure making was perceived as a gift from the Spider Woman (the creator of the world) and hence associated with spirituality. This spiritual activity constitutes a popular cultural practice to this day and serves as an instrument for telling stories (Songsataya, 2016) especially when "methods for twenty of the twenty-seven Diné string figures gathered by Caroline Furness Jayne nearly a century ago were still remembered, suggesting that string games are a stable element of Navajo material culture" (Wirt & Sherman, 2000, p. 119). I want to stress that it is crucial information as it sheds light upon the sacred nature of string figure making, hence association with spirituality. Is there anything unusual about Diné string figures that fosters a perpetual interest in this activity? Approached in this way, Diné string figures – which might at first sight look like a play – are of interest to my research study as a string-like material was manipulated sometimes into abstract yet meaningful designs, having a deeper cultural and spiritual significance appreciated by knowledgeable members of the Diné community or people who have acquired the rudimentary knowledge of the Diné worldview.

Similar to Diné designs, on the Northwest Coast, string designs depicting illustrative shapes and associated descriptive stories were primarily collected among the Kwakwaka'wakw peoples and examined by Russian ethnologist Julia Averkieva during her ethnographic research conducted between 1930 and 1931; she provided detailed directions for string figure moves and accompanying narratives, further transcribed from cylinder recordings by Franz Boas (Averkieva & Sherman, 2011, p. 1). In her

[56] The Diné word for string figures is *Na'atl'o'*. See Haraway D. (2011). *SF: Speculative Fabulation and String Figures*. Hatje Cantz.

accurate and thorough fieldnotes, she records, there are 112 string figures mentioned, involving narratives and chants, recited to the progressive stages of making a particular string figure. Non-Indigenous scholar-ally and linguist Patricia Shaw and Gloria Webster (2013) observe that among the Kwakwaka'wakw peoples occupying their ancestral territories located in the northern part of Vancouver Island, the activity of creating string figures was known as *kota*, the Kwak'wala word which translates as 'to play with string'. Averkieva's research also unveiled the social context of string figures practiced by the Kwakwaka'wakw peoples. This activity was a favorite pastime of the Kwakwaka'wakw peoples, especially among young men playing the game extensively during the winter months. It was usually made by one maker twisting, interweaving and exchanging loops between upon the fingers of both hands (Averkieva & Sherman, 2011, p. 3; Cranmer & Shaw, 2023). Yet, I would argue that – prior to becoming degenerated into a mere form of amusement – a great significance was attached to the making of patterns in string by the Kwakwaka'wakw peoples, invariably connected with chants and narratives and imbued with spiritual meaning. I reiterate my argument that *kota* string figures, as a pattern literacy, are an excellent knowledge-making praxis, conveying time-tested cultural information that needs to be unlocked through embodied experience.

From this overview of the significance of string figure activity and its worldwide distribution, one can learn a great deal about the role of string figures among various societies all over the world. First, one can learn that string figures made with a loop of string might be used as an engaging form of entertainment developing one's ability of focus upon a certain task or, hand in hand with various accompanying narratives or chants, as a tool for preserving and conveying land-based epistemologies and ontologies passed down from one generation to another. Second, one can learn that among certain cultures which have maintained deep interest in the activity of string figure making it might possess a deeper cultural and spiritual significance shared by knowledgeable members of a particular community. Third, one learns that knowledge of string figures among many communities has completely died out whereas certain Indigenous communities still demonstrate a perpetual interest in the practice of string figure making, thus enriching their string figure repertoires not only with new finished designs related to existing figures but also inventing new opening positions and construction movements. In my analysis that is grounded in my embodied research experience with *kota* and Indigenous knowledge-holders, I choose to work with Kwakwaka'wakw *kota*

string figures and associated narratives and my research questions are: How do *kota* string figures perpetuate the Kwakwaka'wakw peoples' relationship with the land as a living entity and all its animate and inanimate beings? To what extent are string figures connected with their relational worldviews and cultural protocols? What sort of place-based relational knowledge are certain string figures and narratives imbued with? How do they function as a pattern literacy and epistemological tool contributing to knowledge-making? How do string figure patterns serve as mnemonic devices aimed at illustrating embodied harvesting and management practices? In my research study, I provide a decolonial perspective.

6.2. Classification of Kwakwaka'wakw *kota*

Kota[57] string figures practiced by the Kwakwaka'wakw peoples are aimed at representing natural as well as artificial objects which are displayed either in a state of rest or motion. Every finished string pattern is provided with a name which is intimately attached to animals, plants, human figures, or activities it is supposed to resemble. Therefore, Kwakwaka'wakw string figures have been grouped according to their subject matter. Julia Averkieva's study of the patterns reveals that individual figures are named for a wide range of subjects. She classified the Kwakwaka'wakw string figures into four respective groups which, as I have observed, are largely based not only upon the type of beings, objects, beliefs, and various facets of the people's social situations they depict but also upon similar methods of construction. Drawing on the material presented by Julia Averkieva and Mark Sherman in their study entitled *Kwakiutl String Figures*, I will show that the first group of the Kwakwaka'wakw string figures is devoted to objects of everyday use as well as the natural environment of Vancouver Island. This category has been divided into two separate groups. The second and, simultaneously, the largest group of string figures reflects animal spirits of the Kwakwaka'wakw culture accompanied by a certain story which constitutes the subject matter of a given figure. Almost every animal species that these people are familiar with has become depicted in the form of a string figure. Among the animate creatures which give their name to particular string figure patterns, I can point out salmon, porcupine, halibut, killer whale, and herring. The third group, oftentimes with patterns lacking realism and characterized

[57] Gloria Cranmer Webster and Carrie Mortimer informed me that the performance art of Kwakwaka'wakw string figures is called *kota*. Personal communication of the author, 2010.

by an extreme degree of abstraction, is associated with numerous facets of the Indigenous peoples' lifestyle, such as digging clams, pulling a line in halibut fishing, or men fighting. Since the patterns in this group vaguely resemble the object they are named for, these patterns, as Julia Averkieva tellingly states, ought to be full of novel knots and tensions in order to be memorized and propagated by the community. The fourth group consists of string designs which are related to the spirituality of the peoples (Averkieva &Sherman, 2011, p. 138). Spiritual allusions occur frequently in the naming of certain figures. Some of these may call to mind some seasonal taboos or ceremonial objects whose shape is suggested by particular string patterns.

For the purpose of this chapter, I have decided to use the classification of the Kwakwaka'wakw string figures prepared by Julia Averkieva and Mark Sherman. Nevertheless, I have added another category connected with the representation and preservation of their land-based ecological knowledge related to a plethora of reciprocal resource management systems and harvesting practices that are grounded in the Kwakwaka'wakw relational worldview, which is the subject matter of this chapter. These figures are imbued with illustrations and step by step manuals regarding animal and plant harvesting methods and managements systems precluding resource depletion. Some string patterns may also function as a mapping device commemorating geographical features and thus essential cultural keystone localities, suggesting their general outlines preserved in terms of string designs. In the following section, I document and synthesize knowledge related to the classification of the Kwakwaka'wakw *kota* and their subject matter. It is important to note that my research study is my embodied knowledge. I have gone through an Indigenous pedagogical process which stresses the importance of empirical, somatic, and experiential knowledge. Before I came across Averkieva and Sherman's study, I had been introduced to the subject and taught several string figures by Carrie Mortimer, who shared that knowledge with me. This experience cultivated in me an intense passion in the Kwakwaka'wakw *kota* and relational knowledge. I was gifted with these teachings and mentorship that raised my awareness of Kwakwaka'wakw stories, place-based knowledge, and relational worldview. I have made these a part of my life. This chapter is the outcome of my decision to contribute to the revitalization of this storied knowledge and I feel accountable to share my research with the Knowledge-keepers and Indigenous scholars. I use *kota* patterns preserved by Julia Averkieva for the sake of my detailed analysis and interpretation to demonstrate that selected *kota* string figures are

used as a pattern literacy to produce, embody, and convey the Kwakwaka'wakw relational knowledge of the land. My study expands on Averkieva and Sherman's research which does not delve into philosophical foundations of kota and the embedded relational knowledge.

Natural environment/Land

One repertoire of the figures represents the Kwakwaka'wakw natural environment. Taking into consideration the length of time the Kwakwaka'wakw peoples have lived on the northern end of Vancouver Island, about 8,000 years (Averkieva & Sherman, 2011, p. 138), and the fact that they have attained a sort of reciprocal and sustainable relationship with the surrounding land based upon respect and stewardship, it should not be surprising to identify certain aspects of this environment preserved in the form of string. Vancouver Island, which lies along the mountainous west Pacific Coast of North America, is characterized by a rugged landscape of channels, flooded would-be valleys forming inlets and fjords, and a series of mountain chains frequently rising out of the ocean, as well as by a magnificent rainforest habitat covering the mountain slopes. Influenced by the ocean-front environment with wet, mild climate, it is exposed to abundant rainfall and moderate temperature all year round, providing ideal conditions for lush vegetation dominated by western red cedar trees (Campbell & Menzies, 2003, p. 23). Gloria Cranmer shares her knowledge that its "sea life, particularly the salmon, the oolichan […] – a silvery smelt-like fish – and the cedar tree are among the natural resources in the natural environment that have long made the Kwakwaka'wakw both spiritually and materially rich" (Cranmer, as cited in Brown, 2009, p. 34). Her words make it clear that this land and a wide array of abundant resources have shaped the lives of the Kwakwaka'wakw peoples who have lived here for thousands of years and, thus, have created culture that acknowledges and reflects the riches in the surrounding land.

Figure 1: "The Mountains with Clouds between Them"

The string figure "The Mountains with Clouds between Them," which was recorded in the village of Alert Bay, reflects the landscape of Vancouver Island with its mountains blanketed in fog and intricate waterways formed by these mountains. More precisely,

the grayish clouds resembling fog that does not reach the ground and blanketing the valleys can be portrayed by a horizontal string that crosses the face of two big triangle-shaped objects, which apparently stand for mountains. According to Averkieva and Sherman (2011), this string figure consists of five different dissolution patterns – "Mountain Broken in Two," "Fire Drill," "It Sits Down Below," "It Sits on the Ground and Splits the Sea Egg," and "It Is Broken" – and although these individual patterns can be found individually in other parts of the world, "they are undoubtedly products of independent invention, for their names and methods of construction bear no resemblance to one another" (p. 138).

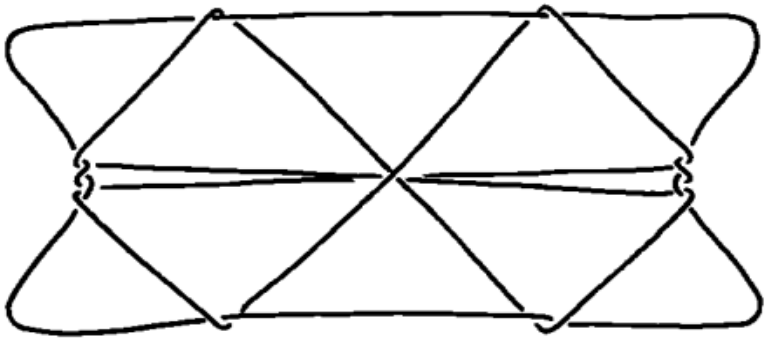

Fig. 11. "The Mountains with Clouds between Them." Illustration by Mark Sherman.

Figure 2: *"Two Trees"*

Another string figure reflecting the ecosystem of northern Vancouver Island is entitled "Two Trees." Each tree in the finished design consists of four loops suspended on a framework. The loops 'a' and 'c' are bound to represent the roots or stump of the tree while the loop 'a' resembles the tree trunk. According to Mark Sherman (1991), the remaining loop 'd' seems to represent the mountainside where the tree grows (p. 30). Averkieva and Sherman's analysis is limited to the step by step construction method of the figure.

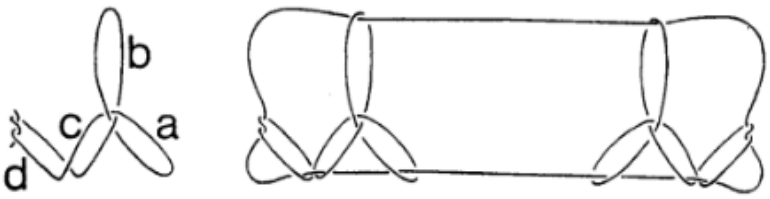

Fig. 12. "Two Trees." Illustration by Mark Sherman.

As already mentioned, considering that the study region is densely forested with western red cedar and western hemlock, it is no wonder, as I contend, that the Kwakwaka'wakw peoples represented trees in string. Moreover, the abundance of western red cedar trees, acknowledged as trees of life providing the Kwakwaka'wakw peoples with a great number of useful resources shaping their lives, might have contributed to their representation in the form of string. It is plausible to suggest that these string figures – similarly to narratives passed on from generation to generation – aim at reminding people of their enduring relationship with their sentient land and ancestral territories. From this perspective, I argue that just as the great cedar trees, acknowledged as trees of life, are rooted in the land so do these string designs connect the Kwakwaka'wakw peoples to the land, creating knotted holistic ties defining who they are.

Spiritual beings of animals

Another category of the Kwakwaka'wakw string figures concerns patterns that reflect their animal spirits which occupy a position of importance in the Kwakwaka'wakw worldview, searching for balance with all living beings.[58] Importantly, I note that all the animals recorded in cord are simultaneously prominent in the creation stories of the Kwakwaka'wakw. Approached this way, string figures and narratives pertaining to animal spirits cannot be separated from their culturally constituted meaning and, thus, their moral messages reinforced by the peoples' relational worldview need to be carefully explained. Chief Robert Josephs, the Hereditary Chief of the Gwawaenuk people and one of the remaining speakers of Kwak'wala, says that "[Kwakwaka'wakw] first ancestors came into this world as animals and birds and after the flood they were turned into people. In the beginning of time these animals and birds had dances like their sacred red cedar bark ceremony" (2013). As noted in Chapter 5, from the vantage point of their view of the world, humans and animals are tied together in a sort of mystical circle, which connects those who came before, those who live now,

[58] As Chief Kwaxistalla Adam Dick explains, the Kwakwaka'wakw worldview, unlike the dualistic Western view of nature setting humans apart, searches for harmony and integration with all lifeforms by means of enacting these stories through storytelling, dance, art, and the cultural and spiritual practice of the potlach. SeeDeur D., Recalma-Clutesi, K., & Dick, A. (2019). When God Put Daylight on Earth We Had No Voice. Kwakwaka'wakw Perspectives on Sustainability and the Rights of Nature. In C. La Follette & C. Maser (Eds.), *Sustainability and the Rights of Nature in Practice* (pp. 92-96). CRC Press.

and those who shall be born in the future. Richard Atleo (2003) notes that this worldview[59] is closely tied to egalitarian discourse, which, by passing on mythological origin stories, aims to encourage Indigenous people to establish an inextricably bound relationship with all non-human creatures based on consent, recognition, respect, and continuity (pp. 200-218). 'Welila'ogwa Irene Isaac (2016), a member of the 'Namgis First Nation, writes that "people were more spiritually, emotionally, physically, and mentally connected to the land and each other. People had to co-exist with their environment rather than conquer the land" (p. 212). Reminiscent of the animistic ontology (Atleo, 2005; Kimmerer, 2013; Watts, 2013), species were perceived as non-human beings or persons endowed with powers to exert positive of negative influence upon peoples according to how these were treated, thus compelling Indigenous peoples to show respect for all species and environmental entities. Believing that families are descended from a particular animal spirit, they adopt it as their family crest frequently depicted on sacred totem poles that reflect their kinship, cultural identity, and family lineage (Long, 1979; Vickers, 1996; Jonaitis and Glass, 2004; Huang, 2007). Totem poles are perceived "as a symbol of ongoing survival and resistance to cultural and territorial encroachment" (Huang, 2007). This kin-based attitude, as I argue, is represented in *kota* and stems from their understanding that everything is interconnected and that all life is bound to be cyclical. It perceives the human experience and surrounding land along with all sentient plant and animal entities, seen both as powerful beings and food resources the Indigenous peoples rely on the land to provide, as integrated and marked by respect.

This relational worldview, inherently embedded in the mindset of the Indigenous community and, as I argue, in *kota* figures serving not only as the archives of their ways of knowing but also as their knowledge-making praxis, explicitly manifests itself in their harmonious co-existence with the land and spiritual ties with non-human creatures. I believe that this kinship relationship between the Kwakwaka'wakw peoples and all other living things and the ecosystem can be reflected in terms of certain string figure patterns lined with value laden stories of creation handed down through generations by virtue of cultural transmission. The emphasis here ought to be placed upon the fact certain string figures depict a notable animal figure endowed with agency and spiritual powers which, through *his/her* efforts and sacrifices, provided for the Kwakwaka'wakw

[59] For further information on the kincentric worldview, see Chapter 5.

peoples and taught them how to survive over millennia, making sure that they would have access to crucial material resources, food, fire, water, and shelter. These *kota* string figures along with narratives might have been filled with ancestral teachings guiding human behaviour towards animal species and fostering peoples' appreciation for the sacrifice of animals as agential beings endowed with personhood. References to animals playing a broad range of roles in the life of the Kwakwaka'wakw peoples may convey their relevance and cultural salience for them. Among the animal species living within the local environment that have been crucial to the spiritual and cultural survival of the Kwakwaka'wakw peoples long enough to be folded into string figures and accompanying narratives, I would like to point out salmon, halibut, killerwhale, porcupine, raven, and many other animal species of the study region.

Figure 3: "A Big Salmon"

Among the recorded *kota* string figures depicting animal spirits is "A Big Salmon" string figure, which, in the final string pattern, represents the fish species by a two-diamond figure with each diamond mechanically formed from double strings (Averkieva & Sherman, 2011, pp. 110-111). In my analysis, I draw on the *kota* figure provided by Averkieva and Sherman which is a source for my reflections on the kin-based relationship between the more-than-human salmon and the Kwakwaka'wakw peoples as embedded in the pattern. As I argue, just as salmon appear continually in Kwakwaka'wakw oral narratives, chants, prayers, dances, and ceremonials, so too should *their* presence in the form of string figures not be overlooked.

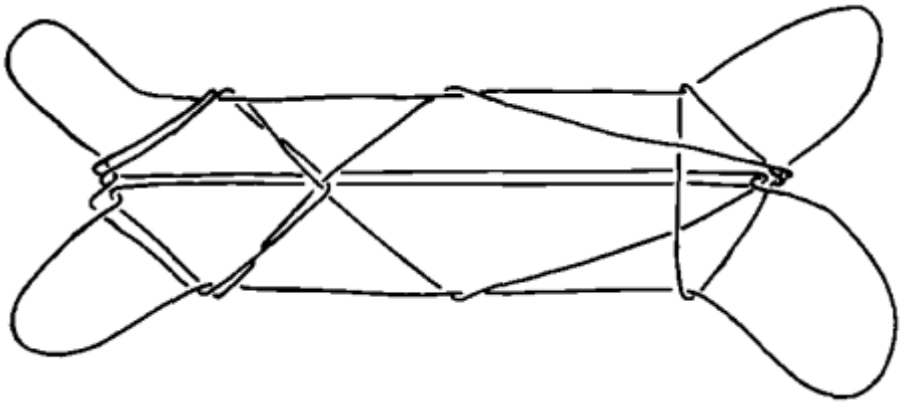

Fig. 13. "A Big Salmon." Illustration by Mark Sherman.

As previously explained, there are several species of salmon living in different areas of the Kwakwa̲ka̲'wakw territory.*60* In effect, *it/he* holds a special position of respect and honor. To take this step further, the importance of salmon for the Kwakwa̲ka̲'wakw peoples can be well illustrated in terms of the First Salmon ceremony greeting the first salmon of the season:

> The ceremony is held to thank the salmon, as members of the Animal Kingdom, for allowing themselves to be killed in order to provide food for humans ... The salmon's head, bones, and entrails are separated from the flesh and wrapped in a cedar mat or bow ... The salmon remains are then put into the water so that the salmon can return home to its people and tell them how well it was treated. Because the salmon's remains were placed back in the water, the salmon will come back to life and return again the next year ("Kwakwa̲ka̲'wakw," n.d.).

As noted above, much emphasis has been placed upon the most fundamental meaning of the ceremonial, which is to greet the returning salmon and express respect and gratitude for their return and demonstrate peoples' wish to meet again. It was believed that while salmon, as part of the supernatural realm, willingly offered themselves to humans so that they were able to eat and live, the latter ones were supposed to acknowledge this generous gift through prayers and recognize the supernatural qualities of salmon (Cullon, 2013, p. 16). This example resonates strongly with the work of Haudenosaunee and Anishinaabe scholar Vanessa Watts on kin studies in terms of which salmon as agential beings might be regarded as members of Indigenous societies. As Watts (2013) suggests in her work on *place-thought*,

> [A]ll elements of nature possess agency, and this agency is not limited to innate action or casual relationships. [H]abitats and ecosystems are better understood as societies from an Indigenous point of view; meaning that they have ethical structures, inter-species treaties and agreements, and further their ability to interpret, understand and implement. Non-human beings are active members of society. Not only are they active, they also directly influence how humans organize themselves into that society […]. Human thought and action are therefore derived from a literal expression of particular places and historical events in [Indigenous] cosmologies (p. 23).

Such conceptualizations help me illustrate the importance of salmon for the Kwakwa̲ka̲'wakw as the staple of their diet providing almost all the sustenance these peoples needed to survive and thrive. Through on-going reciprocal relationships, the agential being of salmon commanded proper handling, reverence, and respect for the remains. The salmon, as a more-than-human being, is sentient and active. In my mind,

[60] Kwakwaka'wakw territory is full of different salmon species, such as chinook salmon (*Oncorhynchus tshawytscha*), chum (*Oncorhynchus keta*), sockeye (*Oncorhynchus nerka*), coho (*Oncorhynchus kisutch*), and pink (*Oncorhynchus gorbuscha),* which have been considered a fundamental component of both the lifestyle and spirituality of the Northwest Coast First Nations since time immemorial. See Cullon, D. S. (2013). A View from the Watchman's Pole: Salmon, Animism, and the Kwakwaka'wakw Summer Ceremonial. *BC Studies,* 177, 16.

since salmon is so intertwined into every aspect of the Kwakwaka'wakw peoples' lives, their culture would come to an end if salmon disappeared. My argument is that the "A Big Salmon" string figure has been instrumentalized as a metaphor for the complex interrelatedness and kinship between the more-than-human salmon and the Kwakwaka'wakw peoples, invoking lasting reciprocal responsibilities and respectful relations. Tying this non-human agency with a kin-based relationship, the figure, as I suggest, evokes and teaches about the Kwakwaka'wakw peoples' intimate entanglement with their land as a living entity full of sentient beings.

Looking further at the string figure repertoire of the Kwakwaka'wakw peoples, it is worth bringing forward that there are several variations of string figures representing the salmon species, which put a great emphasis upon the importance of this resource for the survival of the Indigenous community. This human-animal relationship filled with respect for the benevolent salmon both as a resource and sentient agential being resulting in effective and sustainable resource management and stewardship within the Kwakwaka'wakw territories, I argue, has been also codified in terms of particular string figures that shall be analyzed in the next section of this project.

Figure 4: "The Killerwhale"

The relationality of the world and kin-based relationship with the sentient beings of animals, as I argue, may also be reflected in another string figure entitled "The Killerwhale." After a series of repetitive weaving movements drawing the string through a series of mechanically formed ringlets, the structure of the finished pattern consists of upper and lower ring-shaped loops (Averkieva & Sherman, 2011, pp. 106-107). In order to understand why the image of the killerwhale was preserved in string, it is necessary to shed some light upon the importance of the non-human entities in Kwakwaka'wakw cosmology. It is not unusual in the waters surrounding the northern part of Vancouver Island to spot the massive dorsal fin of the killerwhale, so it should not be surprising that this giant holds a prominent place in the culture and lifestyle of the people who have lived there for millennia. According to Kwakwaka'wakw storyteller Adam Cranmer, the Kwakwaka'wakw "people have great respect for the whales, because our belief is that they are our ancestors. They come and visit us, usually, at the beginning of a potlach if the families are descendants from the whales,

Maxinuxw, the killerwhale" (A. Cranmer, as cited in Josephs, 2010). The Kwak'wala word for the killerwhale is *Maxinuxw*, which means "side by side tribe" ("MAXINUXW," 2018).

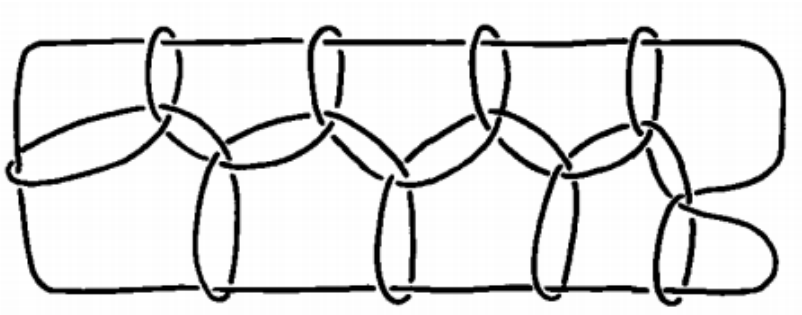

Fig. 14. "Killerwhale." Illustration by Mark Sherman.

Premised on an embracement of relationality (Deloria Jr., 1999; Cajete, 2000; Atleo, 2005; Watts, 2013; Kimmerer, 2013; Todd, 2016), these majestic creatures are more-than-human kins, having a responsibility of being a good relative to other relatives, such as humans, ancestors, and land and sustaining life in mutual relation. Regarded as the same spirit as man, these agential entities, as Josephs (2010) observes, are one of the most respected beings in the Kwakwaka'wakw culture, for they are able to guide Indigenous peoples to safety and take sickness away. Andrea Cranmer's Auntie Rose used to say that killerwhales "are family, they are friends and they will never harm you. They will never harm us humans because they are family" (A. Cranmer, as cited in Josephs, 2010); these words capture the essence of the peoples' relationship with the sea creatures, based on consent, reciprocity and mutual respect. Zoe Todd's discussion of anthropocentrism explains that physical "material as bridge – between people and non-human agents – can allow for a different understanding of the Anthropocene to emerge" (2015, p. 248). Namely, materials are not merely actants yet they can be enlivened with spirit, will, and knowing and thus bind Indigenous peoples to the relationality of the world (p. 248). With this understanding in mind, I suggest that the following *kota* string figure is enlivened with spirit and serves as a loop, a link between the human and more-than-human world, and a bridge to Indigenous ways of knowing.

Figure 5: "Porcupine" and reflections on *kota* as performance art

Another interesting instance of an animal known to the Kwakwaka'wakw peoples – albeit not prominent in their spiritual life – that has been preserved in *kota* is the porcupine. During my research trip to Alert Bay in 2010, Carrie Mortimer taught me how to perform an intricate animal string figure entitled "Porcupine."

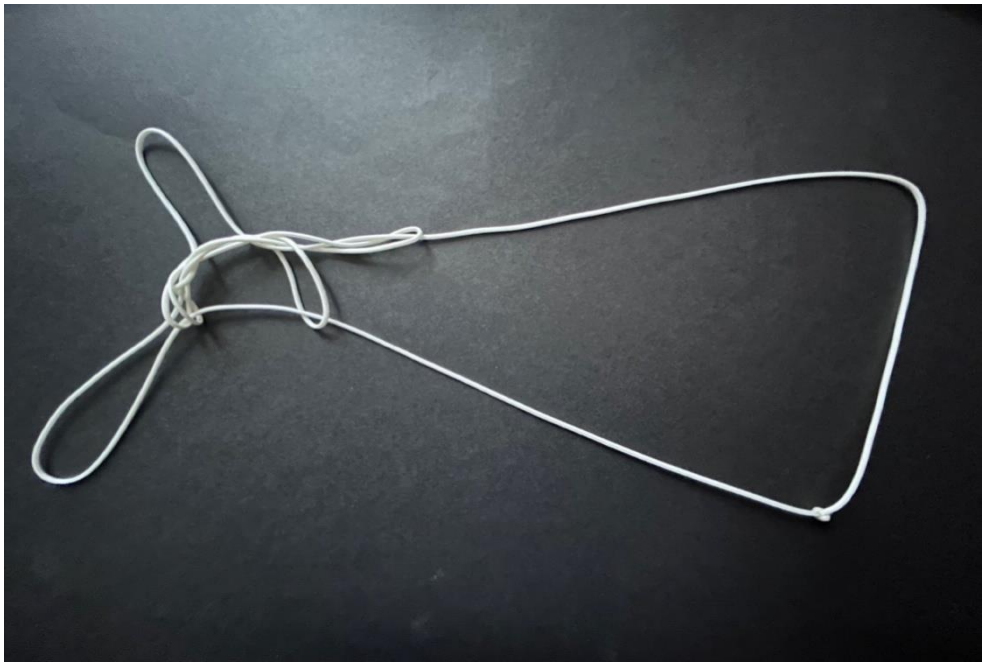

Fig. 15. "Porcupine" string figure made by me.

In short, following her detailed instructions regarding the sequence of necessary weaving movements, one needs to create a pattern which is largely based upon a close resemblance to the animal in question and, by virtue of see-sawing one's hands, the maker is capable of performing the slow movement of the animal. Moreover, those movements are accompanied by the following chant: "Back, back, porcupine woman. She retreated" (C. Mortimer and G. Webster, personal communication and witnessing, 2010; Averkieva & Sherman, 2011, p. 75), which significantly might enable the viewer to notice the slow movement of the depicted animal.

I contend that the making of the "Porcupine" string figure is an excellent example of performing arts showing that Indigenous ways of knowing are lived and experiential. *Kota* string figures are a performance art reflecting the Kwakwaka'wakw peoples' embodied experience and knowledge of the land and more-than-human entities. I argue that *kota* string figures serve as a tool to retrieve Kwakwaka'wakw stories and storied knowledge from the land which is conceptualized as a storykeeper, embody them back

to life in the present, and revisit their relationships with the land. In "Performance Art and the Native Artist: A rEvolutionary Mix?", multidisciplinary Haudenosaunee artist, performer, storyteller, and educator Aiyyana Maracle (2000) explains that performance art – where "music/sound, text/oratory, and dance/movement all integrally contribute to creating the story" (p. 100) – allows Indigenous peoples to articulate their voices, stories, perspectives, and experiences while being present. Her study illuminates that this way they exercise more control over their artwork's reception. It is a contemporary form of storytelling, as suggests Lee Maracle (2010, pp. 99-100). In a conversation I had with Guna and Rappahannock artist and theorist Monique Mojica in 2013, she emphasized that performance art serves as an act of healing, resistance, and reclaiming cultural memory (M. Mojica, personal communication, 2013). In her article "In Plain Sight: Inscripted Earth and Invisible Realities", Mojica (2012) suggests that the land, particularly earthen mounds and enclosures collectively referred to as *earthworks*, is an archive. She writes that her practice of performing art

> regenerates my creative source by placing me on the life-giving land in an embodied research process that requires me to walk on, touch, feel, smell, and absorb the stories, forms, and structures of effigy mounds and earth works, to connect to the ancestors who built them and to the peoples who still inhabit the region. Simultaneous to this sacred work, I am challenged to "talk back" to colonial erasure, to peel away that veil, to refocus my lens (p. 220).

In her work with Spiderwoman Theatre, Mojica works with the land in a relational manner "to redefine Indigenous identities, history, science, cosmology, literature – and […] performance" (Mojica, as cited in LaChance, 2018, p. 100). This way, Mojica physically engages with the sentient land. She respectfully looks to and reanimates it as a knowledge-holder and knowledge-making praxis; she acknowledges that the land is imbued with agency, liveliness, and purpose. For her, Indigenous stories are deeply grounded in the ancestral land and still relevant in the present. Therefore, she transforms her embodied experiences with the land and land-based stories into her relational performance to reanimate Indigenous ways of knowing, affirm the displacement of Indigenous peoples, and resist the effects of settler colonialism.

Non-Indigenous scholar Carla Taunton (Associate Professors of Art History and Contemporary Culture at the NSCAD University) takes this discussion further and writes that performance art and storytelling are employed "to reclaim and re-envision silenced histories and the identities of indigenous peoples in North America [and] physically make space for […] their stories in places once segregated, and controlled by

Euro-American society" (2007, pp. 56-61). Through the decolonizing practice of performance, it can be argued that Indigenous peoples are able to control the story they want to relate. This way, Indigenous performative experience is deeply resonant with Indigenous storytelling and is used to challenge the dominant discourse and ensure cultural survival of Indigenous communities by means of inserting Indigenous voices and perspectives into the official narrative.

Given the finished pattern of the "Porcupine" string figure that can be presented in motion, one may ask what it is about the porcupine that it features in the string figure repertoire of the Kwakwaka'wakw peoples. There are two possible reasons. For one thing, prior to the availability of modern tools, it was the porcupine hair that the Kwakwaka'wakw peoples used to employ as a crucial material resource for making the tips of paintbrushes by wrapping the porcupine hair around the handle with a cedar twine. Furthermore, its quills were particularly used to decorate ceremonial clothing (Shearar, 2008, p. 82). Taking into account the resource aspect of the species that was effectively and respectfully used by the Kwakwaka'wakw peoples for cultural and ceremonial purposes, this example reveals that the land-based resource was an entity of special significance and it might have contributed to the preservation and perpetuation of the given figure. For another, as Mark Sherman tellingly postulates, due to its method of construction which can be easily memorized, the representation of the porcupine in string is apparently one of the most popular string figure patterns in North America (Averkieva & Sherman, 2011, p. 75).

While among the Kwakwaka'wakw people, this figure is known as a porcupine, it undergoes an interesting name change in the Arctic and, in effect, it is referred to as a fox. Similarly to the Kwakwaka'wakw identical version of the figure, the see-sawing motion of the identical method of pattern creation that characterizes the Inuit figure is likewise accompanied by the ensuing chant: "Red Fox, Red Fox. To his mother's sister he went. There he went in" (Averkieva & Sherman, 2011, p. 76). It is interesting to observe that the chant accompanying the "The Red Fox" string figure practiced by the Inuit is in some ways similar to the chant connected with the "Porcupine" of the Kwakwaka'wakw. In effect, unlike the previous animal string patterns presented in a state of rest, the final pattern of the porcupine is less static and can be presented in motion, which, as I argue, might have permitted the memorization of the construction method and compelled the Kwakwaka'wakw peoples to preserve it for the use of future generations.

Based upon my tactile experience with the "Porcupine" string figure, I suggest that a Kwakwaka'wakw person's learning process in the acquisition of *kota* embodied knowledge results from a dynamic interplay of his/her interwoven bodily senses. One of the components of Indigenous embodied knowledge systems is a multi-sensory approach which involves using all the senses to gain a deeper understanding of the land (Battiste, 2000; Simpson, 2011). In her book *Dancing Indigenous Worlds: Choreographies of Relation*, Jacqueline Shea Murphy (2023), an Associate Professor in the Dance Department at UC Riverside, explores "the idea of sensory knowledge: the idea that your body is a *source of vital knowledge* and […] what you feel, sense, or perceive through it is an *act of knowing"* (Introduction: Choreographing Relationality section). Marlene Atleo discusses the somatic nature of land-based knowledge:

> wholistic knowledge is always somatic. For example: judging the ripeness of berries visually; working with fiber materials to create textiles requires tactile acuity every step of the way; smelling bears when they are nearby and can't be seen; tasting oysters before cooking them for family to make sure they are safe to eat; visually identifying food stuffs on rocks amid the surf and kelp beds etc. When you identify with the environment and have developed in it, all knowledge is somatic (M. Atleo, personal communication, 2023).

According to Atleo, Indigenous peoples employ the multi-sensory approach to understand the land, harvest and manage resources. It involves using their senses of sight, hearing, touch, smell, and taste both to determine whether certain plants and animals are ready to be harvested and understand their uses. I find this tactile acuity with creative making particularly pertinent to my research on *kota* because, in my view, it contributes to perceptual experiential learning of land-based knowledge through *kota* based upon the sensation and processing of texture, pressure, and physical properties of the string. It is my understanding that *kota* string figure making is responsive to land-based knowledge.

To justify my argument, I also look to Monique Mojica's research. In her embodied research, she makes physical contact with the land (earthworks) and engages "the full range of the human body's senses to listen and feel for song, story, and movement contained within the bodies and remains of earthworks" (M. Mojica, personal communication, 2013; Allen, 2015: 398). Non-Indigenous scholar-ally Liz Cameron (2021), Chair of Indigenous Knowledges at Deakin University, also affirms the multi-sensory experience of the land and adds that "Indigenous creative pedagogies are a systematic form of knowing that utilizes the scientific structures of multisensory knowledge to interact with spiritual space and cultural place. Indigenous methods of

knowing focus on bodily sensory connections to transmit ideas and values inherent to culture" (pp. 114-115). Of particular importance here is her argument that image serves as an essential direct and indirect exchange for meaning-making and sharing knowledge guided by human senses and human-nature connectedness (pp. 116-118). In this sense, drawing upon these conceptualizations of somatic multi-sensory knowledge-making, I suggest that during the learning process, a string figure maker experiences an embodiment of *kota* knowledge through attention, memory, repetition, imagination, and tactile experience within creative making. He/she touches the string, plays with it, and senses all the intricate gaps between the loops. *Kota* string figure making is a somatic practice, a narrative form of embodied knowledge requiring sensory attentiveness. This way, it creates an intensive sensory experience through physical interactions with a loop of string, ties and knots. I suggest that the somatic practice of *kota* resonates with the land-based epistemologies of the Kwakwaka'wakw peoples. I look to *kota* string figures as storykeepers and sign systems which, as engaged by a maker using his/her senses to connect to encoded lived knowledge of ancestors, are a significant tool strengthening and revitalizing Kwakwaka'wakw epistemologies and ontologies muted through colonization yet remaining alive and active in in the acts of *kota*. Through *kota*, the Kwakwaka'wakw peoples, placed in a holistic relationship with the land, may access the encoded knowledge relationally as something that is sensed, felt, and understood. I believe that this knowledge is in *kota*, the maker's body and hands and using these three things together in a holistic way can unlock this wisdom.

Kota as an expression of emotions and holistic well-being

Having examined the *kota* figures which bear quite faithful resemblance to the object they are named for, I will concentrate upon patterns lacking realism yet possessing eye-catching ties and knots which convey emotions and interpersonal relationships of the Kwakwaka'wakw peoples. As discussed earlier, such figures graphically represent shared perspectives on life constructed by means of extraordinary three-dimensional arrangements of the cord which are named either after a shared situation or feeling.

Expression of fear in kota – Figure 6: "What Will You Do?"

Fear, with a broad spectrum of its intensity, is an emotion experienced by all human beings and it is well represented in *kota*. The figure "What Will You Do?" – recorded at Fort Rupert on the northern coast of Vancouver Island – presents a person who, having encountered something unknown in front of his dwelling, makes up his mind and hides from it. Following Averkieva and Sherman's thorough description of the construction method step by step, during the course of the pattern creation, the maker, in order to convey the situation in motion, slides the vertical figure in the center of the pattern to the right side while the strings are being tightened by gradually separating hands. At this stage, while the pattern is almost finished, it

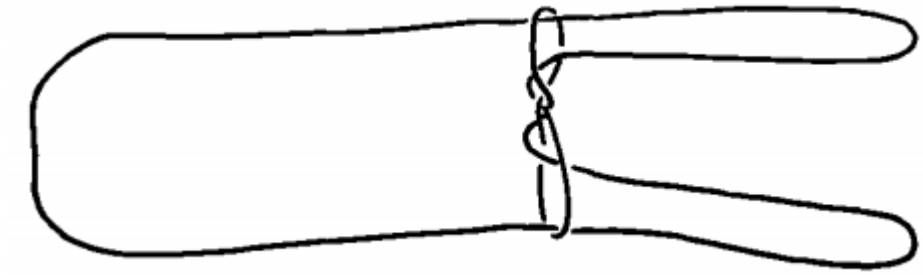

Fig. 16. "What Will You Do?" Illustration by Mark Sherman.

is accompanied by the ensuing chant "What will you do? What is in front of the house? Your forehead wrinkles as you squint to gaze at it. […] Forehead frowns, forehead unfolds" (Averkieva & Sherman, 2011, p. 9), which may imply that the person, fraught with fear and uncertainty, decides to observe closely the unusual figure just before running away (p. 140). Needless to say, the fear of the unknown and the subsequent reaction of the protagonist are vividly illustrated by virtue of the loop of string. Given that, it leads me to argue that the string figure may serve as a mnemonic device invoking embedded knowledge that compels the Kwakwaka'wakw peoples to be especially careful and take no risk in the face of something never observed before, thus avoiding situations that might prevent the desire to achieve holistic well-being and health.

In Indigenous communities, holistic health is interconnected with their spiritual, emotional, mental, and physical lives. For Indigenous peoples, their relational engagement with the land and the way they see themselves within Creation play a

fundamental role in their cultural well-being. Planetary health has faced criticism for its anthropocentric hierarchical perspective prioritizing the importance of human health outcomes over other entities within the ecosphere, which requires a shift in perspective. There is a growing need to recognize the interconnectedness of all living things, and adopting and developing such kincentric approaches could contribute to the transformation and development of planetary health (LeClair, 2021). In his article "Relational Health: Animists, Shamans and the Practice of Well-Being, Graham Harvey (2014) echoes this in his argument, suggesting that holistic approaches to health and good life should recognize the importance of Indigenous animist relationality. The relational nature of animistic Indigenous health knowledge focuses on "specific interactions between putative parts, wholes, societies, environments and the cosmos" (p. 205). Harvey illustrates this with reference to the Anishinaabe peoples. He is clear that animism "refers to those efforts to live well in the world that is a community of persons, most of whom are "other-than-human"" (p. 205). Spiritual leader Arvol Looking Horse (Lakota Nation) furthers this point, emphasizing that the human's health is intimately connected with the health of the land and its living beings. He further explains that Indigenous sacred sites can be compared to the equivalent of hospitals (Looking Horse, as cited in Robbins & Dewar, 2011) while, as Harvey (2014) observes, medicine is more than just a substance, for it "carries association of power and, often, personhood" (p. 210). It follows that this approach aligns with their spiritual healing practices and emphasizes the importance of communities and cultural identities in their well-being. However, it must be understood that if any of these interrelated aspects of life are disrupted, one's health might deteriorate, causing an Indigenous person to become unbalanced (Kirmayer, 2012; Quigley et al., 2022). To treat ill-health in a relational manner, there is often a need for medicine people or shamans to intervene; they search for the understanding of relational causes and solutions (Harvey, 2010, 2014).

When discussing Indigenous holistic well-being, a focus on culturally grounded healing practices is important as there is a modern day need for healing in Indigenous communities because of traumatic experiences suffered during the settler colonial era. As suggested by Julian Robbins (Mi'kmaq ancestry) and Jonathan Dewar (Director of Research at the Aboriginal Healing Foundation), it "is paramount today due to the large-scale suppression of Indigenous cultural expressions during the process of

colonization"[61] (2011, ii). The scholars further emphasize that "these knowledge systems are living entities not relics of the past […] applied to help Indigenous communities and Indigenous people recover from intergenerational pain and suffering endured during the colonial process" (ii). To me, this exemplifies the need to utilize Indigenous land-based knowledge systems and healing accumulated by their ancestors in order to revitalize the spiritual well-being of Indigenous communities while reconnecting to the sentient land. With a goal of enriching their holistic health, it is reasonable to put forward that it is important to have access to healing practices rooted in the somatic knowledge of their ancestors to recover from intergenerational pain endured during colonization.

The practice of *kota* string figures and embedded relational knowledge of the land might be a valuable vehicle for the Kwakwaka'wakw spirituality and a tool in addressing mental health disparities among the peoples. Taking such a holistic approach towards their mental well-being might empower them to reconnect with the spirit world and reclaim their cultural identity and promote healing and resilience within their communities. Therefore, it is fair to suggest that knowledge of such *kota* string figures might allow Indigenous peoples to effectively access and transmit the embodied knowledge of holistic well-being and healing methodologies, once relegated to a thing of the past by colonial policies, to those communities and individuals who need it. This embodied animistic knowledge may also be used to re-think Eurocentric ideas of well-being and health.

Expression of shame in *kota* – Figure 7: "Kick in the Back"

Apart from fear, there are other emotions translated into the Kwakwaka'wakw string figures. For instance, as indicated by Averkieva and Sherman, shame is another emotion frequently depicted in string and, as an example, they bring to the fore the following figure known as "Kick in the Back" (*Qwatsaxsut*). The final pattern of the figure, which was recorded in Fort Rupert, is supposed to portray a pair of feet which agreeably illustrate a lazy young boy being kicked in the back by his father as a punishment for

[61] With an eye to forced assimilation, Indigenous healing practices and ceremonies were interrupted when the Government of Canada outlawed such practices with the amendment to the Indian Act in 1882, thus banning such ceremonies as the Potlach and Sundance. This ban lasted until 1951. For further information on the amendment, see "Indian Act (R.S.C., 1985, c. I-5)." Government of Canada. 1985. Retrieved September 4, 2022, from https://laws-lois.justice.gc.ca/eng/acts/i-5/.

not purifying himself for an initiation, which is acknowledged as an ultimate humiliation among the Kwakwaka'wakw peoples (Averkieva & Sherman, 2011, p. 141). Averkieva and Sherman do not address the concept of shame further. Their analysis is mainly limited to the construction of the figure and to what its pattern resembles.

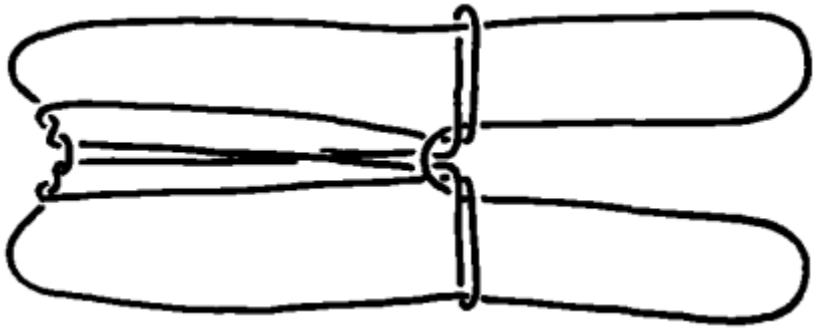

Fig. 17. "Kick in the Back" (*Qwatsaxsut*). Illustration by Mark Sherman.

I argue that in order to be able to decipher what the final pattern in question might depict, it is necessary to be equipped with background knowledge related to the Kwakwaka'wakw storytelling, paying particular attention to narratives that are preoccupied with various cultural taboos as well as possible remedies to deal with their consequences (Boas & Hunt, 1908; Josephs, 2013; Isaac, 2016). References to this situation can be prominently found in the following story recorded by Franz Boas and George Hunt (1925) among the Kwakwaka'wakw peoples:

> In the beginning there was a family of ancestors. The name of one man was First-Beaver, and he had a younger brother named Paddle-to. First-Beaver was very strong and twisted thick yew trees. He rubbed his body with hemlock branches. But Paddle-to was lazy and foolish. The father of First Beaver felt badly because Paddle-to slept all the time. One day, the father kicked Paddle-to and said, "Oh you fool! Don't think too much of always sleeping. Look at your Elder brother. He is always rubbing his body with hemlock branches to make himself attractive to spirit powers." Disgraced, Paddle-to decided to commit suicide (p. 6).

I understand the text as inscribing Indigenous axiology pertaining to the generations-old spiritual cleansing rite involving the use of feathery hemlock branches. Failure to comply with this protocol brought shame on the one who failed to do so. For it was an important spiritual practice among Kwakwaka'wakw hunters, fishermen, and initiates to rub their skin with hemlock branches four times so as to cleanse their bodies from impurities (Turner & Bell, 1973, p. 270).

In her book *Patterns of Culture*, American anthropologist Ruth Benedict (2015) argues that the Kwakwaka'wakw peoples' preoccupation with shame dominated their

ways of behaviour. In other words, accidents of all sorts or misbehaviour – in this case laziness of the son – were bound to inflict shame upon the individual who fell victim to a shameful act and, in effect, he needed to take recourse to certain recognized means in an effort to offset any humiliation the person suffered (p. 364). As discussed by Kwakwaka'wakw scholar Dale Hunt (2005), for the Kwakwaka'wakw peoples, shame is a form of discipline that needs to be given careful attention. This statement rings true as shaming has "the ability to create humiliation within individuals, and thus can damage their spirit as a person […], but in the long run, it can uplift and empower a person" (p. 35). Only the Chiefs and Elders are allowed to shame others in front of their community, which is usually carried out during a Potlach (p. 35).

In a similar argument, 'Welila'ogwa Irene Isaac (2016), a member of the 'Namgis First Nation, makes an observation, noting that, in Kwakwaka'wakw communities, shame and ill behaviour reflect

> badly on the individual, the family, the school, and the community at large. So, when someone shames their family, it is the family's responsibility to wash away the shame by holding a feast and paying people to witness the washing away of shame so that it will no longer be talked about. […] Digita in Kwakwaka'wakw Nations means the washing away of shame (p. 205).

The *digitah*[62] ceremony (Cleansing ritual) is closely related to the shaming ceremony. However, as Dale Hunt (2005) stresses, it does not involve the embarrassment of shaming (p. 36). So it is important for the shamed person to wash away the wrongdoing that brought dishonour to their family or community and make things right (D. Hunt, 2005, p. 35; Isaac, 2016, p. 205). These observations help me support the argument that the "Kick in the Back" figure embodies a teaching related to the Kwakwaka'wakw concept of shame. Accordingly, the boy – having been humiliated by his father by being kicked, which is depicted by the figure's resemblance to a pair of feet – decided to take matters into his hands and to wipe out the shame by committing suicide. Consistent with the cultural condition placed upon the individual, he – in a severe way – takes recourse to a quick reaction to shame. Yet, the wiping out of shame (*Digitah*), which may be carried out in a milder form, is not presented in the string figure, for it is not accompanied by a narrative or a chant, to which I collectively refer as stories.

[62] In the Kwak'wala language, the word *digitah* means "to make things right." See Hunt D. (2005). *"We Are All Different, Still Living Under the Same Culture": A Kwakwaka'wakw Perspective on Dispute Resolution and Relationship Building.* [Published master's thesis]. University of Victoria.

Kota as an expression of spirituality and embodied knowledge

Equally interesting case examples of string figures in the Kwakwaka'wakw repertoire are associated with the supernatural, spiritual beliefs, and a plethora of energies camouflaged behind the features of nature, which obviously arouse mutual respect and interconnectivity. Through the prism of Kwakwaka'wakw stories regarding the spirit world, it is significant to stress that characters featuring in their stories are benevolent or fearsome more-than-human agential beings imbued with numerous supernatural traits whose lives are parallel to those of humans and frequently wander the earth, transcending different worlds, such as an under-ocean world, sky world, and a world occupied by dead people and ancestors. Prior to removing their animal masks and, subsequently, transforming themselves into human beings whose descendants inhabit the earth, such animal spirits, as conscious, social and spiritual creatures, used to dwell in houses in mythical villages located in heaven (Furst, 1989; Viveiros de Castro, 1998; Turner, 2014b, pp. 232-258). In an essential respect, I believe this concept of the pluriverse emphasizes and strengthens peoples' intrinsic relationship with the non-human world, spiritual agential beings, land as an embodiment of sacred energies, species, and natural resources animated by spirit. Considered part of the supernatural realm, they can change their form and experience their life from a different perspective. In this way, it constantly reminds the Kwakwaka'wakw peoples that they are a part of a larger cycle of life, holistically interrelated to all life forms being treated as peoples' kins living in similar parallel communities (Atleo, 2005, 2012; Watts, 2013; Kimmerer, 2013, 2016, 2017). Therefore, the Kwakwaka'wakw peoples' animistic beliefs, kinship, respect, reciprocity, reverence, and humility play an essential role in ensuring sustainability within an ancestral homeland. Understanding this way of viewing the world is crucial to understand the Kwakwaka'wakw ontology and the role more-than-human beings play in Creation. Their kincentric ontological perspective, as I argue, was codified in *kota* tradition and practice and resulted in their reciprocal relationships with the ancestral land and its agential beings, commanding care and reverence.

In an effort to provide further insight into the Kwakwaka'wakw knowledge inscribing their visions of reality in *kota* string figures, I look to Indigenous material culture and pattern literacy which refers to the ability of Indigenous peoples to tell stories of their communities and convey storied knowledge, important events, and spiritual beliefs by means of creating intricate patterns and designs in the form of

pictographs, beadwork, quillwork, basket weaving, and blanket weaving. Taking on geometric designs, complex patterns embody the interconnectedness of all living things and importance of the land. As an important aspect of Indigenous cultures, such designs are integrated into the lives of Indigenous communities and play an important role in the communication within them, allowing for the intergenerational experiential learning and their ancestral knowledge transfer (Gadacz, 2006; Mojica, 2008; Carter, 2010; Hanson & Griffith, 2016; Yunkaporta, 2020; Smith, as cited in Collins, 2022).

Guna-Rappahannock playwright/performer Monique Mojica (2008), for example, describes the intricate process of weaving *molas* which are the traditional textiles of the Guna Nation. She notes that

> *Molas* are made by the combined techniques of reverse appliqué, appliqué and embroidery. They require several layers of fabric and the designs are cut out free-hand to allow the colours from the layers underneath to show through. Stitching the edges of the designs with the tiniest of stitches is the most fastidious part because it is what connects the layers. The *mola* gets thicker and thicker. Sometimes a corner will be torn apart and another colour or pattern of cloth will be inserted. Some areas will be built up with appliqué and details embroidered on. There are no even edges and although symmetry and duality are central principles, even two panels of the same blouse will not be exactly the same. […] I have never made a *mola*, neither has my mother nor my aunts, but we all grew up living with them, touching them, tracing their texture and designs, smelling them, sleeping on them and wearing them (p. 165).

The narrative art of *mola* intricately woven textiles, representing Kuna material culture, is used as an archive, "material instance of, repository for, an ancient Indigenous knowledge system (Carter, 2016, p. 1). As Anishinaabe scholar and theatre artist Jill Carter (2016) explains, in this traditional form of textile art, one can read "the cosmology, knowledge systems, aesthetic principles, and historic moments that place the Guna people in time and space, investing each act of resistance with meaning and reminding people of who they continue to be" (p. 5).

It is important to note that the process of *molas* creation, as proposed by Guna painter, visual artist, and scholar Oswaldo DeLeon Kantule, is guided by four pillars of Guna aesthetics, such as duality and repetition, abstraction, metaphor, and multi-dimensionality (in Guna cosmology, the world consists of eight dimensions) applied to Mojica's artistic practice and performance of *Chocolate Woman Dreams the Milky Way* (Allen, 2010; Carter, 2010, p. 273). DeLeon Kantule offers further insight to the topic of the pattern literacy of *molas*, noting that "visual abstraction and the use of metaphors are both used extensively to communicate a message that is intended to be incomprehensible to enemies, whether they be physical or spiritual" (DeLeon Kantule,

as cited in "Oswaldo," 2014). For the scholar, *molas* are historical documents carrying the history of his Indigenous community (Martinez, 2018).

The textile art of *molas* helps me argue that the performance art of *kota* is an excellent example of Kwakwaka'wakw pattern literacy, incorporating visual imagery that is embodied by a performer to frame his/her narrative and convey embodied knowledge. Resonant with DeLeon Kantule's four aesthetic principles guiding visual art, I believe that repetition, abstraction, metaphor, and multidimensionality also inform the performance art of *kota*. Repetition allows the storyteller to memorize *kota* construction steps. Abstraction, a geometric representation of Kwakwaka'wakw emotions, preserves and transfers the embedded knowledge. Metaphor encrypts Kwakwaka'wakw place-based knowledge systems. Multidimensionality provides multisensory reminders that there are different dimensions of Kwakwaka'wakw reality, human and more-than-humans worlds. Through *kota*, serving as an archive and material evidence of history and living culture, the storyteller can retrieve and project the Kwakwaka'wakw peoples' spiritual intimacy and with the land-base and more-than-human entities onto the present world. Beneath the fibers of string and its intricate shapes lies Kwakwaka'wakw relational knowledge of the land, carrying the voices and teachings of their ancestors. This is central to examining Kwakwaka'wakw *kota* string figures.

Figure 8: "The Bear's Den"

On the basis of "The Bear's Den" figure, the string figure maker, having gone through several steps of the pattern creation, demonstrates a portrayal of a house located on a cliff, and a large circle which can be noticed in the center of the figure is supposed to resemble the door made of a flat stone. It is interesting that the finished pattern at hand evolves immediately from

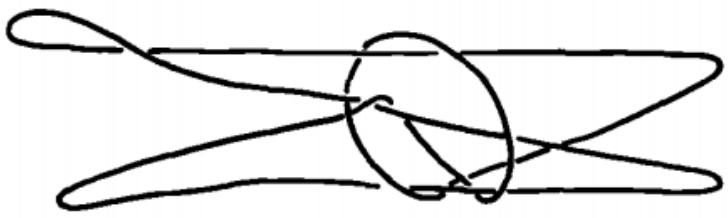

Fig. 18. "Bear's Den." Illustration by Mark Sherman.

the method of construction which is employed in creating the animal figure of the bear. Such a maneuver on the part of the maker enables him to release an extra loop hitherto created as a result of the additional step, and, while the strings are being tightened and extended, what is brought to light in string is the bear walking out of its den. Only at this point is the string figure in motion accompanied by the following chant: "Bear walks out of his den" (Averkieva & Sherman, 2011, p. 13). Significantly, as I have observed, the fact that the intricate pattern of the finished figure resembles a house occupied by a bear may remind the Kwakwaka'wakw peoples that some animals have retained their ability to think and act as people, living in communities and having families. In effect, the geometric representation of the house and bear spirit may compel the Kwakwaka'wakw peoples to bear in mind the interconnectedness of all living entities, which paved the way for stewardship towards plant and animal resources. Through the intensive sensory interaction with the string, the *kota* transmits and engages with Indigenous relational ontology of kin-based relationships with all entities in Creation, which remains as relevant today as it has been for thousands of years. It is an act of embodied knowing, a multisensory reminder that in Indigenous understandings and experiences of the world animals are more-than-human beings *who* possess agency and are capable of transformation and transcending multiple realities.

Figures 9 and 10: "Passing Through" and "Not Passing Through"

Among *kota* abound with references to the spiritual life of the Kwakwaka'wakw peoples, I want to point out two variations of the same string figure entitled "Passing Through" and "Not Passing Through", whose subject matter is preoccupied with the annual Winter Ceremonial. On the one hand, in case of the former finished pattern, the string passing from the left index finger to the right thumb goes through the circle formed at the center of the figure, which may illustrate the passing through ceremony. On the other, in case of the latter figure, the string that passes from the left index finger to the right thumb does not pass though the created circle, thus depicting the not passing through ceremony performed during the winter ceremonial (Averkieva & Sherman, 2011, pp. 123-124).

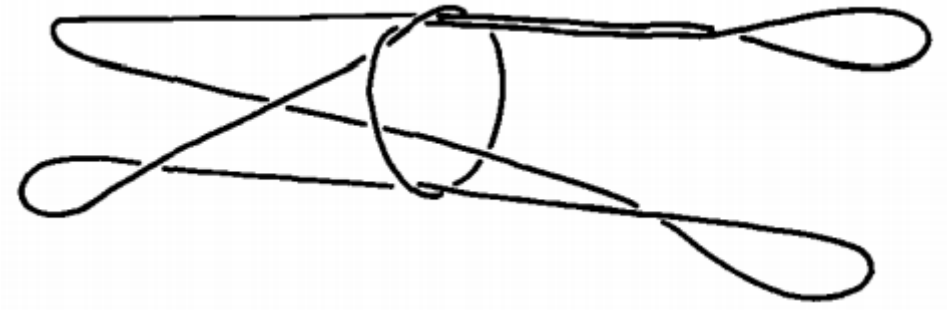

Fig. 19. “Passing Through.” Illustration by Mark Sherman.

There is an obvious connection of the string figures with the ceremonial life of the Kwakwaka’wakw peoples. I reflect on the Kwakwaka’wakw kin-based philosophy and ceremonial life as grounded in the relational worldview in the light of the string figure material provided by Averkieva and Sherman, who do not analyze how this subject is conveyed by means of the analyzed string patterns. For the Kwakwaka’wakw, winter was considered a spiritual time during which peoples’ connection with the spiritual world was celebrated. A closer look at the Winter Ceremonial (*T’seka*) practiced by the Kwakwaka’wakw allows for examining its underlying spiritual features. After the period of seasonal rounds filled with resource harvesting and management activities came to an end, the Kwakwaka’wakw peoples returned to their villages and began a season of intense ceremonial activities. According to their holistic concept of the world and cyclical nature of existence, spiritual more-than-human beings visited their settlements in order to initiate the youth into various hierarchically graded secret societies wherein members become embodiments of a spiritual or supernatural spirit (Masco, 1995, p. 46), among which the most important was the Hamatsa dancing society. Central to the Hamatsa ceremony is “The House of Baxwbaxwalanuksiwe” story in which four brothers, the sons of a powerful chief, lost their way in the forest and found a strange house of a man-eating giant. The youth, who were about to become new members of the Hamatsa society, were kidnapped by the powerful and dreaded spirit of the Man-Eater in the forest to be possessed by the man-eating spirit *Baxwbaxwalanuksiwe*. Luckily, they managed to run away from the spirit craving for human blood and kill it in the end, thus gaining mystical powers (“’Namgis Story,” 2018). Given that, the novices – imbued with insatiable hunger and uncontrollable lust for human flesh – are brought back into their settlement during the initiation ceremony and have to be tamed and eventually humanized by being carefully approached and

touched with sacred cedar bark to bring them back into the human society. Then, after the taming of the Hamatsa initiate with the guidance and intervention of shamans, his re-transformation from the nonhuman to human state takes place (Turner, 2014b, p. 328). In this light, I find it plausible to suggest that the above *kota* string figures indeed exemplify a deeply spiritual passing through the ceremony rehabilitating the individual back into the secular society. Another inference that can be made is that these are significant reminders of the kincentric worldview instilling a reverent attitude towards all living entities and the sentient land, which has essential implication for the well-being of all of Creation's entities.

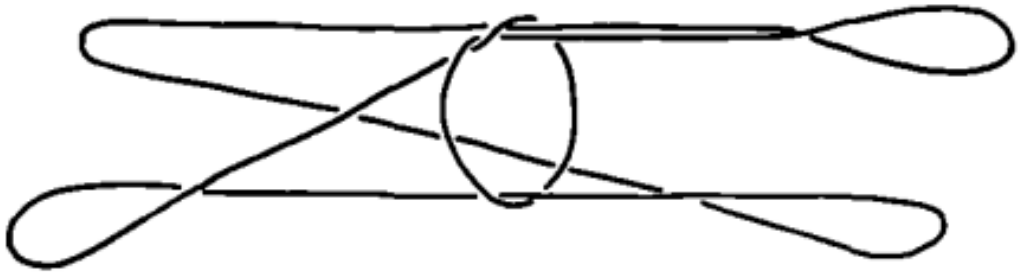

Fig. 20. "Not Passing Through." Illustration by Mark Sherman.

Mark Sherman suggests that the two string figures stand for two forms of the Winter Ceremonial (The Gone Through and Not Gone Through ritual) in terms of which the former one initiated only more experienced performers whereas the latter was performed by less experienced initiates (Averkieva & Sherman, 2011, pp. 123-124). American anthropologist Irving Goldman (2014), drawing upon Franz Boas' *The Social Organization and Secret Societies of the Kwakiutl*, stresses the fact that

> all the [performers] fall into two hierarchical divisions. The highest are *laxsa* ("gone into the house") and include all dancers who come under the influence of Man Eater at the Mouth of the River (Baxbakualanuxsiwae), namely, hamatsa […]. *Laxsa* refers to having gone into the house of the Man Eater to receive from him powers and dance instructions. In ritual, these dancers actually "disappear" into the woods and need to be "captured." All other dancers are *wixsa*. They have not gone into the house, they have "only leaned against the walls". They need not leave the ceremonial house at all.
>
> The *laxsa* having "disappeared," and representing also the most powerful and dangerous forces, become the focus of ritual attention. They must be "recaptured" and "tamed" by strenuous efforts. Among the *wixsa*, some are also subdued, mainly by song, but others simply exhibit their dance and songs (pp. 484-485).

In the light of the above passage, I want to note that the Gone Through ritual of the Winter Ceremonial may in fact be related to the most highly ranked dance society of the Kwakwaka'wakw peoples, the Hamatsa Dance, for only those initiates who went into

the house of the Man Eater were subsequently accepted as member of the Hamatsa society. Whereas the Not Gone Through ceremony – reflected in terms of the string missing the circle located at the center of the figure – refers to the initiates who did not go in the house of the Man Eater, into the forest, and thus it may imply that they were not fully possessed and initiated. It needs to be argued that peoples' lives and culture, as a blending of place, time and practice, are situated across their territories and environment by these ceremonies, for certain activities are reiterated and generations are repeated on a regular basis. I find that these string figures exemplify the inextricable ties between ceremony and belief and narrative and *kota* performance along with the Kwakwaka'wakw words invoking the spiritual meaning of these ceremonies, encoding ways of interpreting the relational world. At the same time, since winter was likewise a time of storytelling (Archibald, 2008, p. 72; Armstrong, 2009, p. 95), a relationship between string figures and storytelling could be indeed argued for the Kwakwaka'wakw peoples as particular string figures were instrumental in knowledge transmission and acquisition. They helped to promote certain knowledge and wisdom encoded in language and stories, denoting events that took place at a particular location and helping to connect geographic locations with memory and history as well as key activities.

I argue that the *kota* repertoire of the Kwakwaka'wakw peoples likewise includes a category of string figures that convey knowledge and wisdom with regard to harvesting and management practices rooted in the Indigenous relational worldviews and philosophies that govern their kin-based relationship with the natural world situating their knowledge systems. The Kwakwaka'wakw peoples went to great effort to produce *kota* figures, which may indeed serve, in essence, as a vehicle for the Kwakwaka'wakw land-based knowledge transmission by means of remembering past events, encoding memories and instructions, and teaching lessons and approaches that come directly from the land in an effective and meaningful manner. As discussed in this chapter, firmly grounded in the belief that there is a fundamental relationship and interconnectedness between humans and more-than-human entities, such string figures frequently accompanied by chants or narratives differ markedly from the remaining string patterns because they integrate factual and historical information with land-based guidance and lessons. The relevance and cultural salience of string figures inextricably linked and interwoven with the Kwakwaka'wakw ontologies and epistemologies of the land as well as their practices and strategies for sustainable resource use shall be addressed and discussed in the next section.

6.3. *Kota* as a vehicle for the Kwakwaka'wakw ecological knowledge transmission and acquisition

The present section focuses on how *kota* string figures are linked to Kwakwaka'wakw epistemologies and ontologies of the land. I explore how various string patterns relate to the holistic knowledge-making praxis and the acquisition and transmission of harvesting and management practices employed by the Kwakwaka'wakw peoples in their ancestral territories across countless generations. My research shows that the multisensory experience of kota can be a useful tool for the revitalization of the Kwakwaka'wakw onto-epistemologies of the land and their relational harvesting and management practices. For this purpose, on the basis of Averkieva and Sherman's material, I have identified and analyzed complex *kota* string patterns conveying this Kwakwaka'wakw relational knowledge, thinking, being, and doing. It is crucial to note that I deliberately provide details related to various techniques of harvesting and land management to show the complexity of the Kwakwaka'wakw peoples' living knowledge.

Performance cartography of kota – importance of language and naming

It is my argument that some *kota* string figures can be employed as a performance cartography providing detailed maps of sacred harvesting localities known as prime for particular highly-valued and culturally important marine species. The following section focuses upon the study of spatial knowledge preserved and transmitted in *kota*. There are many reflections on language in the sections that follow.

Figure 11: "A Salmon"

"A Salmon" string figure, for example, woven by one person, may demonstrate that the construction and utilization of *kota* string figure may be employed as a sort of performance cartography aiming not only at illustrating characteristic landmarks within a given landscape and ecological area but also locating crucial geographic locations, thus allowing people to remember places with cultural-keystone resources. This string figure is an excellent example of Kwakwaka'wakw mapmaking in the form of string which lets them preserve their spatial knowledge of exceptionally fruitful habitats or clusters of adjacent habitats within their ancestral territory. I agree with Carrie Mortimer

and art historian and non-Indigenous scholar-ally Bill Holm who tellingly note that the final pattern of "A Salmon" string figure does not really represent the salmon species itself. Instead, what is presented to the observer is a

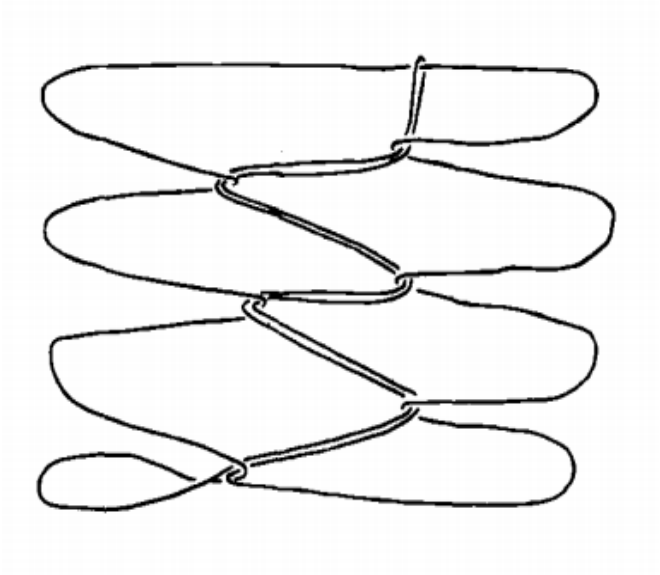

Fig. 21. "A Salmon." Illustration by Mark Sherman.

Winding waterway abundant with salmon heading upstream to spawn, the Knight Inlet (C. Mortimer, personal communication, 2010; Holm, as cited in Averkieva & Sherman, 2011, p. 109). I expand on the scholars' observations further, arguing that this *kota* figure is a form of performance cartography embodying, conveying, and explaining storied spatial knowledge of culturally important harvesting sites, delineating their exact locations and thus legitimizing their existence in the ancestral territory of the Kwakwaka'wakw peoples. Significantly, the figure is accompanied by the following story, recorded by George Hunt and Franz Boas, consisting of brief questions and answers, which may provide an underlying message encoded in the final *kota* design:

wēxtō'lasa'kŭ·lē
qwē^{e}xtō'lEn lax gwā'dzē

Where are you jumping?
I am heading for *gwā'dzē*
[name of a village].

Wēxtō'lasa'kŭ·lē
qwē^{e}xtō'lEn lax g·Eyō'x^{u}

Where are you jumping?
I am heading for *g·Eyō'x^{u}*
[name of a village].

Wēxtō'lasa'kŭ·lē
qwē^{c}xtō'lEn lax hă'nwadē

Where are you jumping?
I am heading for *hă'nwadē*
[name of a village].

Wēxtō'lasa'kŭ·lē
qwē^{c}xtō'lEn lax dzā'wadē

I am heading for *dzā'wadē*
[name of a village] (Boas and Hunt, as cited in Averkieva & Sherman, 2011, pp. 108-109).

This *kota* is an excellent example of the Kwakwaka'wakw pattern-thinking. I read the accompanying text as mapmaking in the form of string following Bill Holm's suggestions that the names mentioned in the above answers given by the spawning salmon relate to a number of villages situated at salmon streams located at Knight Inlet (Holm, as cited in Averkieva & Sherman, 2011, p. 109), which, as I note, somewhat place the names of dwellings and fishing villages one at a time on the winding pattern of the string formation, thus assisting peoples in mapping out subsistence sites. The winding pattern elucidates the imagery of the given place names, associated events and history. In their latest article "The Kwakwaka'wakw Art of Kota – Rooted in Cultural Traditions, Re-Routed to Language Reawakening," Laura Cranmer and Patricia A. Shaw (2023) mention that "the string figure makes a zigzag pattern that can be superimposed over the map of the actual village sites that are names – each site is aligned with a point on the string figure" (Kota 5 section, para. 3). Similarly to Hawaiian string figures *hei*, utilizing the so-called performance cartography,[63] the imagery conveyed by this *kota* string figure evidently provides a picture of Knight Inlet and indicates essential location of places of human activity which is spoken of in the accompanied narrative. Here Kwak'wala naming is at work. It seems that this visual representation, together with such words as *gwā-* (down river) (Boas, 1934, p. 9), attached to a village name delineating its location, help the storyteller, embodying the pattern through textile experience, repetition, and imagination within creative making, and observer create his/her own mental map of the inlet somewhat reinforced with each making of the figure. As my analysis reveals, the mapping process is facilitated both by

[63] Hawaiian string figures use performance cartography in order to reference Hawaiian peoples' constructed places and legitimize their existence by means of serving as a map locating place names and referencing spatial features and understandings. SeeAkana, K. (2013). Hawaiian Performance Cartography of Kaua'i. *Educational Perspectives,*45(1-2), 17.

the repetitive zigzag pattern of loops and the repetition of the names of specific villages, which is likely a mnemonic mechanism.

My research led me to Franz Boas's book *Geographical Names of the Kwakiutl Indians* which corroborates my interpretation of the above story. In his book, Boas (1934) prominently mentions these ancient resource harvesting localities:

> these names designate places as those where useful objects may be found particularly food or useful trees. It is not surprising that river fish, fruits, shellfish, and land animals are principally so used, because most sea animals are not as sharply localized as the salmon in the rivers, fruits and trees in patches, clams on beaches (p. 12).

He further adds that there was an oulachen fishing site at *dzā'wadē* (marking the head of Knight Inlet) (p. 59), which is interestingly enough located on the Klinaklini River (Mitchel & Leland, 2001, p. 270) that flows into the great saltwater inlet. Herein I use Boas and Hunt's U'mista orthography to refer to cultural keystone fishing locations and main characters in the text. Significantly, my research study shows that these place names come with stories imbued with the knowledge of the land and seasonal rounds. For instance, there is a reference to *dzā'wadē* in a Kwakwa̲ka̲'wakw transformation story wherein *Q!ā'neqe^{e}lak^{u}* makes a bet with a bird in *dzā'wadē* and loses the blanket – filled with all kinds of fish – which belongs to his mother *Tsa'tsaxwitelaga*. This story explains the abundance of salmon and in Knight Inlet (Boas, 1934, pp. 22-23). Boas also records *g·Eyō'x^{u}* fishing locality where peoples would travel in order to obtain steelhead salmon (p. 65), returning from the ocean to their spawning stream. Similarly, the anthropologist notes the fishing station at *hă'nwadē,* simultaneously, identifying pink salmon as the target species (p. 47). In addition, I have been able to identify that these places are marked on the maps no. 16 and 17 drawn by Boas that illustrate the waterways of Knight Inlet and shows the distribution of essential resources harvesting sites (p. 117), some of which are given in the narrative accompanying the above string figure. Although the word *gwā'dzē* was recorded by Boas, he did not succeed in getting any detailed information regarding its meaning, location, and purpose. The importance of the discussed *kota* string figure is confirmed then by the narrative, ethnographic account, intricate pattern, and the maps indicating those crucial resource harvesting sites, which do not appear on western maps and charts. This is another example of *kota* as skillful technique to preserve the Kwakwa̲ka̲'wakw embodied knowledge on harvesting localities in string.

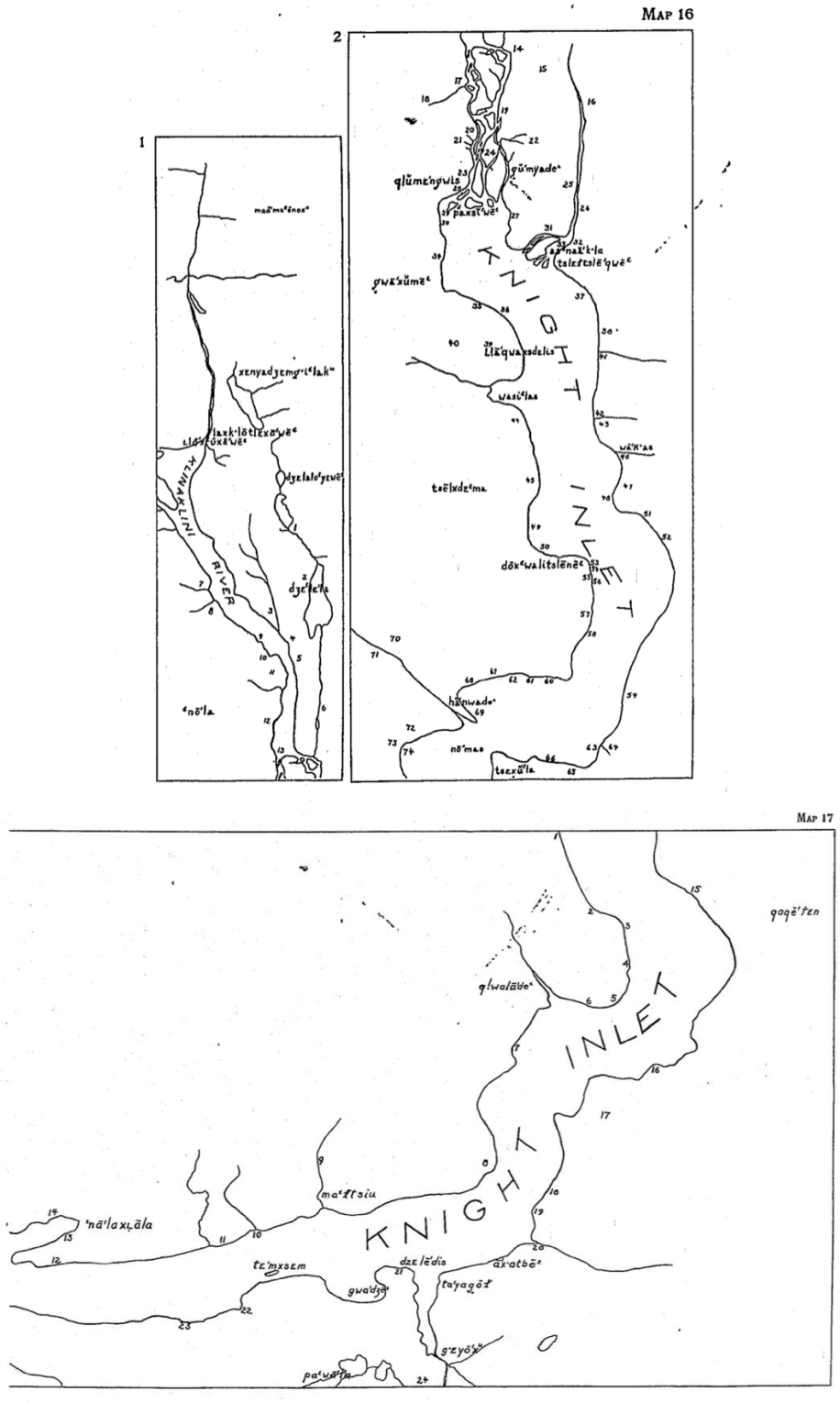

Fig. 22 & 23. Maps of Knight Inlet. Illustrations by Franz Boas.

The Kwak'wala naming incorporated into the related story is, as I want to emphasize, significant here as it indicates great importance of these fishing villages as sacred spaces for the Kwakwaka'wakw peoples. Since the Kwak'wala language comes from the land

(see Chapter 5, pp. 41-56), it places an emphasis upon the life-rhythms and sacred nature of these culturally important sites on the salmon's journey. Such Indigenous scholars Leroy Little Bear (Blackfoot Nation) and Marie Battiste (Mi'kmaw Nation) help me to understand the language importance in the above story recorded by Hunt and Boas. These Indigenous scholars emphasize that in Indigenous relational philosophies, Indigenous language and its vocabulary allow Indigenous peoples to relate to all of Creation, expressing essential relational realities about the land and entities that grow and live there (Battiste, 2000, 2002; Little Bear, 2009). Jeannette Armstrong observations on the connections between language and land are also important to demonstrate the land is the source of Indigenous languages, stories, and knowledge. In her work *Land Speaking*, Syilx scholar Jeannette Armstrong (1998) elaborates this vital point, explaining that N'silxchn, which is the language of her people, is necessary to communicate her embodied experience on the land as it is the land "that constantly speaks. It is the land that is constantly communicating. It is the land that speaks N'silxchn, the old land/mother spirit of the Okanagan People, which surrounds [her] in its primal, wordless state" (pp. 175-176). To relate stories of the land and its teachings, Indigenous peoples invented human words (p. 176). It is through language, as Edōsdi Judy Thompson (Tahltan Nation) explains, that Indigenous communities make sense of the world, for "language and land are interconnected [and] through our language we can hear the voices of our ancestors and their teachings about our culture and our relationship with the land" (Thompson, as cited in Williams & Snively, 2016, p. 43). The land and its place-specific teachings must be listened to maintain sustainability and Indigenous peoples' cultural survival.

Moreover, scholars Megan Bang (Anishinaabe Nation) and Ananda Marin (Assistant Professor of Qualitative Research Methods in Education at UCLA) offer an insight into naming practices that are "instances in which aspects of the natural world (e.g., places and concepts) are assigned names which become semiotic signs of nature–culture relations" (2015, p. 536). In the mind of Indigenous peoples, as Tewa scholar Gregory Cajete (2000) indicates, Indigenous languages are tied to the land and reflect peoples' orientation to the landscape, ensuring reciprocal and responsible relationships between peoples and the land. Cajete furthers this point when he speaks of the animating power of Indigenous languages that is

> inherent in the spoken word that connects the breath of each person to the breath of the world. Native languages invest their homeland with their presence through the active verb-based process

> of "talking the land," that is, naming its places, singing its virtues, and telling its stories. Native languages are highly descriptive of natural places and pay special attention to the way the event or place they are describing is in a perpetual state of motion (p. 184).

Importantly, I have come to realize that the following names of the village sites encoded in the story echo this relational understanding of Indigenous languages rooted in the land. Through such Kwak'wala names, the Kwakwaka'wakw peoples communicate with their ancestral territory, express their self-defined cultural relation to the land, and attach importance to these sites not only as resource harvesting locations but also, more importantly, as sacred sites. All these names mean something. For instance, Gloria Cranmer Webster, Laura Cranmer and Patricia Shaw clarify that *hă'nwadē* is roughly translatable as "place for pink salmon" while *hănu'n* stands for pink salmon (Webster, as cited in Brown, 2009, p. 28; Cranmer & Shaw, 2023), which arguably informs that the village site was named for pink salmon harvesting locations during their spawning season. These are names given to places of significance to the Kwakwaka'wakw peoples. I believe these names are crucial as they affirm the Kwakwaka'wakw peoples' bond with their land and convey their relational ontologies, which is important for resistance against settler colonialism. To borrow Rebekah Sinclair's wording, restoring Indigenous place names "allows a counter-mapping that turns Indigenous ways of knowing into discourses of resistance against settler temporalities (2022, p. 103). This is an important decolonial strategy.

My further analysis leads me to some other reflections on *kota*. For instance, as I observe, there is a relationship between the string figure and the accompanying story and seasonal rounds organized within the resource-rich territory of the Kwakwaka'wakw peoples. It may be argued that these village names hand in hand with the visual aid of the string figure probably reflect peoples' seasonal occupancy pattern as well as their longstanding connections to diverse locations and habitats across the seascape richly endowed with salmon and other fish resource necessary for survival. Moreover, these names, denoting special resource sites and probably deep-time occupancy locations, placed on the winding waterways of Knight Inlet may evoke a sense of place and connect geographic locations with memory and key activities linked with the land as well as knowledge and wisdom of the local marine ecosystem. Providing the names of diverse locations in the Kwak'wala language is critical in connecting the supernatural elements of the story to specific areas in their territory. Such a metaphorical map of the physical layout of the resource nodes might be outdated by

now as such centers for important salmon species may shift over time as environmental conditions and interactions among species change. These sites might have also eroded severely in recent years as tidal and freshwater currents might have changed due to extensive diking of wetlands and jetty construction at the river's mouth. However, it has become clear to me that the string figure prevents the situated knowledge from becoming erased by settler colonialism.

Kota as an expression of fishing techniques

The cultural keystone species of salmon and the origin and construction of various sentient salmon fishing technologies feature strongly in string in the study area as the ability to harvest and process salmon was key to the survival and development of the Kwakwaka'wakw peoples. References to salmon as the staple of the peoples' diet and basis of their sacred relationship with salmon along various refined fishing techniques and implements for harvesting fish resources are found in numerous narratives (e.g., "The Salmon People of Alert Bay") and *kota* string figures. According to Hilary Stewart and Nancy J. Turner, fishing tools, mainly originating from wood and other plant materials, became increasingly more ingenious and specialized over the millennia (H. Stewart, 2008; Turner,2014b, p. 355). To say that the Kwakwaka'wakw peoples and their intimate place-based knowledge and the integration of plants in marine-based harvesting was very sophisticated and their technological pursuits became more advanced would not be an understatement.

Figure 12: "A Salmon Trap"

The *kota* string figure design entitled "A Salmon Trap" is an excellent illustration of this long-standing significance of plant materials for the Kwakwaka'wakw peoples in the construction of effective salmon fishing for a large number of fish in a short time. Although the string figure is not accompanied by a story or a chant, I argue that its design is very suggestive. Averkieva and Sherman's drawing of the figure as well as its construction steps are a starting off point for my analysis and reflections on the sentient fishing technology practiced by the Kwakwawa'wakw peoples. Looking at the final pattern laid flat, consisting of a circle located at the center of the string figure, and

referring to the fishing techniques of the Northwest Coast First Nations, I have noted that this circle may in fact represent an old yet very effective technology

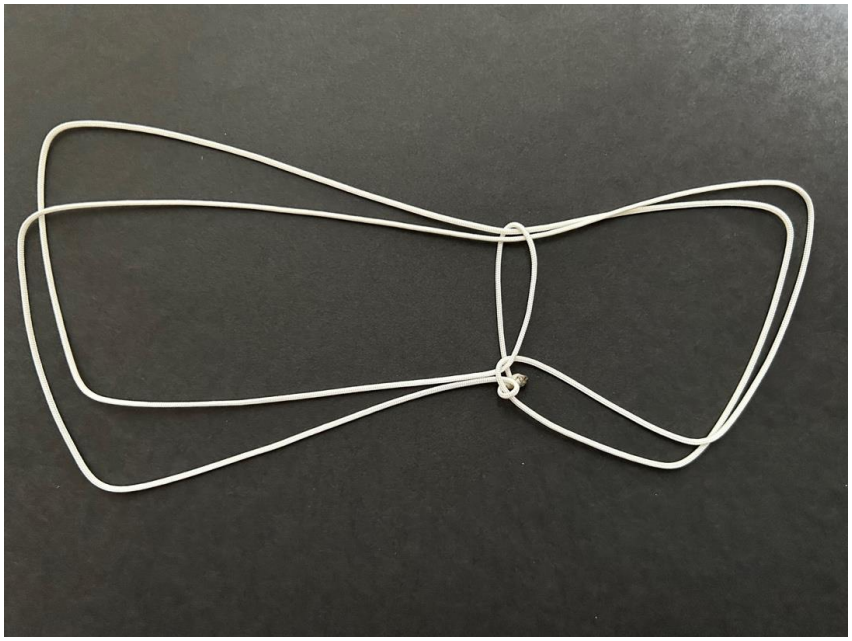

Fig. 24. “A Salmon Trap” string figure made by me.

for catching salmon selectively, namely a cylindrical basket fish trap.[64] By see-sawing the hands, one can create the movement of the figure, simultaneously, making the cylindrical shape located at the center increasingly smaller, which may thus compel the observer – already equipped with background knowledge related to salmon fishing, paying particular attention to target species – to memorize that the spacing of the basket trap warps to be placed in the river during spawning runs might be regulated depending on the size of the salmon targeted, so that the gauge would allow particular sizes of the fish to escape. In this way, this trapping mechanism arguably conveyed by means of the *kota* string figure was largely sustainable, for it enabled the Kwakwaka’wakw peoples to harvest salmon responsibly and selectively, thus ensuring that the remaining fish would reach their spawning grounds. I deliberately provide all these details to show what advanced thinking and technologies have been used by the Kwakwaka’wakw peoples.

To show the essential role of string figures in preserving the place-based knowledge of salmon fishing, it is important to reflect on a fishing weir, preserved in

[64] As already mentioned in the previous chapter, the purpose of basket traps, typically used at fishing weir openings, was to allow salmon to get into the placed trap from downstream, funnel them into its tapered end, and then prevent them from escaping through the small opening. See Stewart H. (2008). *Indian Fishing: Early Methods on the Northwest Coast.* D & M Publishers, 111.

string as well, which was crucial for the functioning of baskets traps used by the Kwakwaka'wakw peoples in salmon fishing. For example, non-Indigenous scholar-ally Donald Mitchell (Anthropology Department at the University of Victoria) states that, as a composite fishing device, the weir placed in the Nimpkish River (*Gwa'ni*) consisted of a "post-and-pole compound with a V-shaped entryway on the downstream side of the trap terminating into two long baskets that became packed with fish swept there by the current" (1998, p. 9). In other words, this wooden structure, being a part of the intertidal resource management, directed the fish towards the apex of the V-shaped ending and caught them in portable conical traps. Madonna L. Moss (Professor of Anthropology at the University of Oregon) offers her observation that although such weirs were mainly aimed at catching salmon species, these fence-like structures were also used to harvest other fish species available at particular locations, such as herring or eulachon (2013, pp. 323-326).

Significantly, fish weirs and traps cannot be perceived merely as a fishing implement. Non -Indigenous scholar-ally Dr Deidre Sanders Cullon (University of Victoria) proposes that they were regarded an entryway or a doorway through which fish, leaving their undersea world, were greeted with prayers and welcomed into the human world. Therefore, fish weirs were constructed in such a way that allowed safe passage for those fish that decided to reach their spawning grounds while catching only those species that chose to sacrifice themselves. In this light, weirs should not be regarded as machine-like trapping devices but rather as sentient structures not only supporting the needs of the peoples but also giving these sentient beings a choice to enter the human world through the apex of the opening or to stay in their undersea world (2017, pp. 140-141). To take Cullon's argument further, I suggest that this Kwakwaka'wakw fishing method, which is preserved in the following *kota* pattern, is an excellent example of an animated fishing technology as coming from ancestors. Resonant with the Indigenous kin-based philosophies (Atleo, 2005; Kimmerer, 2012, 2013, 2017; Watts, 2013; Todd, 2016), the *kota* embodies the relational place-based knowledge related to the behaviour of more-than-human beings of salmon and their kin-based communication with the Kwakwaka'wakw relatives. Analyzing it from the perspective of Indigenous animistic ontology, I observe that the intricate structure is an animated wise being endowed with actant qualities that communicates with the more-than-human entities of salmon and invites *some of them* to come and offer themselves as a gift. Based upon my interpretation of the pattern, the central loop serving as a

selective mode of mobility between the human and more-than-human worlds carefully guides and allows the sacred spirits salmon to enter world of humans. It is very selective as the size of the central opening determines the size of salmon that may go through. Invoking the sensory experience of creating the sentient basket trap, the loops and ties of the string figure reflect the trap's step by step construction and impart required experiential knowledge and respectful and reciprocal engagement with salmon.

Approached this way, this example illustrates a sustainable fishing technology preventing depletion of salmon species and increasing the robustness of the next generation. The kincentric human-weir relationship lying at the heart of such fish traps which provide the Kwakwaka'wakw peoples with interpretations and understanding of the metaphysical and spiritual powers of the world; they simultaneously convey practical, ethical, and social messages related to behaviour and decision-making with respect to sacred salmon. These sentient structures, conveyed by the *kota* as a form of Kwakwaka'wakw pattern literacy, may demonstrate their intimate relationship with the river ecosystem and salmon, placing the Kwakwaka'wakw peoples as active participants within all of Creation, neither apart from it nor above it, as the welfare of other species/more-than-human beings determines the well-being of human beings.

Figure 13: "The Fish Trap"

This efficient and sustainable fishing technology working in conjunction with the above cedar basket trap, as I suggest, is also depicted in the form of the string figure called "The Fish Trap" which is not accompanied by a story or a repetitious chant.

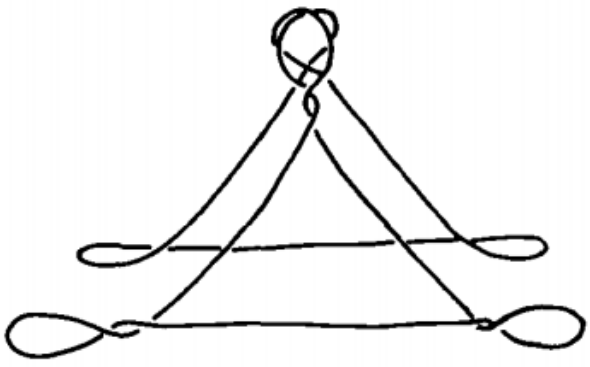

Fig. 25. "The Fish Trap." Illustration by Mark Sherman.

Unfortunately, Averkieva and Sherman only provide the figure's step-by-step construction method. What is missing is their interpretation of the final pattern. On the basis of my multi-sensory experience and analysis of the figure's shape, I have observed that the pattern resembles the lateral wings of the V-shaped weir obstructing the river, simultaneously, funneling salmon into tubular wicker baskets. On closer scrutiny, as I want to demonstrate, the circle located at the top of the figure may stand for the narrow opening that leads the fish upstream into wicker baskets, from which there is no escape. In addition, this circle may stand for the entryway allowing the non-human persons of fish to enter the human world, which, in practice, means allowing only particular sizes of fish to enter the basketry traps through the apex of the opening. This figure – albeit there is no narrative providing a detailed description regarding the structure and functioning of the sentient fishing technology – precisely depicts the effective V-shape design of the wooden fence along with the narrow opening connected to the basket trap. Generally, my interpretation is that the string figure, invoking tactile experience and somatic knowledge, deliberately preserved the shape of this fence-like structure working in conjunction with basket traps. It is an invaluable pattern literacy material as it helps one remember the proper alignment of the latticework section placed in fast flowing streams so as to carry out efficient yet sustainable harvesting.

Used together, these string figures, as forms of pattern literacy related to knowledge-making praxis, are pivotal to discuss as they detail significant innovations in the Kwakwaka'wakw peoples' collective history – the technology of sentient salmon basket traps and fishing weirs. Unfortunately, they are not accompanied by any narratives and do not provide further details regarding their construction steps before being placed in the river. Nor do they shed further light upon materials employed in their construction. Nonetheless, certain narratives, which have been analyzed in the previous chapter, may validate the *kota* patterns as mechanisms for preserving as well as transmitting place-based relational knowledge related to the fishing methods supplementing necessary information useful for survival. They depict the construction of cylindrical-shaped basket traps used in conjunction with cedar wood stake weirs placed in shallow tidewater, detailing the orientation and alignment of the basket-like wicker trap in the river. Thus, those narratives (see Chapter 5, pp. 27-37) combined with the string figures "A Salmon Trap" and "The Fish Trap", as visual aids, may serve as a unique construction manual with specific guidelines and advice. Kwakwaka'wakw fishermen could use the knowledge inscribed in *kota* figures to plan, design (basket-like

structure consisting of frames and an entrance at one end), and construct steps of these communally operated fishing technologies in a relational manner. It is important to acknowledge the educational value of these string figures as they are endowed with ancestral teachings that not only guide human behaviour and decision-making towards the land but they also remind the Kwakwaka'wakw peoples of the need to show respect and appreciation for the salmon resources given to them due to the sacrifice of other living entities. Leanne Simpson (2001) provides insightful reflections on Indigenous pedagogy: "oral tradition, learning by doing, apprenticing with Elders, observing, experiencing, praying, dreaming, participating in ceremonies, listening to stories – the processes of teaching, learning and transmitting knowledge are critical components of Indigenous knowledge" (p. 136). She encourages Indigenous peoples to nurture such experiential forms of knowledge transmission within their communities (p. 136). To borrow Jo-Ann Archibald's words, this process is about "reaching back to receive teachings (knowledge and values) from the Ancestors and those who have travelled before us […] [and] put[ting] these teachings into our everyday lives [and] pass[ing] those teachings to others, especially the younger generation" (Archibald & Parent, 2019, p. 5). These insights apply to my analysis as I emphasize that these *kota* figures are a form of pattern literacy, learning by doing which reaches back to bring the Kwakwaka'wakw ancestral knowledge of the land into the present. This way, it revitalizes and provides invaluable information pertaining to their philosophies, stewardship of lands and resources as well as sustainable management systems operated on a community level.

Halibut Harvesting

Halibut harvesting is another activity incorporated and preserved in the performance art of *kota*. It is the sentient halibut fish hook that deserves a special attention as its construction allowed fish to replenish themselves. It is here again where Kwakwaka'wakw ecological knowledge and worldview have been inscribed showing how advanced the Kwakwaka'wakw peoples were in their long-term conservation practices. Pacific halibut, the highly-nutritious fish dwelling on the ocean floor, was a very important fish resource and spiritual relative for them. Although being available all year round, the fish was effectively caught in April and May before the growth of brown

weed on the ocean floor, preventing the fish to notice baited fish hooks (Mitchell, 1998, p. 7). During their cyclical seasonal rounds, Kwakwaka'wakw fishermen, as Boas recollects (1966), regularly travelled in dugout canoes to remote halibut fishing grounds located off-shore from coastal villages and caught the fish with a unique V-shaped halibut fish hook previously baited with cuttlefish (p. 17). As Haisla artist Lyle Wilson notes, the hook was made of two pieces of wood "balanced by a similar hook on the opposite side, with both tied to a wooden cross-brace and attached to a disposable stone anchor. The design of the hook caused the tired halibut to flip over because these ancient fishermen realized a halibut struggled less when it was upside down!" ("MAMIYA MUMUG'AZU," 2018). It is very often decorated with images targeted at luring the fish (Shearar, 2008, p. 52). Suffice it to say, since the abundant marine life has been central to the Kwakwaka'wakw peoples, these specialized wooden hooks seem to have been carefully tailored for the purpose of showing proper respect and gratitude for the gift of the halibut and maximizing their potential for catching target fish species.

Figure 14: "Pulling the Line in Fishing Halibut"

An intriguing reference to sophisticated halibut fish hooks in the study region is the following *kota* string figure entitled "Pulling the Line in Fishing Halibut." To construct the following figure, the maker needs to use not only the fingers but also teeth and a toe. After having practiced this *kota* string figure myself, I agree with Mark Sherman who suggests that "by alternately pulling thumb loops and little finger loops, [one can] produce a sawing movement, representing Pulling the Line in Fishing Halibut" (Averkieva & Sherman, 2011, p. 122). Nevertheless, Averkieva and Sherman's analysis of the figure is limited to its step by step construction and it does not relate to *kota* as a form storytelling and pattern literacy of the Kwakwaka'wakw peoples.

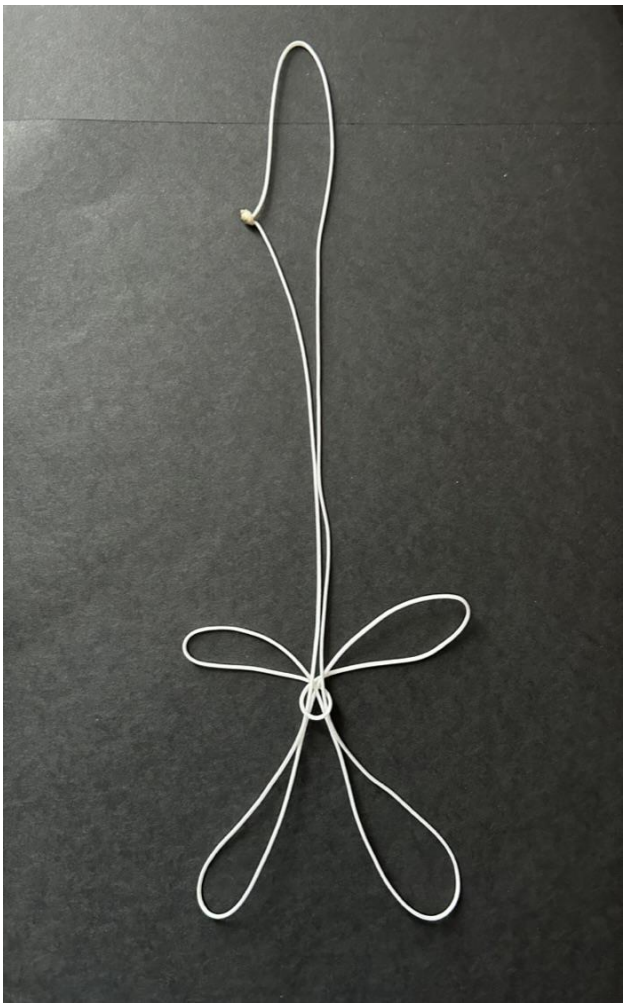

Fig. 24. “Pulling the Line in Fishing Halibut” string figure made by me.

The final pattern is characterized by a star-shaped design with a long loop mounted on the toe which, as I suspect, represents a long line made of kelp stems whereas the very end of the loop wrapped around the toe may resemble the halibut fish hook along with a securely hooked fish. The sawing movement generated by pulling the thumb and little finger loops thus contracting the central weaving may resemble the activity of hauling the hooked halibut from the ocean-bottom to the surface. In line with this thinking, not only does it shed light upon the fact that halibut fishing required an apparatus involving a long line at the end of which was the hook but it also hints at the fact the employed fishing method was bottom-fishing. The string figure markedly illuminates a tremendous amount of millennia-old knowledge required to carry out halibut fishing in compliance with the notion of stewardship.

But where did the halibut come from and what is the origin of the slingshot-shaped halibut hook? I have searched for stories collected by George Hunt and Franz Boas that might match the analyzed string figure to shed further light upon the embedded meaning

and somatic knowledge. There are many different stories from the Kwakwaka'wakw peoples as cited by Hunt and Boas that may complement the intricate relational knowledge of halibut fish hooks endowed with agency and reveal further details concerning their use and, in all these stories, the Kwakwaka'wakw peoples need supernatural intervention to be able to receive the animated gift of this crucial fish species. For example, they have a story entitled "Prayer of the Halibut Fisher." In this story, before putting the fishing implements in the water, the fisher speaks to halibut fish hooks as his kin and addresses the fish in a very respectful manner:

> "Oh, younger brothers, now you are dressed with your good dress. Now you will go and call the Old-Woman, Smelling-Woman, Born-to-be-Giver-of-the-House, Flabby-Skin-in-Mouth, and invite those whom I have named." Thus says the halibut-fisher and puts into the water the crosspiece.
>
> He says so, and pays out the halibut fishing line. While he is paying out the fishing line, the halibut-fisher says, praying down into the water:
>
> "Now get ready for it, Smelling-Woman; do not watch it for a long time, but give it to every corner of your house, Born-to-be-Giver-of-the-House."
>
> As soon as the fishing line touches the bottom, he says:
>
> "Now, go for it, Smelling-Woman, do not play looking at your sweet-tasting food, Born-to-be-Giver-of-the-House, but take it at once, go ahead, Old-Woman, go ahead and take your sweet-tasting food, go ahead, go ahead, Flabby-Skin-in-Mouth. Do not let me wait very long on the water, Old-Woman. Go ahead, go ahead, my younger brothers are dressed with your sweet-tasting food, Old-Woman, Flabby-Skin-in-Mouth." Thus he says.
>
> As soon as he gets a bite, he says "Hold on, hold on, younger brother." Thus he says, while he is hauling up the fishing line. As soon as he sees the halibut, he takes his club and when the head comes out of the water, he strikes it on the nose. Then, the halibut-fisher says, when he strikes the halibut:
>
> "Indeed, this does not sound bad on your head, Old-Woman, you Flabby-Skin-in-Mouth, you Born-to-be-Giver-of-the-House, for indeed, I came to do so to you with my club, Old-Woman. Go now and tell your father, your mother, your uncle, your aunt, your elder brothers, and your younger brothers, that you had good luck, because you came into this, my fishing canoe" (Boas & Hunt, 1921, pp. 1321-1322).

The lengthy story is of interest to this study for two reasons. First, it authenticates the knowledge embedded in the string figure by recognizing Indigenous animistic ontology and new materialism (Deloria, 1999b; Atleo, 2005; Kimmerer, 2012, 2013, 2017; Watts, 2013; Todd, 2016; Rosiek et al., 2020) and providing a protocol framework for how to treat the halibut kin respectfully, explaining the sentience of this form of fishing gear, which can be identified in the way the fisher addresses the magnificent fish using different names (Old-Woman, Smelling-Woman, Born-to-be-Giver-of-the-House, and Flabby-Skin-in-Mouth) and the agential being of the hook, acknowledging their personhood. As discussed in Chapter 5, both the hook and the fish are not things but kin-based relations. Mamalilikala Chief T'łakwagi'lakw Arthur Dick Sr exemplifies my point when he talks about words of thanks being offered to the fellow being of halibut:

> When we use to go put the halibut gear into the water and then halibut would come up into the boat… Dada (paternal grandfather) would turn the halibut's head towards Village Island and he thanked the halibut for giving his life so we can continue to survive as humans. That's what Dada use to do. […] [A]ll the animals were human beings… That's the way Dada was (Dick Sr, as cited in D. Cranmer, 2016, p. 186).

Arthur Dick Sr's recollection is relevant to this discussion because, as 'Namgis educator and weaver from Alert Bay 'Nalaga Donna Cranmer (2016) states, "this sacredness and inter-connectedness, or *maya'xala* (respect) shown by the people, for the land and the sea resources is what allowed the Kwakwaka'wakw to live on the coast for thousands of years" (p. 183).

Arguably, reflecting the main Kwakwaka'wakw teaching of *maya'xala* and animistic ontology, the string figure reminds the Kwakwaka'wakw peoples to engage in reciprocal and respectful relationships with all of Creation, whether human or non-human agents. As Isaac (2016) goes into detail on reciprocity, in Kwakwaka'wakw culture, "we are all part of the same circle of life; we are all connected. If there is no reciprocity, the things we rely on the most will no longer come back to use" (p. 217). Second, the story also imparts certain time-tested knowledge and expertise pertaining to the making and using of this fishing apparatus. What can be inferred from the above passage is that the halibut fishing device was made of two lashed pieces of spruce wood connected together in a V-shape and, having been baited with cuttlefish or octopus, it was descended onto the bottom of the ocean, which is referred in the story as the house of the halibut under the sea. The prayer itself hints at two halibut fish hooks lowered to the ocean-bottom (bottom fishing) as it is where the fish dwells during *its/her* lifetime. This method of fishing is inscribed in the string figure which can be subject to motion, thus illustrating the bottom-fishing method. The figure is responsive to the relational knowledge of halibut fishing. Moreover, this description of halibut fishing demonstrates the level of knowledge about the fish and *its/her* environment. Considered together, it is in the story and string figure where the culturally situated meaning and millennia-old Indigenous ecological knowledge lie, for the narrative and string figure provide a deep-time perspective on its physical details such as its construction as well as application.

These nuggets of information, combined with the string figure in question, reveal and vividly depict not only the inextricable spiritual human-fish relationship but also serve as a mnemonic mechanism allowing Indigenous peoples to learn and remember halibut harvesting rules and the construction method of the fishing device. I have

pointed out the mnemonic nature of the kota string figures in several sections of this project. As demonstrated by the discussion, the Kwakwaka'wakw peoples, who constructed the refined fish hook, were skilled in observing the fish behavior which allowed them to treat the fish as an important relative and, with that in mind, adjust their fishing methods so as to prevent the depletion of the local halibut population. What is missing in the narrative though are the details crucial for the construction of the hook such as: where the necessary wood may be harvested, what time of the year one should obtain proper material, and how to harvest it in a culturally appropriate way.

The clam gardens of the Kwakwaka'wakw

The Kwakwaka'wakw *kota* repertoire also includes references to intertidal clam gardens, or *luxʷxiwēy*, which is another system of resource management aimed at enhancing the productivity and availability of particular marine resources. Having a substantive impact upon the lives of the Kwakwaka'wakw peoples and clam species, considered a staple food preserved for later use (Lloyd, 2011, p. 30), expansive clam gardens[65] played a pivotal role in their survival on the Northwest Coast, for it served to provide them with easily accessible shellfish resource sites in the vicinity of their permanent dwellings, thus ensuring their food stability and security, especially in times of hunger and starvation (Deur et al., 2015). Within the entire suite of the Kwakwaka'wakw peoples resource management systems grounded in the holistic worldview, clam gardens seem to demonstrate a significant investment of the peoples not only into understanding the land made of interacting living beings but it can also be acknowledged as a crucial innovation related to managing the local landscape on a sustainable basis, thus challenging colonial misrepresentations of Indigenous cultures as unable to cultivate the land.

I deliberately offer the following ethnographic details to help the reader envision the arrangement of a clam garden, such as the placement of rocks and distribution of tidal zones, represented by a string figure. These details serve as a bridge between the string representation of a clam garden and its physical layout. In general, Cullon (2017)

[65] This subtle manipulation of the marine ecosystem and distinct form of landscape construction erected in intertidal zones on the Northwest Coast remained overlooked by early anthropologists and archaeologists until recently even though it was responsible for drastically yet intentionally changing the foreshore in the study region. See Cullon D. S. (2017). *Dancing Salmon: Human-fish Relationship on the Northwest Coast*. (Unpublished doctoral dissertation). University of Victoria, 54.

explains that the construction of clam gardens commonly involved putting a lot of effort into moving rocks away from the beach and, then, placing them at the extreme low tide line, which, in effect, resulted in the creation of a wall at the base of the beach. Afterwards, the beach located within the enclosed area was gradually filled with sand and shell hash (p. 54). In order to gain detailed insight into the functioning of clam beds, it is worth referring to Kwakwaka'wakw Clan Chief *Kwaxsistalla* Adam Dick's knowledge of Kwakwaka'wakw resource management practices. *Kwaxsistalla* vividly recollects that these rock-walled intertidal beach terraces were an investment of group labour into resource management localities that were owned and managed by the Kwakwaka'wakw peoples. Such clam harvesting localities (*luxʷxiwēy* referring to the

Fig. 27. Ancient Clam Garden. Photo by Mary Morris.

process of rolling rocks out of clam beds towards the lower intertidal area), which were situated around the Broughton Archipelago, have been sustained by his kins for millennia (Dick, as cited in Turner et al., 2013, pp. 3-5).

When discussing details of clam harvesting, Indigenous vocabulary is used: *gawiganux* (butter clams), *gulgulum* (littleneck clams), *matani* (giant horse clams), and *joli* (cockles) (Kwaxistalla, as cited in Lloyd, 2011, p. 30), and yew digging sticks (*kellakw*) used to loosen the sediment and bring clams to the surface (Deur et al., 2015, p. 4). The words in italics are Kwak'wala terms. Similarly to *Kwaxistalla's* life-experience story of berry management in Chapter 5, I argue that the use of the Kwak'wala vocabulary with regard to clam gardens reflects Indigenous philosophies and brings back to life their relational ties with all of Creation. In this sense, it is a decolonizing act proving that the Kwakwaka'wakw have been guardians of their territories and had a relational bond with the land since time immemorial. Moreover,

invoking kinship that is woven into the land and echoing the words of *Kwaxsistalla*, it is reasonable to hypothesize that the natural habitat of various clam species was expanded in a sustainable and environmentally responsible manner, using a suite of necessary materials and implements to sustain large numbers of Kwakwaka'wakw populations.

Clams and clam digging activity carried out on the intertidal clam beds are referenced briefly in Kwakwaka'wakw stories collected by Franz Boas and George Hunt. For instance, the "Hâ'daga (Raven-Sound-in-House)" story talks briefly about clam digging and hints at Kwakwaka'wakw peoples' intimate knowledge of the local environment. In this story, which inscribes Indigenous onto-epistemologies, Winter-Dance-Woman and Hâ'da-Woman go to the intertidal beach to avail themselves of some shellfish:

> Now I will tell you a story about the ancestors of Those-who-throw-away, a clan of the Sea-Dwellers. It is said that the village of the ancestors of Those-who-throw-away was at River-in-Front. Their chief was Raven-Sound-in-House, and his princess was Hâ'da-Woman; and he had for his attendants Smell-of-Canoe and Staying-in-Canoe, and Expert-Canoe-Calker; and Hâ'da-Woman and Winter-Dance-Woman were friends.
>
> They would all the time walk down to the beach at the other side of the point of the village. Hâ'da-Woman had two dogs; and she had a grandmother, an old woman. Chief Raven-Sound-in-House was really proud; and his tribe were happy on account of the number of the tribe; and it is said Hâ'da-Woman and Winter-Dance-Woman did not follow their tribe when they invited one another. One fine day when it was low water, Winter-Dance-Woman asked Hâ'da-Woman to go to the other side of the point of the village. Hâ'da-Woman got ready at once, and the friends went down to the beach. They were going to dig clams on the beach. Winter-Dance-Woman went ahead, and Hâ'da-Woman followed her.
>
> Now, Winter-Dance-Woman saw some sea-urchins, and she picked up four of them. When she had just taken the four sea-urchins, Hâ'da-Woman came up to her. Then Winter-Dance-Woman spoke, and said, "O Hâ'da-Woman! Now do eat these sea-eggs, for they are really good." Thus she said to her. Hâ'da-Woman replied to her, and said, "O Winter-Dance-Woman! Don't say that, for I do not wish to be seen eating sea-eggs." Thus she said to her. Then Winter-Dance-Woman spoke again, and said, "Oh, I am not going to talk about you, for you really desire to eat the sea-eggs." Thus she said to her (Boas, 1910, p. 246-247).

I want to point out that the above story, illustrating Indigenous relational philosophies yet with a focus on ecological perspectives, exemplifies the importance of shellfish for the Kwakwaka'wakw peoples and the abundance of various marine species on the Northwest Coast, including sea-urchins otherwise known as sea-eggs, and clams. Upon further reflection, it also sheds light upon the clam-producing area specifying that the clam harvesting activity was carried out on the beach in the intertidal area. Nevertheless, it does it describe how *luxʷxiwēy* were created and manipulated to provide a productive and predictable food resource on a regular basis. Nonetheless, what I infer

from the narrative is the ecological knowledge related to the optimal harvesting time of clams within such gardens. It specifies that the optimal timing for harvesting this marine resource was at low tide, for the wide area of the open beach was exposed at that time. This knowledge embedded in this story presumably helped people to schedule their harvesting activities so that they did not miss the necessary window of time to collect sufficient quantities of clams during favourable conditions. In effect, the story takes the reader one step further to understanding the importance of the string figure to be discussed.

Figure 15: "Digging Clams"

Shellfish and the activity of clam digging feature in a number of *kota,* implying their significance in subsistence technologies and the annual movement of seasonal rounds. An interesting example of the place-based knowledge related to the management of clam gardens and associated activities can be found in the following string figure entitled "Digging Clams."

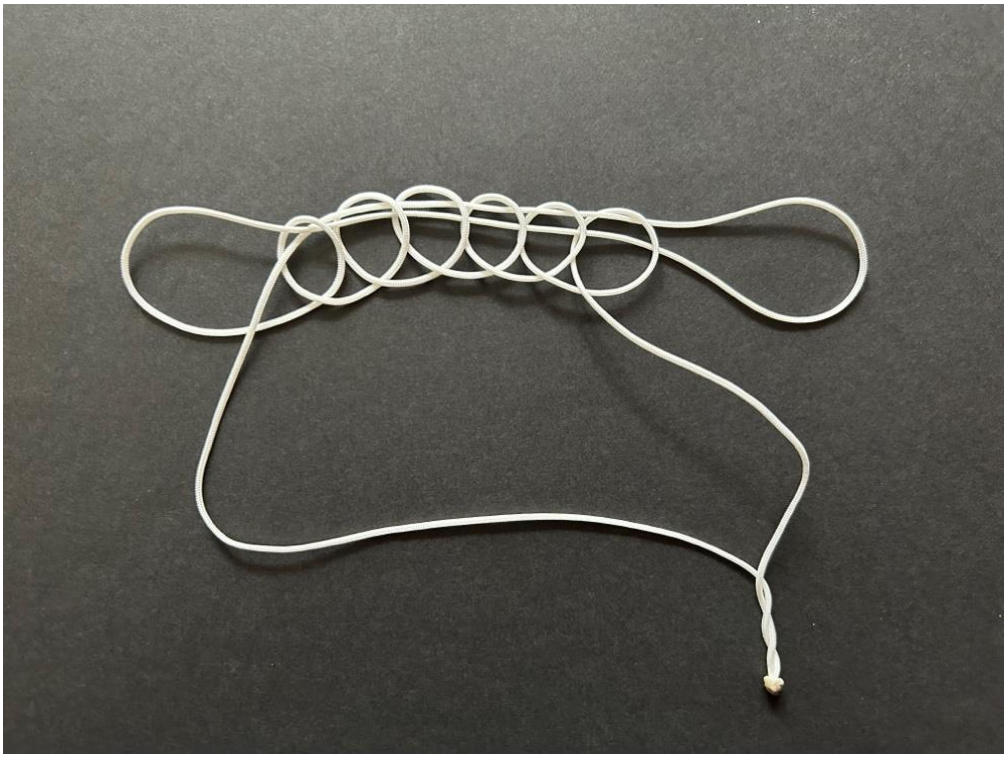

Fig. 28. "Digging Clams" string figure made by me.

The intricate pattern, recorded in Fort Rupert (Averkieva & Sherman, 2011, p. 117), consists of six mechanically created ringlets spread evenly across the top of the finished pattern. The following narrative accompanies the finished pattern, which is presented in a state of rest:

> ᵉmāsLasdzē'k·aLEnuᵉxᵘlā'lax·înlā'xsa
> k!! eō'sēk!wāx·ᵉidaōsōᵉs q! ä'lēg·înuᵉxᵘ
> tētEᵉlō' xwä'ᵉnēsLasqăpă' xsdEg·aa' Laᵉē
> âᵉmᵉlaqăp!ē'dᵉwīᵉwuᵉlaxēts! ē'daqē q! āL!ō'kwe
>
> Where are you going?
> We are going clam digging.
> Let me go!
> The boat is full. There is no place for you to sit.
> I hope the boat capsizes and all of you drown.
> The six women fall out of the boat (p. 117).

Aside from providing the following figure with the title and construction method, Averkieva and Sherman again did not elaborate upon its design and embedded meaning. On the basis of their material, I have found that two themes of interest may be embedded in this string figure. On the one hand, Mark Sherman suggests that the string figure, taking great heed of the ringlets, represents six Kwakwaka'wakw women travelling in a canoe in order to harvest shellfish (p. 117). Following this line of thought, the accompanying story is of interest to this string figure as it may shed further light upon its design. That is, what is codified within the recollected story and "Hâ'daga (Raven-Sound-in-House)" story is the fact that clam harvesting was usually a part of women's gathering activities during the annual movement from one resource area to another; yet, men, too, participated in collecting larger shellfish, especially chitons (Boas & Hunt, 1921, p. 484-485). At the same time, I would like to emphasize the role of large dugout cedar canoes, allegedly represented in the final pattern of the string figure, as part of their material infrastructure during their annual rounds, enabling the Kwakwaka'wakw peoples both to travel to their prime harvesting locales and use them as vehicles for loading collected clams. In this case, being consistent with the stories, I argue that the figure may clearly exemplify a critical role of women in the maintenance and harvesting of clam resources across time and space. Related to this is the material infrastructure, such as digging sticks and cedar canoes noted in the figure and accompanying story that also played an essential role in the management of such gardens.

On the other hand, the above lines of evidence regarding the functioning and construction of clam gardens and *Kwaxsistalla's* recollections may have a potential to yield a more complete understanding of the same string figure. Namely, having learnt and explored the *kota* figure through my tactile experience, I find it plausible to put forward that the finished design of the figure was, in fact, intended to correspond with real landscape and bear resemblance to a clam garden. In my sensory analysis of the "Digging Clams" pattern, I would like to address and draw upon Indigenous memorization techniques discussed by Indigenous scholar Tyson Yunkaporta (Wik Nation, Queensland). Similarly to Battiste, Mojica and Murphy, Yunkaporta (2020), in his book *Sand Talk,* explores the somatic and multisensory nature of Indigenous knowledge systems on the basis of sand talk which is an Australian Indigenous form of drawing images to act out events happening in stories also called yarns in order to make meaning and convey embedded knowledge. And further, the scholar (2021) states that

> in Indigenous culture symbols, patterns and images are used to encode knowledge in supra-rational ways. Images that reference places and narrative can be recalled by replicating the image or interacting with an object or place where the image is inscribed. These images are usually not literal codes for specific things, but are metaphorical (Image section, para. 1).

This knowledge is embodied in physical reality and ritual objects are mnemonic devices which "can be made and imbued with memory in a way that recall can be triggered by holding or interacting with that object at any time or in any place" (Embodiment section, para. 1). This is important because time-tested information can be deliberately encoded and read from them (Yunkaporta, 2020). Additionally, since Indigenous knowledge is located, as explains Yunkaporta (2021), landscape can be "storied and visualized from a bird-eye perspective […] [with] each point of interest on a path of travel represent[ing] part of a story and a repository of knowledge" (Locatedness section, para. 1). Applying this conceptualization of images and patterns as embodied memory techniques used by Indigenous peoples into my work, I contend that the encoded meaning related to the design of the garden and related lived knowledge of ancestors is communicated and brought to life through the movement and loops interwoven and exchanged upon the fingers of both hands. After thorough examination, following *Kwaxsistalla's* vivid description of clam gardens, focusing primarily upon the physical design of the landscape construction and its regular maintenance, a closer look at the pattern leads me to think that the woven interconnected circles are similar to the wall construction made of piled up cobbles and accumulated at the zero tideline.

Whereas, as appears to be the case, the bottom part of the figure may depict a culturally-modified terraced-like beach situated on the landward side of the rock formation wherein clams were cultivated in soft sediment. Approached in this way, my analysis shows that the figure, as a visually tactile way of learning and transmitting knowledge, can be very suggestive and illustrative as it arguably preserves the Kwakwaka'wakw ecological knowledge related to the construction of clam gardens, shedding light upon human-built features of the resource management systems devoted to enhancing the quality and productivity of diverse shellfish species. I recognize that this pattern is an invaluable tool and memory aid that conveys the concept of *maya'xala*. It might be used to trigger memory and retrieve stories that contain knowledge related to the construction and operation of clam gardens. As a form of cultural revitalization and survival of the Kwakwaka'wakw peoples, these stories and the *kota* figure embody these ancestral ways of knowing back to life in the present, challenging the dominant discourse and constant abuse of the land within their ancestral territories. This knowledge is stored in the body, mind, and image. "Most people have hands, so if we put all the knowledge into them, anyone can carry it around" (Yunkaporta, 2020) and inscribe it into *kota* string figures.

6.4. Conclusion

In this section of my research project, I have demonstrated that the performance art of *kota* serves as a vehicle for preserving and expressing the holistic nature of Creation and land-based experiential knowledge of the Kwakwaka'wakw peoples. This knowledge of people from many lifetimes is woven into intricate ties and knots comprising *kota* string figures. As a decolonizing strategy, the act of reclaiming this knowledge begins a process whereby what seems to have been thrown into oblivion or lost is brought to light into the present by means of images, multi-sensory experience, repetition, old narratives and personal life reminiscences. These visual patterns collaborate with chants and stories in order to reinforce embedded teachings and instructions. Therefore, the performance art of *kota*, braided with Indigenous epistemologies and ontologies, serves an act of cultural resurgence that may help the Kwakwaka'wakw peoples revisit their relationship with the land and their communities.

Kota is an excellent example of pattern literacy and memory technique that uses tactile and embodied learning[66] to map geographical features and sacred harvesting sites, suggesting their general outlines preserved in terms of final string patterns. Narratives replete with Kwak'wala place names accompany this practice, situating the Kwakwaka'wakw peoples in relation to the local landscape, well-established trails as well as subsistence locales that evoke deep meanings inextricably linked with the cycle of life. These designs demonstrate the extent of the Kwakwaka'wakw ancestral territory and exemplify the location and use of sacred harvesting sites, shedding light upon the type of cultural keystone resources collected within their land. There is relational knowledge of the land made of more-than-human beneath the string fibers and intricate shapes, carrying the voices and perspectives of Kwakwaka'wakw ancestors. Through kota, the maker can reclaim and bring into the present the spiritual intimacy and relational bond with the sentient more-than-human world. This knowledge embodied by the maker is a living thing that is patterned within all of Creation.

Finally, *kota* patterns enact teachings and guidance pertaining to various sentient harvesting and management systems devised and applied in the Kwakwaka'wakw territory. As tangible metaphors and visual representations of real objects, whether in a state of rest or motion, these patterns not only depict refined adaptive fishing implements but also contain detailed information concerning their construction and use. When examined closely, *kota* designs are imbued with contextually-specific meaning and vividly resemble the design of the sophisticated fishing gear and resource management sites, thus comprising knowledge-making praxis that guides and advises on the construction and operation of these fishing tools. Paying particular attention to certain construction elements of the figures, being equivalent to corresponding features of the fishing apparatus, *kota*, as my research has demonstrated, pointed the Kwakwaka'wakw in the right direction of planning so that their harvesting could be carried out in a reciprocal and responsible manner. The provided information is significantly validated by the ancestral and life-experience narratives further illuminating the use of such fishing technologies and management systems. The memories and teachings of ancestors lie in *kota*.

[66] As I have noted throughout this chapter, *kota,* as a way of learning, teaches and transmits generations of embodied knowledge that was generated and shared through relational connections that string makers, knowledge holders, harvesters, and fishers have with one another, plants, fish, seascape, and landscape.

Chapter 7

Conclusions

> *If research doesn't change you as a person,*
> *you haven't done it right* (Wilson, 2008, p. 135).
>
> **Shawn Wilson**
> Opaskwayak Cree scholar

The aim of this dissertation has been to analyze selected Indigenous stories and *kota* string figure patterns for the purpose of demonstrating how they have updated, preserved, and transmitted Indigenous ecological knowledge systems of Northwest Coast First Nations across time and space. Throughout the study, I have sought to address key gaps in the literature and make contributions to guide future research. Through the body of evidence presented in this research project, substantial information on land-based Indigenous stories and string patterns as a transmission mechanism has surfaced. Specifically, the analysis of these land-based storytelling traditions shows the pathways through which Indigenous ecological knowledge has been acquired and dispersed by knowledge holders in the focus communities. This chapter summarizes the main findings of the thesis research, including outcomes, lessons learned, contributions, conclusions, and plans how to further the research.

Researching and writing this dissertation has been an act of reconciliation balancing my Euro-Western academic education and Indigenous research methodologies that is manifested in the writing of these chapters. As an intense research and personal journey that has changed me in ways that I would not have predicted, it has had a lengthy development because writing about Indigenous peoples of the Northwest Coast, their ecological ways of knowing, and storytelling and *kota* string figures from a visitor perspective is a difficult task. I have used transcultural storywork framework for analyzing and understanding Indigenous traditional stories, life experience stories, and *kota* string figures as a form of pattern literacy embodying lessons and manuals for sustainable living. I have found that this relationally-driven ancestral knowledge is embedded in creation stories, life experience stories, and string

figures which connect historical and factual information with teachings and guidance. My findings show that Indigenous stories and string figures serve as a vehicle for preserving, conveying, and updating relationally-driven teachings and detailed information pertaining to ecological relationships among various species, medicinal and technological uses of plants and animals, resources and harvesting locations, stewardship of lands and resources, sustainable management systems, and detailed manuals related to refined adaptive harvesting innovations.

My dissertation starts with questions I have sought answers to. The central question that is fundamental to this work is how Indigenous stories, creation stories, life experience stories, and *kota* string figures preserve, update, and transfer Indigenous ecological ways of knowing. Because Indigenous knowledge systems are situational and place-based, I have chosen to work with the region of British Columbia and have used the voices of Northwest Coast First Nations to illustrate my points. Exploration of any other region would require another in-depth study into specific cultures. I have tried to foreground voices of Indigenous storytellers, Elders, scholars, and critics, affirming their philosophies and knowledges, thus contributing to the discussion on the decolonization of mainstream colonial perspectives and geopolitics of knowledge. Using Archibald's principles of *storywork* to make meaning of the examined stories, I have shown that, through various types of stories and *kota* string figures, Indigenous peoples of the study region have transmitted the ecological wisdom of their ancestors that has been critical to their survival. In this way, storytelling serves as the background to everything Indigenous peoples do. Stories and *kota* string figure patterns hold a lot of power, embody complex relational worldviews and provide a cultural framework for preserving and transmitting these land-based ways of knowing to younger generations.

From the outsider's perspective, these stories and performance art of *kota* are read as entertaining legends, myths, or fairytales. I expose these colonial misrepresentations as in fact they convey complex Indigenous onto-epistemologies. Moreover, for Indigenous peoples, storytelling itself, as demonstrated in this dissertation is the most appropriate form of keeping and sharing place-based Indigenous ecological knowledge grounded in the relational worldview. Stories and *kota* string figures are etched into the landscape and seascape, its fauna and flora. They can be employed to educate and instruct Indigenous peoples to act in a respectful and sustainable fashion with regards to their ancestral homelands and local resources, their land and more-than-human world, foregrounding anti-anthropocentric perspectives. In addition, I argue that the

revitalization of Indigenous stories and the performance art of *kota* string figures and embodied knowledge may also serve both as an act of restoring relationships with the land and Indigenous resurgence in the form of re-engagement with traditional lifeways and ways of knowing. It is a weaving of resurgence, resilience, and reconnection with the holistic concept of the land which disrupts the machinery of settler colonialism.

As my research shows, teachings found in stories and string figures, developed specifically to describe collective lived experiences[67] coming directly from the land, date back thousands of years, transmit the history of their traditional territory, relational philosophies/onto-epistemologies and axiologies, and show Indigenous peoples how to respond to the ecological rhythms of their territory in order to live in harmony and engage with the local ecosystem and the human and more-than-human worlds. This is intimately linked with the relational worldview and understanding that we are all interconnected with each other, promoting a sense of responsibility and accountability. It is of great substance that my analysis demonstrates that the selected stories and string figures, transcending time and connecting Indigenous peoples to their ancestors, are used as a tool of reminding them of their enduring relationship with the land and ancestral territories. They allow them to communicate with future generation just like their ancestors would communicate with them. They connect Indigenous peoples to their territory and create holistic ties defining who they are. Evidence of this lies in stories and string figures that serve as the archive of their worldview and harmonious co-existence with the land and spiritual ties with sentient non-human creatures. The principle of interrelatedness is at the heart of stories and *kota* string figures. That being said, I argue that *kota* string figures lined with value laden creation stories handed down through generations reflect this kinship relationship between Indigenous peoples and all other living entities.

I have shown that Indigenous stories and string figures are lived expressions of Indigeneity and serve as an ethical guide in a socializing mechanism targeted at determining Indigenous peoples' behaviour and actions with regard to the local environment and biodiversity. Helping to shape the codes of ethics and conduct for Indigenous communities and justify their sacred thoughts and actions, they are retold in order to teach younger generations how to act and strengthen their socially acceptable roles and responsibilities when being on the ancestral land and maintaining a strong

[67] It is important to note that the collective experience comprises a number of individual experiences coming directly from the Indigenous land.

respect for all living things. It brings to life a distinct relationship with the ecosystem and resources that extends to environmental stewardship based on the belief that the land serves as the heart of all creation. The findings of my project highlight how Indigenous stories and *kota* string figures affirm the experiences and epistemologies of Indigenous peoples and regulate the specific cultural and social order by means of presenting cultural protocols that ought to be obeyed while interacting with the ecosystem, with all the seen and unseen beings. The lesson I have gained from my observation and analysis is that the Northwest Coast First Nations relate such stories and create selected string figures in order to convey the onto-epistemological idea of holism and validate the idea that they have a kinship relationship with plant and animal species and that their health is intimately connected with the well-being of resources. I think that inscribing the kincentric philosophy and recognizing the interconnectedness of all living things, the analyzed Indigenous stories and string figures might be read as regulating harvesting and management activities while discouraging disrespectful and wasteful treatment of resources and promoting a sense of responsibility and conservation.

My exploration of the topic reveals that the land is not merely a supplier of resources to be exploited but it should be respected and looked after for the sake of future generations, for it shows the construction of place-based identities. In this regard, I believe that these land-based storytelling traditions have allowed Indigenous peoples to create a peaceful and thriving existence for thousands of years. This respectful connection to the land and resources is demonstrated through the analyzed plots of stories and finished *kota* string figure patterns. As a durable medium, these stories and string patterns represent the ancestral land to which Indigenous peoples belong. I have shown that storytelling and *kota* string figures play a large role in Indigenous worldview and their ecological knowledge. Having witnessed the reclamation and revitalization of Indigenous knowledges and philosophies, itis my dream that similar processes will take place in the Eastern European Slavic cultures, and particularly Upper Silesia, that we will use our stories to reclaim the pre-industrial or even pre-Christian history of the region, revive its Indigenous worldviews and knowledge systems, and rebuild our sacred connections and relationship with the land and all Creation.

Having analyzed these stories, I have revealed that they give clues about instructions necessary for the proper application of the sustainable cultural management systems operated at a community level and in compliance with the notion of

stewardship. I have illustrated that these stories and figures indicate that Indigenous peoples possess in-depth knowledge related to ecological characteristics of the plants and climatic features of the local ecosystem so as to apply different ingenious technologies. Importantly, my project shows that the visual images of the string figures, taking advantage of repetition, order, and visualization, collaborate with various stories in order to reinforce the conveyed teachings. On closer inspection, I have demonstrated that this tactile and embodied way of learning and transmitting knowledge on the managements systems embedded in creation stories and string figures is also corroborated by life experience stories given by knowledge-keepers.

What has also been inferred from the compendium of Indigenous narratives and *kota* string figures from the study region is that they consist of references to and preserve land-based know-how on a variety of ingenious sustainable technologies developed over thousands of years and their intricate construction methods and functioning, such as fence weirs, basket traps, fish hooks, kelp gardens, and clam gardens. I have highlighted that Indigenous stories hand in hand with *kota* string figure patterns, featuring supernatural characters, serve as a sort of instruction manual imparting precise guidelines and advice pointing at Indigenous peoples, acting as caretakers of the landscape and seascape, in the right direction of planning, designing, and construction steps of these communally operated and highly-specialized technologies. Following this line of thought, this thesis offers a compelling argument that *kota* string figures provide an invaluable visual material of sophisticated salmon fish weirs and basket traps, halibut fish hooks, and clam gardens as it helps one remember the proper construction of fishing technologies utilized to carry out efficient yet sustainable harvesting. What is of great importance here is that stories and *kota* patterns share a holistic perspective on the treatment of natural resources; yet, they present species not as resources but as partners living in harmony with one another in the relational world, which, as I argue, has played an essential role in designing and operating these sustainable technologies. This study strongly suggests that *kota* string figures as visual narratives serve as a natural pedagogical tool that could enrich the learning process.

Another finding of this dissertation is that many stories and string figure patterns consist and illustrate specific landmarks and geographical boundaries that function as mapping devices used during seasonal rounds indicating prime harvesting location with a particular territory. I argue that some stories and associated string figures can be used

as a mapping device that commemorates geographical features and thus essential harvesting localities. It is spatial knowledge that is preserved and transmitted in stories and woven into the intricate ties and knots comprising *kota*. As my analysis reveals, some stories and *kota* string figures may be employed as a sort of performance cartography aiming not only at illustrating characteristic landmarks within a given landscape and ecological area but also locating highly-valued resource locales and deep time occupancy locations within their territories. My research encapsulated in the above paragraphs makes a crucial assertation that accompanying stories contribute to the imagery of the map-making in the form of string by situating geographical names on the string formation and the repetition of specific names, which is likely a mnemonic mechanism. Given that, the natural surroundings of the land, such as trees, rivers, mountains, rocks, may serve as a history book.

Finally, I have established that these land-based storytelling traditions, as a source of place-based knowledge, serve as traditional pathways for knowledge transmission, integrating new information and ways of knowing. Indigenous stories conveying Indigenous ecological knowledge may evolve with the changing environment and ancestral territories, seasonal movements, availability of plant and animal resources, changing weather patterns, landscape changes and bring the past forward to the present time. As such, these intergenerational forms of cultural transmission are adaptive and responsive to new ecological and social conditions as long as the land serves as an epistemological authority. Thus, it can be said that they change according to the needs of Indigenous peoples to preserve and convey an updated version of their teachings and place-based knowledge pertaining to the local ecosystem and its cultural resources.

This thesis illustrates the importance of land-based storytelling and *kota* string figures in culturally reclaiming and renewing Indigenous knowledges and well-being. Just as Indigenous knowledge is cyclical, so has my dissertation involved endless cycles of learning and evaluating and thus it tells the story of what I have learnt so far on this research journey without end. I have been particularly empowered by the significance of Indigenous stories and *kota* string figures which demonstrate a remarkable potential to heal contemporary Indigenous communities suffering from spiritual and emotional illnesses related to settler colonialism. I have felt the weight of responsibilities to Northwest Coast First Nations and knowledge-keepers to conduct myself in a principled manner that has respected Indigenous ways of doing during the course of this study. And again, following Indigenous methodologies, I have answered many questions with

this research, including some that emerged as the research project progressed. For me as a person and researcher, this research project has been a raising of consciousness journey, a ceremony, and I think this statement like a *kota* string figure ties up together all the relationships that have gone into the creation of this dissertation.

In the end, I trust this research and information that I have articulated will be of benefit to Northwest Coast First Nations and their ongoing journey of Indigenous knowledge reclamation, as well as to academic audience. My decolonization research creates a space to challenge the acts of oppression and foreground and advance Indigenous oral traditions, pattern literacies, and onto-epistemologies. By providing a comprehensive understanding of the place-based relational knowledge and Indigenous philosophies conveyed by narratives and the pattern literacy of *kota* string figures, I hope my thesis can serve as a tool for reclaiming and validating this knowledge. I add my voice to the current debates on post-anthropocentric perspectives challenging the dominant human-centered worldview placing human beings as superior entities in relation to the rest of Creation. By centering the voices and perspectives of Indigenous Knowledge-holders in my research, I hope this study may lead to a greater recognition, respect, and empowerment of the Indigenous groups I have been examining in this project both on Turtle Island and beyond; they have been working hard to reclaim their rightful place as knowledge holders and guardians of their ancestral lands and move their communities forwards, and I envision my work as contributing to their cultural revitalization efforts and self-determination, as well as inspiring other cultures to delve into indigeneity by learning or relearning "how to become indigenous to their local place in locally specific ways" and remember their own Indigenous knowledges (Yunkaporta, 2019, p. 163).

It is important to note that research in Indigenous communities has not always been carried out in an ethical way and has not benefitted the communities. With this dissertation, I recognize the authority of Indigenous people and I will present my research findings to the Knowledge-holders I have had interviews and contact with; I would like them to decide how the findings should be utilized and disseminated within their communities. I have already engaged with Indigenous scholars at numerous conferences when I gave academic presentations on *kota* as a knowledge making-praxis, and they appreciated and approved my respectful anti-colonial research project which documents and celebrates their oral traditions, cultures, and place-based knowledge systems. As a learner, not a discoverer of the Indigenous communities' knowledge, I

think sharing this thesis with them will foster my collaborative relationship with the Knowledge-holders and result in further projects. I also trust it will open the door for ongoing dialogue, feedback, input, and guidance from the community members, thus making sure that my future research aligns with their priorities, ethical research practices, and needs.

By reclaiming and affirming Indigenous land-based ways of knowing and philosophies as a form of ongoing survival and resistance against settler colonialism, I also envision this thesis as offering a guideline and inspiration to scholars and writers and communities from Eastern European Slavic cultures to revitalize our/their lost or eroded reciprocal and respectful connection with the land and all of Creation, reevaluate our/their own methods of intergenerational knowledge transmission, and foster collective learning that arises from the land as a significant source of knowledge. The Northwest Coast First Nations' decolonial and re-indigenizing perspectives can also be inspiring for minority Slavic cultures in Eastern Europe and their reclamations of Indigenous onto-epistemologies/pre-Christian perspectives, as discussed by Jeannette Armstrong (2017). Moreover, constant struggle for political and cultural sovereignty that Indigenous cultures of the Northwest Coast have been involved in, can be compared with the development of decolonial consciousness and practices in Eastern/Central Europe – once subject to Austrian, German, Hungarian, Tsarist, and Soviet versions of ceaseless expansion and colonization – leading to the transformation of our relationship to the land, to the emergence of new ideas on social identity, the validation of regional cultures, and the reclamation of local knowledges. Drawing upon Sojka's observations (2021), I hope that the Northwest Coast First Nations' experience of reclaiming the land-based ways of knowing and relational philosophies through storytelling can be translated into the situation of Upper Silesians whose stories embody the Indigenous knowledge of the land. This would mean valorizing the knowledge and worldviews of Upper Silesians embedded in local stories serving as a decolonizing tool which could "unite the old and new inhabitants of Silesia and provide a joint spiritual vision of this region" (p. 188).

In order to disseminate my research findings further to contribute to the preservation and appreciation of Indigenous storytelling and storied relational knowledges, I will develop educational resources that will integrate my research findings on Indigenous narratives as a knowledge-making praxis. As part of the indigenization of education, these resources can be used at universities and cultural

institutions both in Canada and beyond to promote a deeper understanding and appreciation of Northwest Coast cultures, oral traditions, and traditional knowledges. To ensure that these materials are respectful and accurate, I will cooperate with Indigenous scholars, Knowledge-keepers, and non-Indigenous scholars-allies to tailor such resources to specific contexts. I will use these teaching materials at the University of Silesia to bring Indigenous onto-epistemologies to the classroom and academia and teach to recognize the sentient nature of all Creation, thus avoiding anthropocentrism and academic conceptualizing.

I hope my study also inspires further research into Upper Silesian identity. I would like to continue the project Indigenous Expressions of Culture in Storytelling, Drama, Theatre and Performance – Traditional and Contemporary Canadian and Polish Upper Silesian Perspectives[68] to explore the richness of Indigenous expressions of culture in storytelling in Canada and Upper Silesia. I believe that fostering such transcultural dialogues among scholars, educators, and artists from marginalized cultures offers an enriching experience for Upper Silesians, striving for linguistic revitalization and recognition as a minority. In addition, I envision my project to contribute to the on-going process of re-indigenization of Upper Silesia and other minority cultures which I see as developing interest in Indigenous cultures and traditions. This process is already underway, which is evident in the efforts of online Slavic culture groups, with a particular focus on Upper Silesia, to revive their pre-industrial and pre-Christian cultures, languages, knowledge systems, and a respectful relationship to the land. These include such groups as "Sławosław,"[69]"Kaszëbskô Jednota"[70] ("Kashubian Association"), "Ślonsko Ferajna"[71] ("Silesian Society), Gŏdōmy po ślōnsku[72] ("We speak Silesian"), and "Śląsk jest sliczny!"[73] ("Silesia is beautiful"). Online news and information platforms and radio stations have emerged (TV Silesia, Slonsky Radio, Radio Piekary, Radio Kaszëbë) which, as Sojka observes,

[68] Indigenous Expressions of Culture in Storytelling, Drama, Theatre and Performance – Traditional and Contemporary Canadian and Polish Upper Silesian Perspectives was the first of the intended series of conferences dedicated to the transatlantic exploration of indigeneity within storytelling, drama, theatre, and performance in traditional and contemporary perspectives. It focused upon selected Indigenous cultures of Canada/Turtle Island and local/Indigenous cultures of Upper Silesia. The conference was organized on April 26-28, 2017 jointly by the Department of American and Canadian Studies at the University of Silesia in Katowice, Poland, and the University of Fraser Valley, BC, Canada.

[69] See https://www.slawoslaw.pl.

[70] See http://kaszebsko.com.

[71] See https://www.facebook.com/SLONSKO.FERAJNA/?locale=pl_PL.

[72] Seehttps://www.facebook.com/GodomyPoSlonsku.

[73] See https://www.facebook.com/groups/506811356013712/?locale=pl_PL.

"function as major tools of language and culture revitalization" (2021, p. 178). The revitalization of Slavic cultures, language, and knowledges is significantly influenced by these endeavors, inspiring a process of regional identity building (178).

In addition to these activities and institutions, there are other scholarly endeavors dedicated to revitalizing Slavic cultures. They include, for instance, the University of Silesia research group Trans-Indigena: International Studies in Artistic Expression of Local and Indigenous Cultures, which I am proud to be involved in. Our team carries out research on local, Indigenous, and minority cultures in Canada and Poland, with a specific focus on the Indigenous culture of Upper Silesia. Guided by decolonial theories and methodologies, the group's aim is to explore Indigenous forms of cultural expression and Indigenous onto-epistemologies.[74]

Moreover, to further the dissemination of my research findings and reach a wider Indigenous and non-Indigenous audience, I plan to present the findings in seminars and public lectures, using storytelling sessions to facilitate meaningful dialogue in line with Indigenous research methods and ethical protocols. Indigenous Knowledge-keepers will be invited to lectures and workshops that I plan to organize. I hope my decolonizing and indigenizing research reaches Indigenous and non-Indigenous scholars-allies via publications. I will seek opportunities to co-author publications written by Indigenous scholars to ensure that Indigenous perspectives and voices are respected in the dissemination process. Finally, I plan to create a website where I will share my research findings, publications, and related resources. I have taken steps to record visual representations of *kota* string figure patterns along with their step by step construction methods to enhance engagement of Indigenous and non-Indigenous scholars-allies.

The implications of this research are far reaching and there are many areas for future research that emerge from this study. Hence, given the ongoing concerns pertaining to the loss of Indigenous stories and ecological knowledge as result of disconnection from the land and the more-than-human world, my work in the area of Indigenous storytelling and Kwakwaka'wakw *kota* string figures and Indigenous ecological knowledge will continue beyond this dissertation.

The way that this interdisciplinary research began was in ceremony. As I have strengthened my connection to Indigenous story-based methodology, I have also come

[74] More information on the research group Trans-Indigena. International Studies in Artistic Expression of Local and Indigenous Cultures is available at https://www.youtube.com/watch?v=5sFwnyuio0A and https://us.edu.pl/instytut/inok/o-instytucie/zespoly-badawcze/.

to understand how important stories are. It was not until I started writing this dissertation that I realized the significant role that stories have played in my understanding of the world. I have always used stories to transmit knowledge to my students, and I have used life experience stories to form connections with them. However, I now also understand that I use stories to make meaning from my life and my experiences. This awareness helps me create a bigger appreciation for all of life and it brings me back home, reconnects me to the place where I began, to the land and relations that feed me, and to the stories and knowledge that the land holds. This journey has woven together not only my own narrative but also the stories of those who generously shared with me. Now, it is my ceremony of sharing what I have been privileged to hear, experience, and learn over the years through the sharing by Indigenous Knowledge-keepers, scholars, and critics. My research journey has been a reclaiming and decolonizing process for me. And there are many other stories that need to be told, and new experiences await.

Gilakas'la.

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Abstract

The interdisciplinary study explores the preservation and transmission of Indigenous land-based and place-based ecological knowledge systems, onto-epistemologies, and relational kin-based philosophies of Northwest Coast First Nations through the lens of storytelling and performance art of *kota*. Focusing on selected Indigenous stories and *kota* string figures from British Columbia, this research gives voice to Indigenous peoples and demonstrates that these cultural expressions not only embody complex relational worldviews, but also serve as a knowledge-making praxis, providing Indigenous people with guidance on respectful and reciprocal interactions with the sentient land and its living entities, foregrounding anti-anthropocentric perspectives. This thesis illustrates the importance of land-based storytelling and *kota* in culturally reclaiming the early Indigenous storytelling tradition, their land-based ways of knowing and relational philosophies.

The study begins with an exploration of the author's transcultural positioning, research as a ceremony, and a thorough review of the literature on the topic of Indigenous storytelling and ecological knowledge. As discussed in Chapter 3, this research adopts Indigenous storytelling as a decolonizing and indigenizing methodological framework and method to examine traditional stories, life-experience narratives, and *kota* string figures as repositories of land-based and place-based knowledges and ancestral teachings on harmonious living and relationship with the land, and the human and more-than-human worlds. Drawing upon Marshall's Two-Eyed Seeing framework and Archibald's principles of *storywork*, the study reveals how these narratives and *kota*, as a form of pattern literacy, embody a kinship relationship between humans and all beings, reflecting the interconnectedness of Indigenous experiences and their onto-epistemologies.

Chapter 4 delves into the distinct nature of Indigenous storytelling, focusing on the rich oral traditions of the Northwest Coast and highlighting its importance as the underpinning of Indigenous lifeways and acts of survivance in the present. Building upon this foundation, Chapters 5 and 6 analyze selected narratives and *kota* string figures to show how mnemonic aids and tactile and embodied learning facilitate the transmission of ecological relationships among various species, medicinal and technological applications of plants and animals, availability and location of resources,

land stewardship, sustainable harvesting and management practices, and instruction manuals of fishing technologies. Recognizing the kincentric philosophy and interconnectedness of all living beings, these stories and *kota* are lived expressions of Indigeneity, connecting Indigenous peoples to their territory and creating holistic ties defining who they are. As a pedagogical tool, *kota* collaborate with various stories to reinforce teachings on sustainable harvesting and management practices, shape the codes of ethics discouraging disrespectful and wasteful treatment of resources, and foster responsibility and conservation. The analysis also reveals that certain *kota* patterns serve as a form of performance cartography, illustrating landmarks within an ancestral territory and locating sacred resource sites. Accompanying stories contribute to the imagery of the map-making in the form of string by situating geographical names on the string formation and the repetition of specific names.

As the final chapter concludes, the revitalization of Indigenous stories and the performance art of *kota* and storied knowledge may serve as acts of restoring relationships with the land and fostering Indigenous resurgence in the form of re-engagement with traditional lifeways and ways of knowing. This process weaves together elements of resurgence, resilience, and reconnection with the holistic concept of the land to disrupt the mechanism of settler colonialism, re-indigenize Western academia, and foreground the importance of reclaiming Indigeneity in Eastern/Central European minority Slavic cultures, with a focus on re-indigenizing Upper Silesia functioning within a larger dominant narrative. By highlighting the voices, perspectives, and worldviews of Indigenous Elders, scholars, and critics, this research contributes to the on-going discourse on the decolonization of mainstream colonial perspectives and geopolitics of knowledge.

Streszczenie

Celem niniejszej rozprawy, która ma charakter interdyscyplinarny, jest prezentacja sposobów utrwalania i przekazu rdzennej wiedzy ekologicznej, a także treści dotyczących ontologii, epistemologii oraz światopoglądów Pierwszych Narodów z północno-zachodniego wybrzeża Kanady. Problematykę tę badam, analizując przykłady z zakresu sztuki opowiadania (storytellingu) oraz sztuki performatywnej zwanej *kota,* polegającej na wyplataniu wzorów ze sznurków. Skupiając się na narracjach oraz wzorach *kota* pochodzących z Kolumbii Brytyjskiej, staram się pokazać, że te lokalne formy ekspresji kulturowej nie tylko zawierają złożone holistyczne światopoglądy, lecz również służą do przekazywania wiedzy kolejnym pokoleniom. Dostarczają rdzennym narodom cennych wskazówek, dotyczących relacji z ziemią oraz znajdującymi się na niej różnymi formami życia, które, zgodnie z rdzennymi światopoglądami, są obdarzone świadomością i wymagają szacunku. Wspomniane przeze mnie narracje i wzory *kota* pokazują człowieka jako istotę spokrewnioną ze zwierzętami i roślinami, wraz z którymi stanowi on część uporządkowanego i zharmonizowanego koła życia. Współcześnie storytelling i *kota* są cennymi źródłami odzyskiwania rdzennej tradycji ustnego przekazu, która w wielu miejscach zaginęła z powodu kolonizacji rdzennych narodów przez białych osadników.

W dwóch pierwszych rozdziałach rozprawy doktorskiej prezentuję swoją transkulturową pozycję, z której prowadzę badania, traktowane przeze mnie jako rodzaj ceremonii. W tych częściach zawarłem również szczegółowy przegląd literatury na temat rdzennej sztuki opowiadania (storytelling) oraz wiedzy ekologicznej. W rozdziale trzecim wykorzystuję storytelling, który jest dla mnie zarówno dekolonizującą metodologią, jak i metodą badawczą, pozwalającą w tradycyjnych opowieściach, osobistych narracjach i figurach *kota* dostrzec ich ogromny potencjał wiedzotwórczy. Ta wiedza pochodzi zarówno z ziemi, jak i nauki przodków, i dotyczy życia człowieka w harmonii z otaczającym go środowiskiem, a także światem duchowym, pozamaterialnym. Indygeniczne metodologie, którymi posługuję się w tej części pracy, to m.in. „Two-Eyed Seeing" Alberta Marshalla oraz „Storywork" Jo-Ann Archibald.

W rozdziale czwartym skupiam się na przybliżeniu bogatej tradycji ustnego przekazu narodów żyjących na północno-zachodnim wybrzeżu Kanady. Podkreślam istotne znaczenie storytellingu dla rdzennej ludności, traktującej go jako podstawę życia

i przetrwania we współczesnym świecie. W kolejnych dwóch rozdziałach analizuję wybrane narracje i wzory *kota*, pokazując, w jaki sposób mnemotechnika oraz kinestetyka ułatwiają przekazywanie wiedzy na temat ekologicznych relacji między różnymi gatunkami, leczniczego i technologicznego zastosowania poszczególnych roślin i zwierząt, a także dostępności i lokalizacji zasobów naturalnych. Analiza narracji oraz sznurkowych splotów dostarcza również wiedzy na temat odpowiedzialnego zarządzania środowiskiem naturalnym (stewardship) czy protekcyjnych praktyk pozyskiwania zasobów naturalnych, z czym wiążą się chociażby instrukcję, jak skonstruować wysoko rozwinięte selektywne narzędzia połowu.

W zgodzie z wyznawanym holistycznym światopoglądem, stanowiącym podstawę rdzennej wiedzy, omówione przeze mnie lokalne formy ekspresji kulturowej umiejscawiają Pierwsze Narody badanego przeze mnie obszaru w zintegrowanej i harmonijnej relacji z ich tradycyjnym terytorium, a także wytwarzają holistyczne więzi ze wszystkimi formami życia, które definiują ich działania i tożsamość. Warto zauważyć, że *kota* oraz niektóre narracje, realizują również cele pedagogiczne; wzmacniają nauki dotyczące zrównoważonych i protekcyjnych praktyk pozyskiwania zasobów naturalnych oraz stanowią model etycznego regulowania określonego porządku. W efekcie mają przeciwdziałać wytrzebieniu roślin i zwierząt oraz promują postawy proekologiczne. Analiza wybranych przykładów pozwala uwypuklić, że niektóre wzory *kota* funkcjonują jako sztuka kartograficzna, w interaktywny sposób ilustrująca punkty orientacyjne i elementy krajobrazu na danym terytorium, a także wskazująca święte miejsca i lokalizacje związane z pozyskiwaniem zasobów naturalnych. Narracje towarzyszące geometrycznym wzorom są częścią mapy, składającej się ze splecionych sznurków i powtórzonych w odpowiednich momentach nazw geograficznych.

W podsumowaniu rozprawy zwracam uwagę na to, jak rewitalizacja rdzennych narracji i *kota* może skutecznie przywrócić relacje ze środowiskiem naturalnym i sprzyjać odrodzeniu rdzennych kultur poprzez powrót członków rdzennych społeczności do tradycyjnego stylu życia i czerpania wiedzy pochodzącej z ziemi. Odrodzenie rdzennej kultury i przywrócenie holistycznego kontaktu człowieka ze środowiskiem naturalnym jest formą walki z kolonializmem, jedną z jej odsłon jest również indygenizacja środowiska akademickiego. Doświadczenia kanadyjskie wydają się niezwykle istotne i warte uwzględnienia w procesie odzyskiwania rdzenności kultur słowiańskich Europy Środkowo-Wschodniej, w tym emancypującej się kultury Górnego

Śląska, która funkcjonuje w obrębie większej, dominującej kultury narodowej. Praca ta stawia w pozycji centralnej filozofie i wiedze starszyzny ludności rdzennej, oraz indygennych badaczy i krytyków. W ten sposób, jako badacz reprezentujący zachodnie instytucje wytwarzania wiedzy, wspieram proces dekolonizacji i zmiany geopolityki wiedzy na bardziej sprawiedliwy.