

Paths to Sustainability: Creating Connections through Place-based Indigenous Knowledge

by

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Abstract

For most of humanity's existence, a robust human-nature relationship was paramount. Any inherent benefits were clearly understood and respected. However, in the last 500 years of western history, religious dependence diminished in favour of a more rational and humanist approach and market economics rose in prominence. This evolution encouraged notions of cultural separation from nature that led to an emphasis on the individual, the expansion of private land ownership and the commodification of natural resources. These misguided beliefs then spread throughout the world during colonization. The result has been a mass degradation of the earth's ecological health, alongside a strong decrease in the positive qualities of tradition and community life. Repair of the human-nature connection is urgent.

This research demonstrates that Indigenous people living among us today who embody Traditional Ecological Knowledge (TEK) can offer insights to heal this serious rift. They teach us that without honest human-nature relationships and a grounded existence in place, long-term prosperity for western civilization will be challenging. An Indigenous worldview demonstrates that place-based learning and the repair of community connections is imperative for healthy social-ecological systems. Nature's importance must be regarded for its own sake, not just for the benefit of humans. Incorporating these principles into present-day society encourages more sustainable practices and helps to treat our common planet with respect. In addition, the act of receiving traditional wisdom from our Indigenous neighbours facilitates a reconciliation of the tragic legacies that endure from colonization. Without this fundamental healing, little long-term recovery of people and the land is likely.

Lay Summary

For most of humanity's existence, a robust human-nature relationship was paramount. However in the past 500 years of western history, notions of cultural separation from nature encouraged misguided beliefs which then spread throughout the world during colonization. The result is the mass degradation of our planet's ecological health alongside a decrease in positive qualities of tradition and community life. Repair of the human-nature connection is urgent.

This research demonstrates that Indigenous people living among us today who embody traditional knowledge can offer insights to heal this serious rift. They teach that without honest human-nature relationships and a grounded existence in place, long-term prosperity for western civilization is doubtful. Incorporating these principles into present-day society encourages more sustainable practices. As well, the act of receiving traditional wisdom from our Indigenous neighbours facilitates the reconciliation of tragic legacies. Without this fundamental healing, little long-term recovery of people and the land is likely.

Preface

This Masters thesis is an original, unpublished creation based on fieldwork conducted by the author from July 2016 to February 2017. I am entirely responsible for all the research and writing. My supervisor Dr. Charles Menzies and committee member Dr. Jennifer Kramer reviewed several drafts and provided content and editorial suggestions.

Ethics approval was obtained from the University of British Columbia's Behavioural Research Ethics Board: certificate number H16-01087.

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I would also like to fondly recall my Musqueam teacher and friend Henry Charles, who passed away on January 28, 2017 two months after offering us a research session. His strong spirit, and the way he connected to his people and the land will always guide me.

Dedication

To our Coast Salish hosts for the generosity, patience and good humour they demonstrated while sharing their traditional wisdom. They showed us how to respect one another and be on the land in a good way. Their commitment to preserving and implementing such a precious legacy offers much hope.

To my parents Lily and Max Brauer who taught me to honour other people's perspectives and care for our common home. The memory of all my Jewish ancestors from Eastern Europe inspires me daily to carry out תיקון עולם – *Tikkun Olam* – Repair of the World.

1. Introduction

In 2013, I returned to University and took courses in Environmental Studies and British Columbia History to discover more about the land I inhabited. Living in the City of Vancouver for most of my adult life, I had become acutely aware of the endless stream of proposed resource extraction projects for Canada's westernmost province and the numerous environmental protests, which arose in response. Dissenters were concerned for the health of remaining diverse and prolific ecosystems. The land and its resident species had no voice and were treated as mere commodities to be extracted and sold on world markets. Yet, as ecological economist Herman Daly said, "There is something fundamentally wrong in treating the Earth as if it were a business in liquidation." (Daly, *Steady State Economics*, 1977, p. 248)

As time went on, I became more directly involved in the conversation. For the next two decades, I founded and worked for a non-profit watershed society, offering environmental education, cultural projects and special events. (Brauer, 2005) Alongside collecting valuable information on natural history and water issues, I also had the privilege of learning traditional knowledge¹ from local Coast Salish people. Gradually, my perspective was transformed; I absorbed a deep-seated worldview through a re-formatted Indigenous² lens.

¹ 'Tradition' and 'traditional' as in 'traditional knowledge' describe cultural beliefs passed between generations. Such methods were fully employed by Indigenous people worldwide before colonization began in the 16th century. European traditions existed more prominently before that time. They diminished with the advent of science, technology, the market economy and industrialization.

² 'Indigenous' as in 'Indigenous people' describes members of a community who have historical links to a natural ecosystem which includes resources (earth, water, flora, fauna, etc.). Their society encourages social structures which connect people to ecosystems. They have a distinct culture and language which maintains strong ties to the land and their ancestors. An 'Indigenous worldview' describes the relationships and activities undertaken by such groups. In Canada, Indigenous people are called First Nations, Inuit and Metis.

At one Graduate seminar on sustainability, the subject came up about the lack of consent from the Elsipogtog First Nations in New Brunswick for a shale gas fracking development in their territory. (Gollom, 2013) When the class decided not to discuss the issue at great length, it suddenly struck me that conversations about Indigenous culture, along with other dialogues involving First Nations people, were not frequently included in academic exchanges on sustainability. Yet my understanding was that their wisdom and multi-layered relationship with the land should be positioned at the centre of these deliberations. After all, First Nations had been practicing a sustainable lifestyle for a lot longer than the newcomers. Could they not inform non-Indigenous residents of better practices? From this insight was born my strong intention to create an academic research project to investigate the subject.

The fact that original settlers did not fully accept the benefits of an Indigenous perspective, and their descendants and more recent immigrants think the same today, is not a complete coincidence. The western business model³ of extracting resources for profit and shaping the landscape to benefit mainly humans exists in strong opposition to an Indigenous place-based view. (Gowdy, 1998, pp. ix-xii) UBC Indigenous Studies Professor Michael Marker from the Arapaho Nation states: “The land is alive and meaningful by reference to a past that affirms relations between humans and the natural world. (Marker, 2006, p. 492). This inherent connection continues to be highly threatening to the newcomer’s vision of resource wealth:

³ The ‘west,’ as in ‘western worldview’ and ‘western business model’ describes western European beliefs instituted by settlers after the colonization of Indigenous lands which expanded substantially in the 16th century. In Canada, as in other countries, Europeans mostly marginalized Indigenous people and their ways of being. The settlers instituted European social structures – politics, economics, law and culture. This caused great destruction and upheaval in resident Indigenous societies. The legacy of this difficult relationship continues today. ‘Settlers’ and ‘newcomers’ portray the people who colonized the land.

There is a deep insecurity within the consciousness and conscience of settler societies that, when confronted by the indigenous Other, is awakened to challenges about authenticity in relation to land and identity. There is embedded in this encounter with indigenous knowledge a challenge about both epistemic and moral authority with regard to indigenous relationships to land and the spirit of the land. (Marker, 2006, pp. 485-486)

Humanity cannot afford to deliberate rival positions forever. They must come up with suitable ways to healthfully relate to the living planet they inhabit. Constantly degrading its condition causes unprecedented environmental scenarios. A measure of 400 parts per million of greenhouse gases – which has just moved 50 units over the “safe” measure – continues to advance global Climate Change. (Jones, 2017) Functioning ecosystems are damaged and reduced as human development expands. Toxic waste byproducts of resource extraction and processing escalate. Industrial pollution and garbage invade the air, land and water.

Close to fifty years ago, humankind was technologically advanced enough to put a man on the moon. Yet it seems paralyzed to adequately reduce and minimize the devastating impacts of the Anthropocene – a geologic age when *Homo sapiens* influences and challenges the health of planetary systems crucial for its own survival. The presiding western worldview offers few cultural options for transformation. Some ‘green’ and ‘sustainable’ solutions are encouraged but they are often not prioritized. The whole scenario is exacerbated by the fact that much of the electorate and consumer public are urban residents living in clear-cut and paved over landscapes. Nature barely exists in their physical or spiritual reality so the need for context is minimal.

Vine Deloria, a Native American Sioux activist and historian, defines this contemporary social-technological fabrication as ‘the artificial universe’ where the wail of sirens and asphalt pavement increasingly replace the howl of wolves and living soil. (Deloria, 1970, pp. 181-197) Author and social-change activist Chellis Glendinning discusses the extreme dislocation people

don't know they feel when they are removed from the world their ancestors inhabited. Each generation then reclassifies this as 'the new normal.' (Glendinning, 1995, p. 52) Such realities seriously affect the human condition as cause and effect entwine. Historian and author J. Edward Chamberlin wonders how people will reconcile the "unspeakable evil that haunts every one of us" from centuries of persecution, slavery and genocide. (Chamberlin, 2003, p. 75)

In my thesis, I demonstrate that traditional wisdom and place-based learning embodied in Indigenous people living among us today serve as an excellent model. This is especially true since many of them are working to revive their original social-ecological systems. If non-Indigenous people are informed of these approaches, they have the opportunity to experience a different way of knowing. Thinking honestly about human history, all our ancestors were once Indigenous since they would have once resided in the natural ecosystems of a place. If this way of life had not been successful, we would never have evolved to become modern people. (Gowdy, 1998, p. x) Anthropologist and author Wade Davis wonders why contemporary society believes technological wizardry a mere three to five centuries old will invent us out of all our challenges. He asks: can we not, instead, understand how ancient teachings better inform our lives? (Davis, 2008)

Some western scholars have championed humanity's re-engagement with the earth as a solution for an unwise trajectory, even within degraded landscapes. In the early 20th century, American conservationist Aldo Leopold said forming stronger attachments to land leads to more care and attention for its welfare. (Leopold, 1949, pp. 239-240) In the 1970s, anthropologist and philosopher Gregory Bateson said, "The major problems in the world are the result of the difference between how nature works and the way people think." (Bateson N. , 2010)

Anthropology was born in the colonial era and it once regarded Indigenous people as exotic ‘Others.’ Fortunately, scholars today are suggesting more innovative ways to research human culture. Charles Menzies, an anthropologist and member of the Gitxaala First Nation is “seek(ing) to turn the anthropological gaze by identifying an Indigenous set of ideas or concepts that one might...call an Indigenous anthropology.” He is “interested in contributing to an anthropology that is rooted within the intellectual traditions of Indigenous peoples *and* the longstanding traditions of the discipline qua discipline.” (Menzies, 2013, p. 172) In the same spirit, anthropologists George Marcus and Michael Fischer encourage researchers to turn critical faculties towards investigating their own backyard. (Fischer, 1986, pp. 4, 137).

My own perceptions were changed by local First Nations, therefore I was inspired to reconstruct those encounters and examine how members of the general public would react. My intention was not to focus on the knowledge of local Indigenous residents, but rather to explore how non-Indigenous people respond to Traditional Ecological Knowledge and the worldview that supports it. Would this deepen their understanding of the land where they live and develop a greater motivation for practicing sustainability?

I also wanted my research to provide a healing venue for the difficult relations that occurred between Indigenous and non-Indigenous people since colonization. From first contact, First Nations encouraged care and respect for ecosystems while the settlers practiced mass

resource extraction. My project offered an alternate educational and personal relationship. Thus I considered it ‘Action Research,’⁴ which could certainly be duplicated in the future.

Out of necessity, I frequently use common terms such as ‘sustainability,’ ‘place-based learning,’ ‘Traditional Ecological Knowledge (TEK),’ ‘Indigenous worldview,’ ‘reconciliation’ and ‘decolonization.’ I tried as much as possible to discuss meanings alongside labels. For example, explaining ‘sustainability’ is complex; Herman Daly suggests a good definition.⁵ In my analysis, I use the terms ‘environment,’ ‘nature’ and ‘the natural world’ to describe the part of our common planet that is largely not constructed by humans. However, it’s worth noting that an ‘unnatural world’ does not really exist. As historian and author Simon Schama says, everything comes from a natural source. (Schama, 1996, pp. 6-7)

Throughout this thesis, the quotes gathered from formal post-session interviews with research participants are differentiated by italics and quotation marks. They didn’t all want their names made public so none are added. Instead, they are identified by letters in square brackets alongside descriptions in a table on page 10. Italicized words written after the English ones denote Indigenous names or words with International Phonetic Alphabet (IPA) spelling.

⁴ I have defined Action Research in the following terms: “Action research methodologies are framed by a commitment to social justice, giving voice to those who are usually silenced, challenging structures of oppression and acting *with* ordinary people to bring about social change – therefore they offer appropriate research models for engaging in community-based ‘truth-telling’ in post-conflict situations.” (McGovern, 2006, p. 49)

⁵ “The power of the concept of sustainable development is that it both reflects and evokes a latent shift in our vision of how economic activities of human beings are related to the natural world – an ecosystem which is finite, non-growing and materially closed. The demands of these activities on the containing ecosystem for regeneration of raw material “inputs” and absorption of waste “outputs” must, I will argue, be kept at ecologically sustainable levels as a condition of sustainable development. This change in vision involves replacing the economic norm of quantitative expansion (growth) with that of qualitative improvement (development) as the path of future progress.” (Daly H. E., 1996, p. 1)

2. Once Upon a Time, Not Very Long Ago: Coast Salish Context

“(During the research) I had more connection with this land because it came through (the educators). That’s such a precious connection especially for those of us who were part of immigrant groups. (The Indigenous educators) have a deep, ancient wisdom.” [C]

When two European settlers staked a coal claim in present day downtown Vancouver in 1850, the surrounding region existed as one of the richest ecosystems on earth. Massive temperate rainforests blanketed the terrain, including conifers over a thousand years old. Smaller deciduous trees and shrubs grew in the understory, including edible berry bushes. The area was home to scores of insects, reptiles, amphibians, birds and a host of large and small mammals. The sky, water and land were covered with migrating birds from the Pacific Flyway. In spring and fall, numerous freshwater creeks were full of chum and steelhead salmon navigating to and from saltwater. Eel grass provided reproduction habitat for herring; surf smelts and sand lance spawned on gravelly beaches. These forage fish supported a vast oceanic chain, providing nourishment for larger fish species and offering sustenance to countless birds, bears, wolves, otters, seals, whales and humans.

For millennia, tens of thousands of Coast Salish people inhabited the river estuary and ocean inlets in what is now the Lower Mainland of British Columbia. They lined the shore with grand cedar longhouses, which accommodated many families at once. They caught fish in the local waters, gathered seafood from the beaches and shaped the landscape for better food production. (Trosper, 2009, pp. ix-x) The forest offered plants for gathering and mammals for hunting. Cedar trees supplied crucial material for canoes, buildings, clothing, dishes, tools and carved artwork. (Macdonald, 1992, pp. 12-13) Their social-ecological systems evolved to care

for these plentiful resources by creating a strong human-nature connection. This, coupled with the strength of natural ecosystems, formed a robust long-term relationship.

For First Nations, a sense of place remains paramount. Stories and ceremonies speak profoundly and passionately about a direct connection to the earth and its multitude of species. Origin cosmology relates to the physical reality of the place they inhabit, interact with and travel upon. The nutrients from creatures and plants become their body; the spirits of resident beings enter their soul. Where First Nations live is part and parcel of who they are. (Hilland, 2013, pp. 41,43) In one of the few resident Indigenous accounts in the early 20th century, Squamish Chief August Jack Khatsahlano addressed Vancouver's Chief Archivist Major Matthews. Khatsahlano frequently stated his name, birthplace and relatives (Mathews, 1956, pp. 10, 18). He described many place-names in today's Burrard Inlet and Howe Sound chosen by the Squamish in association with the landscape or what happened at that location.

By 1860, European settlement began in earnest and a different worldview took over. (Macdonald, 1992, pp. 14-17) By the late 19th century, all of Vancouver's old growth forests were clear-cut. Timber processing poisoned land, water and air while surrounding rivers and oceans were fished intensely. Trees and seafood provided a lucrative return in western markets and in no time the bounty shrank significantly and the human population of the pioneer city spread throughout the territory. (Macdonald, 1992, pp. 14-35) The settler's government created reserves to house First Nations, who frequently had to comply with alien authorities. (Harris, 1992, pp. 57-60) Despite this adverse legacy, the *xʷməθkʷəy̓əm* Musqueam, *Skwxwú7mesh* Squamish and *səlilwətaʔl* Tseil'waututh First Nations today continue to inhabit their unceded territories and practice traditional knowledge, as well as sharing it with others.

3. Field Research Methodology

“There was a dialogue that you got going to introduce us and this experience was different for me... (The educators) were forthright and honest with an authenticity and willingness to share... You set up a human to human exchange in the land, each time in different situations.”[C]

My experience allowed me to create research that duplicated what I learned from local First Nations. The Coast Salish educators⁶ I chose were actively learning and practicing their own traditional knowledge and I asked them to be in charge of the curriculum. As guidelines, I suggested they cover subjects such as their relationship to plants, animals, land, water and each other. I proposed they include language and culture and explain how they gather information since colonization interrupted transfer between generations. I requested they teach in studios, clubhouses, woods and waters to help research participants⁷ fully appreciate the surroundings. All sessions took place on the reserves or in areas that supported First Nations culture.

During seven sessions, seven Indigenous educators shared teachings with fourteen participants who responded to social media call-outs, posters and word of mouth. Those who answered the invitation tended to be interested in the topic of sustainability and First Nations and had a familiarity with what the educators might present. The challenge was to investigate how the participants were affected afterwards. They received up to twenty hours of instruction in all; the average engagement was fifteen hours. I observed them during the sessions and conducted interviews before and after. Beforehand, I asked questions specific to their experience; such as their personal relationship with nature and sense of responsibility for it. How did they define and

⁶ ‘Educators’ are the First Nations educators ie. the teachers

⁷ ‘Participants’ are the research participants ie. the students whose responses were the focus of the study.

understand sustainability, place-based learning, Traditional Ecological Knowledge, Indigenous worldview, reconciliation and decolonization? In post-session interviews, I investigated how their perceptions changed. The following table shows the research participants described as male or female, their profession, place of origin and the date of our post-session interview:

Table 1: List of Participants and Descriptions

[A] M – retired social worker	Ontario – was not able to be interviewed after
[B] M – permaculture designer	Netherlands – 01/31/17
[C] F – retired architect	Ontario – 12/16/16
[D] F – retired social worker	Vancouver – 01/06/17
[E] F – high school art teacher	North Vancouver – 12/30/16
[F] F – high school social science teacher	Vancouver Island – 01/02/17
[G] F – aboriginal focus-school teacher	USA – 02/12/17
[H] F – kinesiologist	USA, Vancouver – 12/27/16
[I] F – professional storyteller	Vancouver – 01/20/17
[J] F – local historian & home-school teacher	Alberta – 01/17/19
[K] F – theatre artist	Vancouver – 01/13/17
[L] F – biology undergrad	Mexico – 01/17/17
[M] F – environmental educator	Fraser Valley – 01/28/17
[N] F – environmental educator	Fraser Valley – 12/17/16

Participant [G] had Indigenous background; the rest did not. The majority were passionately involved in some form of social justice or environmental activism in their non-work lives. Many were encouraged in these activities by family. Several had parents who introduced them to the wild world – if this meant wading in gumboots through the swamp behind their house, catching crabs at Spanish Banks, going to a farm, woods or an island close by for a playground or sailing around Georgia Strait. Others picked up their interest of nature from living in the city and visiting wild places.

“When you’re with native people, connected to the land, you can begin to feel a very different way of being in the world.” [C]

The first session began on a rainy day in September 2016 after a long hot spell. We spent a few hours on a “Talking Trees” walk through Stanley Park near Beaver Lake with Candace Campo *xets'emits'a*, from the Sechelt Nation. She operates an ecotourism company and lives on the Squamish Reserve. She discussed the nutritional, medicinal and cultural attributes of various trees, plants and animals. Candace described the ceremonial significance of cedar face paint and the many uses of the cattails which lined the edges of the water. She recounted her own people’s complex tales of cultural connection to the land, the importance of community⁸ in matrimony and how resources were shared among families.

“Candace talked about hunting ducks... how they only took down male and not females in order to maintain populations... It was an interesting perspective: understanding a resource and how populations behave... (to) ensure you’re not going to cause their demise. It’s a huge problem... For example, fish populations are being depleted and there’s no chance of re-population. That example with the ducks was really clear... it’s a simple concept to make sure you do what is not going to be detrimental – for yourself and the world around you.” [L]

For the second session, we visited Squamish Nation artist Rick Harry *Xwalacktun*, in his artist’s studio next to his home on the Squamish Reserve. He works primarily as a wood carver and also creates in paper, metal and stone. He spoke extensively about his family and community relationships and how these informed his work. Rick described his connection to the land and the materials he used – especially cedar. He had a wide-ranging knowledge and treated his tools and materials with great respect. He offered good words about fostering young artists and encouraging them to embrace their own traditions. In fact, a young carver was working with him that day. Rick welcomed us into his space; his family was present and engaged in our visit.

⁸ For the term ‘community,’ I use the environmental definition offered by activist and writer Wendell Berry. “If we speak of a *healthy* community, we cannot be speaking of a community that is merely human. We are talking about a neighbourhood of humans in a place, plus the place itself: its soil, its water, its air and all the families and tribes of nonhuman creatures that belong to it.” (Berry, 2002, p. 202)

“Rick Harry is the one... at the forefront of re-creating the form. Now, he’s passing his knowledge and legacy to other people. He said the (carving) tools weren’t available (for him). He had to invent them...(because it) got interrupted. I feel we can look at what some of our Indigenous neighbours have done, even with the interruption that was created by policies. The way they’re able to pick up the weaving and re-weave it so we can do it too.” [H]

During the third session, we walked through the forest along Musqueam Creek with Musqueam educator Terry Point. He discussed his people’s valiant attempt to bring back the health of Vancouver’s last surviving stream to support salmon. Terry spoke about how the dredging of the Fraser River had done much damage. He showed us a culturally modified tree and talked about Musqueam cosmology. One important story offered a strong link: the two-headed serpent *sʔi:lqəy* created Musqueam Creek by killing everything in its path from Camosun Bog *x^wməmq^we:m* to the river *staləw*. The creature’s droppings produced a new plant: the *məθk^wəy*. The people were named Musqueam, *x^wməθk^wəyəm*, place of the *məθk^wəy*.

“The two-headed serpent was about holding two things, seemingly at odds. I thought... I can understand that!... How those people identified with the grass because they were the grass. Humans and nature are not at odds. We’re all a part of the same food web. We’re all connected and responsible....it all sort of came together in one idea. I think the two headed serpent will follow me around for the rest of my life!” [M]

For the fourth session on Thanksgiving Day weekend, we visited Wes *Chiaxsten* and Larry *Shuck7swaywsum* Nahanee, Danielle Morsette and their families at Mosquito Creek Marina Clubhouse on the Squamish Reserve. Wes and Larry are Squamish Nation canoe skippers and cultural keepers. Danielle Morsette is a traditional weaver from the Suquamish Nation in NW United States. Danielle described how she learned weaving methods and created mostly wool clothing. Wes and Larry engaged us in an enlightening and profound conversation about the difficulty of growing up Indigenous in a colonial environment among drastically altered people and landscapes. How was one to learn customs, language and ceremonies that had

almost been lost by disease, development and the residential schools? The drive of our educators was strong and their intentions were clear. But they did not hesitate to talk about the difficulties.

“When (our modern culture) talks about sustainability, our concepts are almost diametrically opposed...I couldn’t help but reflect on that....After millennia, the Musqueam and Squamish are still canoeing, making beautiful crafts, learning and teaching about different kinds of plants for hundreds of thousands of years! It doesn’t need to change so much because it still works. Whereas, I have a Blackberry that’s four years old now and the company’s on the way out.”[F]

For the fifth session, I organized a large cultural gathering. First Nations taught me that important events are to be shared with the public. In this way, information is carried forward and creates a better environment for all. So I produced a Witness Ceremony and Cultural Evening with Wes Nahanee *Chiaxsten*, the research participants and 50 invited guests at the UBC Museum of Anthropology Café. The intention was to allow the participants to communicate their insights to the invitees and for all the guests to Witness this sharing and carry it further, since the ceremony is a form of ‘native newspaper.’ I opened the event with a slide show describing the four preceding sessions. Then, Wes led the ceremony and shared his knowledge. Witnesses were called and given a gift of money – a few quarters, which were the equivalent of what a Hudson Bay blanket was once worth. We ate our meal and then the research participants stood before the guests, offering stories in a formal presentation. Afterwards, the special Witnesses chosen communicated their impressions back to the audience.

“My moment came during the witnessing....when I felt myself holding the thread and standing up, speaking...feeling this is not a time to act like you’re small. It’s not a time to be self-effacing. It’s not a time to say –I don’t have a voice. It’s not a time to do any of those self-defeating things. It’s time to step to confidence! It’s time to step into this gift.” [I]

During the sixth session, we departed from Mosquito Creek Marina with Wes Nahanee *Chiaxsten*, in a canoe travelling east along Burrard Inlet. While the rain poured down, the crew

learned how to be on the water in a First Nations way. Even though we looked onto a wall of human developments on the North Vancouver shoreline, we existed as a small group of eight in a lone vessel travelling under our own power. Wes taught us that our responsibility to each other and the canoe should be very strong. Without the extra knowledge and stories he shared, the trip would have been far less welcoming and connected.

“(Being out on) the water is a good example of learning some Traditional Ecological Knowledge....It was interesting that when we got into the canoe...we introduced ourselves. It felt awkward... I guess we’re not really used to having a relationship with things. We just buy them, use them and dispose of them.” [N]

The seventh and last session was Cultural and Language Teachings with Henry Charles. We met in the Anthropology-Sociology building at UBC. As a Musqueam member, Henry made a point of relearning his endangered language *hənq̓əmin̓əm* which at that time only had 6 fluent speakers; his experience showed revitalization was possible. He spoke about his family lineage, which he traced back several generations, and the relationship the Musqueam people have with the landscape and the villages along the coast where the University is now situated. He shared his knowledge of the language and how he learned it. He recounted the difficulty of resurrecting an endangered tongue. Sometimes conflicting views stopped the process from continuing at all.

“The language session was totally not what I was expecting. I thought we were going to learn a few words and phrases. But it was a story – which I love. I have to relax...it’s not such a linear, goal-oriented thing....What Henry spoke about... raised my awareness about local landmarks and sites that were established as time or place markers...I liked learning about them.” [J]

4. Perceptions of Transformation

“I think it’s important for all people to have direct human experiences with Indigenous people and that’s why I thought this research was very important. You were going about it the right way. Instead of embellishing any romantic notions, you were able to introduce the participants to people who were very real. And I think that’s a very powerful experience to have.”[G]

I started the post-session interviews with a question on whether the participants felt they had been transformed by the research activities. Almost all mentioned their knowledge and feelings about an Indigenous worldview and sustainability were substantially deepened. It was heartening to hear that the majority expressed the wish that I undertake this research again in some form and if that happened, they would gladly join in. All were appreciative of the opportunity to participate in such a unique undertaking. It offered *“a rare experience;”* a chance to *“learn in a more authentic way.”*

About a third were teachers so the structure and content of the sessions certainly helped them in their work. For others, having their own individual connection to the educators was worthwhile, with the addition of personal stories and insights. All the participants agreed these interactions were more valuable than what frequently happens in formal institutions.

“As a teacher, I’ve... set up (sessions with Indigenous educators). (This project’s) sessions were not the same. The surroundings of an educational institution tend to be very prescribed and sterile. And they don’t have the same kind of meaning....For example, with Candace,...Stanley Park was the classroom. (There’s) no way to duplicate that in almost any interior space, let alone a current public school setting. That’s where their lives were centered...their walls, their kids, their people, their clothing. The surroundings made it a much more holistic experience.”[F]

The learning environment had a strong influence and contributed to positive outcomes. A *“group consciousness elevated (the process).”* Epiphanies came easier when surrounded by a cohort. The participants were intrigued to be offered outings on a series of weekends to visit

“places they didn’t usually go.” Natural settings facilitated the shifting of viewpoints. The sessions were *“practically located in place....on (the educator’s) sacred ground, their area, their territory.”* The participants commented that being on the Musqueam and Squamish Reserves positively affected their ability to absorb traditional knowledge since the feeling was different from the city. Just visiting these places was insightful. Some admitted to never having ventured there before even though they had lived close by their whole lives.

Meeting First Nations people face to face in intimate settings and getting to know one another was a new experience for a number of participants. The educators demonstrated *“a different way of being on the land.”* To receive teachings where they *“lived and worked”* and be offered such opportunities created a more *“three-dimensional”* setting. They hadn’t encountered *“this way of learning very much”* since most were accustomed to our current style. All these experiences created a transformational atmosphere.

The participants *“reinforced their beliefs about connectedness”* and became more conscious of where they lived. Their sense of humility was heightened. They appreciated being *“forced to articulate their ideas.”* Ecological richness survived *“right here.”* This added to what could be seen and *“more could be absorbed.”* The sessions were a *“reminder to dig deeper.”* It provided the impetus to *“think more about what they didn’t know and need to learn;”* to understand *“what nature asked them to do.”* To learn from people with ancestral connections to the place we all inhabited and to perceive how to *“view their lives in nature”* was profound. The educators were living their lessons. They were individuals actively involved in *“the community side of things.”* They *“stood for something.”* If they could do it, so could the rest of us.

One participant [K] mentioned that since receiving education about historical streams in Vancouver, something inside her changed. She had *“never thought about what was under the street before!”* A second person [F] said that if she visited Stanley Park again she would feel more like a part of the landscape. Another [A] shared that these sessions helped him to understand his own traditional culture. Being offered Traditional Ecological Knowledge was highly valued. After the sessions finished, teachings came back to *“twig memories.”*

Other, adverse changes occurred. One person [H] stated the encounters taught her she knew *“less of the answers.”* Another [D] expressed that she felt depressed after learning the extent of the destruction that was done to the Indigenous people and their land. But both were keen to work at righting difficulties, rather than resigning themselves.

On the subject of sustainability, they noticed the Indigenous view was *“more an approach than specifics.”* The biology student from Mexico [L] mentioned she never heard sustainability discussed in a cultural way before. She understood that passing knowledge through family and community was a traditional method; a style not highly present in today’s society. She acknowledged that the merging of old and new ways had a lot of potential. She recognized that information about the original land and people of Vancouver was not easy to learn and she welcomed this opportunity. Also, the education she received about restoration and plant uses from an Indigenous perspective was very valuable for her work.

“I gained a deeper understanding of what it means to be Indigenous...of how deep the oral tradition goes. I felt part of their family...and welcome.” [B]

5. An Indigenous Worldview: Distinct Characteristics

Early on, it was apparent to us all that not only are relationships important for positive social-ecological interaction between humans and the natural environment; they are paramount.

Research Relationships

“One of the most noticeable things for me was the relationship between you and Wes. It’s obvious you have developed a strong bond with great trust. I don’t think the project would have worked as well without the forming of relationship between the source of knowledge – our First Nations presenters – and the teacher or conduit of that knowledge – yourself. My thought is that forming relationships is a major key in learning. Thanks again for the great opportunity this experience offered us.” [D]

The research participants recognized I had established strong contacts for up to 15 years previously with the Indigenous educators I chose. Without ongoing associations, I would not have been able to approach them at all. Time and time again, the participants reflected fondly on the hospitality, trust and humour of the educators. Their willingness to share knowledge and the patience and kindness they exhibited was admirable.

The participants’ positive responses did not surprise me. I highly appreciated Indigenous knowledge in my first encounters and it continues to fascinate me today. The perceptions feel simple and profound and come across as very supportive of the natural world. No wonder the participants were highly attracted to these ways of being. They listened intently and asked numerous questions. Some of them confided in me later that perhaps there were too many questions. But the educators always responded thoughtfully and thoroughly.

“It blows me away how gracious they are about sharing their knowledge – to people (connected to those who) spat in their faces for so many hundreds of years.” [J]

“What struck me most...was the sense of openness everyone had to share their culture with us...so welcoming. (They were) such good hosts.” [N]

“(Despite all the negative history) I’m so grateful for the humour. (It was) so humbling, so generous. (And they were) telling jokes, making light of all this! Wow, the strength.” [E]

Crucial Relations to Place

“I think you can connect so much more... when you’re actually there. I’m trying to imagine learning about plants in Stanley Park...or the two headed serpent without seeing the creek that created it, or Xwalacktun’s inspiration for his artwork without being surrounded by his space. (When the schools do) First Nations (teachings they say) here’s a fact, fact, fact...(It’s) not connected to anything. How are you supposed to make meaning? I think there’s no excuse. Look where we are! It’s not like you’re trying to learn about Egypt and get a class trip (there). Go out your backyard and talk about whose territory you’re on! It’s not that hard! That was especially helpful for me since I am going into teaching.” [M]

What underlies all conversations with Indigenous people is connection to place. It shapes the individual and the community. It’s the glue that makes human society stick together. Animals rely on their physical environment for sustenance and humans are affected as well. Today, people count on global commerce for consumables and frequently travel for work and recreation. Regardless, our home place still shapes our lives considerably.

Native American Seneca historian and activist John Mohawk imagines a time when our tribal ancestors arrived in a new ecosystem, wondering, “How do I adapt to this place?” (Mohawk, 2008, p. 134) They would have created beliefs that blended with the culture of the land. Since plants are very old species on our planet and remain stationary to witness what goes on, they certainly have teachings to offer. Some trees have surveyed their environment for over a thousand years. Rocks are even older: as old as the earth. Indigenous people are willing to listen and learn from nature. This ability shows “the marvelous capacity of our species to survive...and adapt to that place,” and sometimes set down roots for millennia. Such approaches appear far more durable than any current facility to create technology. (Mohawk, 2008, p. 134)

“I would look up to the trees when it was raining. It was so beautiful....I took in the spectacle

... Afterwards I felt all the connections... You don't get that in a lecture. Trees communicate. This was different: learning from the knowledge keeper.”[B]

Jeanette Armstrong, an educator and activist from the Okanagan First Nation explains her people's place-based concepts. “The soil, the water, the air, and all other life-forms contributed parts to be our flesh. *We are our land/place.*” Ceremonies facilitate interactions. Joy is found in place as it nurtures and protects human community. “The thing Okanagan fear worst of all is to be removed from the land that is their life and their spirit.” Language speaks of this connection: “The Okanagan word for ‘our place on the land’ and ‘our language’ is the same.... This means that the land has taught us our language... To know all the plants, animals, seasons and geography is to construct language for them... Not to know and to celebrate this is to be without language and... land. It is to be *dis-placed.*” (Armstrong J. , 1995, pp. 323-324)

“For me... I can take in the information holographically. The person is sharing their information, and I am hearing and receiving, and I can also see through them to this whole other way of being... to knowledge that's placed in a particular context. It's not just extracted... We all come with a backstory but often we're not aware of it. Or we try to hide it.”[H]

Associations with the natural world are the basis for place-based learning: education as it relates to place. Michael Marker, who is from the US and studies Coast Salish people says:

Genuine Aboriginal scholarship will continue to assert the centrality of ecological knowledge unique to place. Efforts to form alliances with progressive theorists will fail unless they foreground the interdependent mythic relationships of plants, animals and humans in actual settings on the land. The placeless subjectivities of theorists must give way to a focus on intimacy with a collective experience on the land. (Marker, 2006, p. 492)

Comparison of learning systems becomes difficult since “the educational perspective of tribal people has always been oriented toward living sustainably in a place defined as a homeland.” This exists in direct conflict with the landlessness of today's school systems. Their

norm is “‘global citizenship’ and participation in a postindustrial, rootless workforce.” (Marker, 2006, pp. 490-491) By cultivating strong connections to place, any person – Indigenous or not – can feel at home in the land where they live. Botanist and ecologist Stan Rowe wrote:

Nature is Home, with the responsibilities for care and affection and aesthetic concern that the word implies. To be at home means asking ourselves about our intentions of staying on, about care of the furnishings and their maintenance, about sympathy for the other occupants and their welfare – all matters with power to initiate a fundamental revolution in the practice of our arts and sciences, in time becoming our second nature, as we prepare to minister to the natural Home Place. (Rowe, 1990, p. 157)

Human Relationships with the Natural World

“When you’re picking the salmonberry, the plant is so glad. It says, ‘next year I’ll produce more berries.’ Biology confirms this is the case. Things want to complete their life cycle and I want to feel I have been useful. Not to anthropomorphize or put humans at the centre, but perhaps the salmonberry is glad to provide a body with some energy.” [1]

During the post-session interviews, the majority of participants noticed the educators continually stressed that human-nature interactions informed their worldview. For example, having an astute awareness of a stream helps you understand how to take care of it. Picking berries from a shrub offering its bounty encourages fruit the following year. Forming a personal bond with a canoe urges people to safely voyage without fear. Treating all life entities like fellow beings means people engage in reciprocal relationships with nature; one aids the other and both are enriched. Concepts and connections are crucial to the definition of TEK. Fikret Berkes, applied-ecologist and professor at the University of Manitoba states:

The study of *traditional ecological knowledge* begins with the study of species identifications and classification (ethnobiology) and proceeds to considerations of people’s understandings of ecological processes and their relationship with the environment (human ecology). Implied in the concept is a component of local and empirical *knowledge* of species and other environmental phenomenon. There is also a component of *practice* in the way people carry out their agriculture, hunting and fishing, and other livelihood activities. Further, there is a component of *belief* in people’s

perceptions of their role within ecosystems and how they interact with natural processes. (Berkes, 2002, pp. 5-6)

Ahousaht hereditary chief and scholar Richard Atleo, *Umeek* describes *haḥuulism* – his definition of a way of life for his people living on the west coast of Vancouver Island. He speaks of the challenges and strict teachings required. “Nuu-chah-nulth peoples today, in concert with many other Indigenous peoples, embrace the phrase that is variously translated as ‘everything is one,’ ‘everything is related’ or ‘everything is connected.’” (Atleo, 2011, pp. 139-140)

Human Responsibilities *“This was more about how a person relates to their world. It’s actually a deep cultural change that’s needed. So to be recognizing the differences with their cultural expression, how they spoke to us and what they shared confirmed this for me.” [C]*

From the western perspective, human rights are frequently mentioned. The Universal Declaration of Human Rights was officially sanctioned at the United Nations in 1948 in response to the extreme abuses of the Second World War. Canada’s Human Rights Act of 1985 is 53 pages long; it includes entitlements for many different circumstances. However in his landmark treatise *The Sand Country Almanac*, Aldo Leopold noticed a lack of responsibility for the land:

There is as yet, no ethic dealing with man’s relation to the land and to the animals and plants which grow upon it. Land...is still property. The land relation is still strictly economic, entailing privileges but not obligations.” (Leopold, 1949, p. 238)

In contrast, within an Indigenous worldview responsibilities are stressed over rights. In the main, humans are not in charge of one another; accountability is more important. Land and species are not ‘owned,’ but revered, respected and cared for. Landscapes are ‘managed’ in a responsible way. People exist in the continuum of creation, rather than imaging themselves as separate.

The Practice of Gratitude *“It’s that whole thing about nature grounding us and how*

desperately we need it. And how, when you're in it, the other stuff can fall away." [J]

Having gratitude for relationships with the natural world and learning how to act from nature is an important objective. In *The Council of Pecans*, biologist and Indigenous educator Robin Wall-Kimmerer writes that nuts: "(give of) themselves so that we can live." Since people consume them, the nuts thrive. "Living by the precepts of the Honourable Harvest – to take only what is given, to use it well, to be grateful for the gift, and to reciprocate the gift – is easy in a pecan grove." Humans can return the gift by "taking care of the grove, protecting it from harm, planting seeds so that new groves will shade the prairie and feed the squirrels." (Wall-Kimmerer, 2003, pp. 20-21) However, gratitude is often just the first step:

I've heard it said that sometimes, in return for the gifts of the earth, gratitude is enough...because we have the awareness and the collective memory to remember that the world could well be otherwise, less generous than it is. But I think we are called to go beyond cultures of gratitude, to once again become cultures of reciprocity. (Wall-Kimmerer, 2003, p. 189)

The Reciprocity Imperative *"If I do these things...I can be enriched ... There's always reciprocity – that word is most the important thing that I take out of these sessions. It's not me here, then nature over there. Everything is relationship. And having the style of teaching that is relationship is very important to learning a lesson."* [K]

Ecological economist Ron Trosper describes why the socio-ecological policies of Indigenous people in the Pacific Northwest were successful organizing common pool resources like seafood, timber and water. Their societies were fortunate to have rich reserves; but strict protocol was required otherwise the natural balance was upset quickly. (Trosper, 2009, p. 2)

Trosper states that like many other Indigenous groups, First Nations in the Northwest employed:

...a system of ethics and beliefs about the natural world (which) supported the idea of sustainable land use. The worldviews of societies in the Pacific Northwest stress three main ideas: the unity of humans and nature, the importance of restraint in consumption, and the presence of a long time horizon. (Trosper, 2009, p. 17)

One key aboriginal governing tool is a “system of potlaching” (Trosper, 2009, p. 19). It was outlawed from 1884-1951 but is once again practiced today. The Coast Salish have a *Tl’a7ashn* or ‘Feast.’ Ceremonies are long and involved with story-telling, singing, dancing, protocol, feasting and gift giving sometimes lasting for days. The gathering provides opportunities to connect generations, for morals to be passed down, life skills to be taught and spirituality practiced. Generosity prevents an excessive accumulation of wealth by one group, providing a ‘social insurance.’ People are rewarded by giving away surplus. The public nature of transactions also invites responsible behavior and accountability, which makes good sense in fisheries management. (Trosper, 2009, p. 19) Such a method solves western society’s problem with the ‘tragedy of the commons’ – an economic theory where people share resources but act independently in their own self-interest. They prefer to deplete resource rather than considering a ‘collective action’ for the common good. (Hardin, *The Tragedy of the Commons*, 1968).

Economic policies introduced by settlers after colonization were opposite to those of the original people. First Nations used ethics to control productivity with a view to keeping land healthy for the future. One positive action was rewarded by another, reducing greed and fostering a positive relationship to the earth. Land was owned commonly by groups, in contrast to the western system of private ownership by nation states and individuals. The Indigenous way was a ‘proprietorship,’ not a property. Strict standards and an obligation to share were standard. (Trosper, 2009, p. 14). Many of these ideas continue today.

Embracing all Aspects the Sensory *“Visiting the workshop of Rick Harry...seeing the tools, touching the rock and wood, definitely makes a difference how you experience things. (It) helps absorb what they’re saying and remember it afterwards... We’re not exposed to (this) much because of how schools and classrooms are designed... There is value in remembering the surroundings, the colours, the sensations of being there; other than (just) facts and stories.”[F]*

In a western worldview, numerous sensory aspects of knowledge are diminished and as a result, the scope of understanding decreases. Not using necessary human senses creates strong dysfunction. Wall-Kimmerer says: “The circle of ecological compassion we feel is enlarged by direct experience of the living world, and shrunken by its lack. (Wall-Kimmerer, 2003, p. 239)

Anthropologist Yolanda van Ede writes that the predominant ‘ocular-centric’ view encouraged by western society first appeared in Europe after the Enlightenment. It encourages the “anaesthesia myth; the consequence of a modern hyperaesthesia.” She states the west “desensitizes itself”; that is, “shutting out as much sensory impulses as necessary, whether consciously or subconsciously, in order to survive in the new urban environment.” Van Ede calls this *ocular centrism*; “the hegemony of the Eye.” (van Ede, 2009, p. 62)

Ever since Plato and Saint Paul, philosophers and theologians propagated seeing as the purest sense, epistemologically as well as morally. From the Age of Enlightenment onwards, science also took sight as its most precious sense. (van Ede, 2009, p. 62)

Using all of one’s senses questions the one-dimensionality of a western ‘view.’ In a sensual world, “cosmology and epistemology seem to merge, rather than being separated as with science or religion.” (van Ede, 2009, p. 70)

Human to Human Relationships

Throughout evolution, human societies worked together in order to survive. Only in the last 500 years have western thinkers dared to encourage the rights of the individual and divorce humankind from an imperative connection to others. However, recent research in social anthropology has proved the foolishness of such theories. In the late 20th century, Austro-Hungarian economic historian and anthropologist Karl Polanyi wrote:

“For, if one conclusion stands out more clearly than another from the recent study of early societies it is the changelessness of man as a social being. His natural endowments reappear with a remarkable consistency in societies of all times and places; and the necessary preconditions of the survival of human society appear to be immutably the same.” (Polyani, 1957, p. 46)

Indigenous communities certainly emphasize community connections. They also embody rich and important interactions between humans and a wider physical and spiritual environment.

Human Relationships to the Ancestors and Greater Spirit World *“I think it’s more like an approach. I loved when we were in the canoe, giving thanks to the ancestors...and then at the end (of the journey) the closure – thank you for keeping us safe. All that acknowledgement. It’s not just – ‘we did it.’”[J]*

During the research sessions, the educators frequently mentioned ancestors and an ongoing continuum of stories, songs and ceremonies stretching back for generations. In Indigenous societies, ancient narratives are passed down and shared. Humans are really animals who have removed masks and costumes. A bird, fish or bear might be a connection to a deceased relative who comforts and helps you. Trees, mountains and rivers are sentient. Stories and language recount associations; everything has *animus* or spirit (Wall-Kimmerer, 2003, pp. 55-56) Humans are rarely alone and lonely; they are guided by plant, animals and human spirits all around. Such influences enhance people’s ability to care more deeply for the earth.

Indigenous communities have lived in the Lake Titicaca region of the Peruvian Andes for centuries. The land is not ‘empty;’ a *Terra Nullius* as described by the conquistadors. Instead, it is rich and alive with spirits. Agronomist and author Grimaldo Rangifo Vasquez says:

In the *ayllu*, the activity of its members is not modelled from the outside, it is not the product of a planning act that transcends it, but rather it is a result of the conversations that take place between the community of humans *runas* and the communities of *buacas* deities and the natural communities *sallqa* in a brotherly atmosphere of profound equivalency. Activity, in this case, emerges from dialogue, conversation and according to

what circumstances indicate; it does not derive from an imposition by man over nature. (Vasquez, 1998, p. 89)

Spirits live in the surrounding mountains. Humans are ‘rational animals’ but also have constant conversations with non-human relatives. Little hierarchy exists; everyone and everything are relatives. (Vasquez, 1998, pp. 91-92) As an essential food source, the potatoes are considered kin. Moroccan anthropologist Frédérique Apffel-Marglin says old potatoes address new potatoes and care for them. (Apffel-Marglin, 2011, p. 125).

In today’s western society, potatoes who talk to each other and spirits who communicate with humans from mountains are considered good form for fairy tales. It is not recommended for adult living. However, many children possess an innate ecological consciousness and experience inter-species and natural world connections. Clinical Psychologist Anita Barrows writes:

That children’s stories abound with animal protagonists speaks to the bond we perceive between children and animals; though analysts like Bettelheim have sought to interpret fairy tales as allegories of instinctual conflict. I think the attraction children have for fairy tales set in nature and populated with animal characters may also be explained by children’s instinctually based feelings of continuity with the natural world. (Barrows, 1995, p. 107)

As they grow up, children are too often forced to abandon ideas as they ‘mature’ to live in fragmented and disconnected cultures and landscapes. As Barrows says: “the infant is born into not only a social but ecological context.” (Barrows, 1995, p. 103) Frequently, not enough support exists to allow them to navigate a natural world. Add to this, our current disease that is rarely spoken of called “species loneliness – a deep, unnamed sadness stemming from estrangement from the rest of Creation.” (Wall-Kimmerer, 2003, pp. 208-9) No wonder so much natural life is disappearing. Our present society makes people feel ashamed to admit they love the sound of a bird, the rustle of leaves in the wind, or they wish to hug a tree.

“Skunk cabbage has become one of the plants (I greet). Now I say hello to the skunk cabbage. Some new friends!” [H]

Interpreting a Way of Life *“It seemed the educators were carrying on doing what they do despite the impinging problems of a lack of a sustainable understanding. I wonder where they get that strength from? ...They know how to be stewards of the earth and have unfortunately witnessed all this devastation. And still they continue to try and show us: I marvel at that. Something I think would be a beneficial character trait – a consciousness to communicate.” [F]*

From an Indigenous perspective, humans are encouraged to address the world with body, mind, emotion and spirit. In a western view, just the first two are emphasized publicly. First Nations inspire the *head* and the *hands* to act while also urging the *heart* and *spirit* to join. The Coast Salish say *N’chomo* – ‘one heart, one mind.’ Such a theme repeats itself frequently in other Indigenous cultures. Armstrong expresses that the Okanagan term for ‘heart:’

...is a capacity to bond and form attachment with particular parts and aspects of our surroundings. We say that we as people stay connected to each other, our land and all things by our hearts....As Okanagans we teach that this is an essential element of being whole, human and Okanagan. We never ask a person, “What do you think?” Instead we ask, “What is your heart on this matter?” (Armstrong J. , 1995, p. 321)

Emphasis on Stories as Truth *“As a teacher, I have well realized the power of stories. That’s why I brought some Indigenous people into my classroom...as an important linking mechanism...When stories are connected to place, they makes sense. If you can put in...the day to day life, the cycle of the seasons...then you feel part of the bigger picture...It’s the connectedness from ancestral to further along.” [F]*

The creation and telling of stories is a uniquely human trait, which offers an essential framework for people’s lives. Stories are mentioned time and time again in Indigenous knowledge transfer and are considered oral history. In the same way, mythology was present in all societies for most of their existence. British historian and author Karen Armstrong states: “From a very early date... it appears that human beings were distinguished by an ability to have ideas that went beyond everyday experience.” (Armstrong K. , 2005, pp. 1-2)

Only since the rise of science as the ultimate truth-teller have western people turned against mythology and condemned it as fanciful and frivolous. Presently, “that’s a myth” is a negative statement. Considering mythology supported humanity since time immemorial and continues to be of value for people today – its marginalization is a strong condescension of a human process, which helps to find meaning in life. (Armstrong K. , 2005, p. 7)

Atleo states that “Our (Indigenous) Stories are True!” in a chapter title. (Atleo, 2011, p. 139)

Origin stories are similar to theory in that each one is testable by its own method, just as scientific theory is testable by its own methods. Another way in which origin stories are like theory is the outcome. When a theory has been tested over a long period of time and has reliable and consistent outcomes, the data derived from it becomes facts. The same is true for the testing of origin stories. (Atleo, 2011, p. 141)

In his thesis on the values of stories, Edward Chamberlin describes how storytelling can act as peacemaker and saviour in today’s crowded world. What is commonly agreed upon is “how stories give meaning and value to the places we call home; how they bring us close to the world we live in by taking us into a world of words; how they hold us together and at the same time keep us apart.” (Chamberlin, 2003, p. 2) Stories connects us to place, which is likely why they exist so frequently among Indigenous people strongly rooted to the land.

“What better way to understand the world we live in... right now than by asking people who have been here since time immemorial. That perspective has to be valid.” [M]

The Value of Community

“How can we learn this (way of thinking) so we benefit? It’s a big part of humanity; doing things with more community spirit. If we throw (the Indigenous) culture away we’ll have to invent it again. I have a lot of respect for what (the Indigenous people) are doing. They seem to have managed to keep this....and they had so much thrown at them. It’s quite remarkable.” [D]

The participants observed that being a part of a group for seven educational sessions aided understanding. Learning happens more successfully when people come together.

“It was them being able to communicate their love and connections; also being a part of a group consciousness-raising. I think that elevated it quite a lot, because you can sit as an individual and have an epiphany. But when other people are having epiphanies it (has) this neat movement. From my perspective, that really was a big part of it: (to be with) the group.” [F]

“If we’re talking about sustainability, environment, ecology, automatically, we’re talking about interactions, relationality, community. Whether you’re solitary with the tree and a cat, or you’re in a village, or just with a partner, you’re talking about relationality. Not just your position vis-a-vis each other, but how you interact. To then have the group – meant that we were practicing that, and learning from each other, and deepening into a container of trust, which allowed more to come out. And then (we might have) possible future actions.” [I]

Many participants noted the challenge of creating a sustainable culture when an individual worldview is championed. Curiously, even though the west stressed independence for the past few centuries, the benefits often decreased for the majority born after industrialization. Perhaps the richer members of society could self-actualize. But a strong community structure was diametrically opposed to what became the human-made economy. Thus anyone other than the affluent was frequently forced into a life of near servitude.

American economist and historian Robert L. Heilbroner believes humans are “socially co-operative creature(s).” (Heilbroner, 1972, p. 16) Regardless, our western view favours the individual. The origins of this idea began after the advent of annual agriculture in the Neolithic Age. The ancient Greeks and early Monotheistic religions offered initial concepts. (Armstrong K. , 2005, pp. 79-81) Historian and author Paul Theobald tells us that by 5th century Europe, a personal relationship evolved with a Christian God during the reign of St. Augustine. But all societies were largely community-based until at least the 16th century. After the Reformation, when intellectuals “tuned to themselves for the answers,” (Theobald, 1997, pp. 10-11) they:

...appropriated the Greek idea that humans have unlimited rational power and they gave it a new twist.... Instead of harnessing this power in the service of community, instead of being the passive recipients of a world divined by God, humans could utilize their

rational power for themselves by manipulating nature in such a way as to order the world to suit themselves. (Theobald, 1997, p. 11)

For centuries before and during the Middle Ages, much of life was organized around tradition. “Economic and social life were one and the same thing” (Heilbroner, 1972, p. 24). By the 17th century, diminished religious power, rationalist thinking and colonization altered the social landscape. Heilbroner claims these new ideas were “fundamentally more disturbing by far than the French, the American or even the Russian Revolution.” (Heilbroner, 1972, p. 19) He explains: “The great chariot of society, which had for so long had run down the gentle slope of tradition, now found itself powered by an internal combustion engine.” (Heilbroner, 1972, p. 31)

As long-established financial systems fell away, the new market economy was employed full-time. This certainly pleased the richer classes. The British historian John Hobsbawm stated: “The ideal of an individualist society, a private family unit supplying all its material and moral needs on the basis of a private business, suited them, because they were men who no longer needed traditions.” (Hobsbawm, 1969, p. 84) However, Karl Polanyi declares: “The outstanding discovery of recent historical and anthropological research is that man’s economy, as a rule, is submerged in his social relationships;” (Polyani, 1957, p. 46)

Aldo Leopold tried to offer nature-oriented solutions to human issues a century ago. However, the wider society was just not ready to receive them. Included in *The Sand Country Almanac* is *The Land Ethic*, a discussion on how people could include our living planet in important undertakings. He comes to the analysis from a western perspective but parallels to an Indigenous view are frequent. He proposed that people connect to the land as part of their

worldview; to perceive and embrace concepts that included the earth and other species as rightful citizens.

All ethics so far evolved rest upon a single premise: that the individual is a member of a community of interdependent parts... The land ethic simply enlarges the boundaries of the community to include the soils, waters, plants and animals, or collectively: the land... In short, (it) changes the role of *Homo sapiens* from conqueror of the land-community to plain member and citizen of it. (Leopold, 1949, pp. 239-240)

He encouraged his society to transition back to a stronger relationship with the earth.

We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect. (Leopold, 1949, pp. xviii-xix)

Leopold was determined that ethical discussions should include human-to-human *and* human-to-society interactions. To that point, the ‘biota’ – the flora, fauna, soil, water and air was not even considered. Therefore, Leopold wanted to employ ethics to guide ecological concerns. He believed this idea would encourage “a kind of community instinct in-the-making.” (Leopold, 1949, p. 239) Community spirit and ethics needed to be key addition, alongside the importance of context. He believed in using education to encourage an ecological conscience with an emphasis on voluntary obligation not tied to economic preconditions.

In stark contrast to recent western notions, Indigenous societies have always regarded community as imperative. Armstrong says the Okanagan are, “...affected by actions of any one individual within the family and community, and so all must know this in their individual selves. A capacity to bond is absolutely critical to individual wellness. Without it, the person is said to be “crippled/incapacitated” and “lifeless”. She states that, “the Okanagan refers to relationship to others by a word that means ‘our one skin.’” And “... most serious teachings are that community

comes first...then family, and then ourselves as individuals, because without community and family we are truly not human.” (Armstrong J. , 1995, pp. 322-323)

Lack of Community and Displacement from the Land Makes Us Sick *“It felt really good to be a part of that community, and welcomed. I felt very humbled and honoured. (The educators) were so warm and welcoming. I remember walking away being very positive. It feels good to connect to people.” [N]*

The present disconnected state of humanity from the planet they inhabit is not often discussed. Those in today’s world who have broached these controversial subjects are the eco-psychologists. They investigate how human separation hurts ecosystems as well as attitudes; and round and round it goes. Psychologist Sarah Conn says:

The Earth hurts; it needs healing; it is speaking through us; and it speaks the loudest through the most sensitive of us. I believe the pain wants to speak through a great many more of us. When people are unable to grieve personal losses openly and with others, they numb themselves, even constricting their muscles in order not to let the grief show. This can become chronic, leading them to see, hear, feel and breathe less. The same process of numbing and constriction occurs with our loss of connection to a sense of place in a viable, thriving ecosystem. (Conn, 1995, p. 171)

Businessperson and Indigenous advocate Rebecca Adamson asks humankind to come together and join Indigenous people in the fight for sacred territories. She suggests protests are in everyone’s interest. The “acceleration of globalized markets threatens (all) our survival more now than ever before...This is not just about Indigenous Peoples. This scenario will destroy all of us.” (Adamson, 2008, p. 32)

For tribal people who see the world as a whole, the essence of our work is in its entirety. In a society where all are related, simple decisions require the approval of nearly everyone in that society...It is a society as a whole, not merely a part of it, that must survive. This is an Indigenous understanding...in a global sense. Unless there is something I don’t know, we are all Indigenous Peoples on this planet, this community...we have to reorganize to get along...In this case it is our survival. (Adamson, 2008, p. 35)

6. The Importance of Education and Sharing as an Act of Reconciliation

“I think that every single person we talked to was affected in a negative way by colonization. That’s why reconciliation is important. Because there’s damage and there’s hurt and there’s trauma. That’s not ok – it’s really upsetting. I’m trying to imagine myself put in that place – my identity is the grass and the grass is gone. That’s traumatizing...I’ve never had to experience that kind of loss...something so fundamental to your being. It really bothers me – that people can think that it’s ok...and they don’t have to do anything...to try and fix it.” [M]

When spending time with First Nations today, the past looms large. From first contact, they actively participated in the dominant culture’s commerce out of necessity. (Lutz, 1992, pp. 69-71) As well, if First Nations had not shown settlers how to survive wilderness conditions, they would have struggled even more. These days, the difficult consequences of a forceful interruption of the Indigenous people’s way of life are not far away. Even though it appears we have all ‘moved on,’ the negative impacts of colonization never really disappeared from our common society. As writer William Faulkner said: “The past is never dead. It’s not even past.” (Faulkner, 1951, p. 73) Misunderstanding of previous realities has morphed into multiple conversations and interactions. While discourse is healthy, too many of these interchanges – or a lack of them – are not. The time has come to tip the balance in favour of original people.

This project was created as Action Research intended to promote reconciliation and decolonization. I believe that learning from original people turns the tide back in favour of traditional knowledge and places more value on these methods once again. When asked about whether this research helped with reconciliation, the participants responded:

“The ‘Other’ is often created in politics or history. They become less...menacing, dangerous or fearful if you are sitting in a room with them – or outside in the forest talking about plants. That is a much more profound way of helping people understand where we are... I hope that for all the (Indigenous educators) who so generously gave their time, they feel (good about this)... I wondered sometimes. Because after hundreds of years of working with non-Indigenous people, who maybe nod at them and say – yeah, that’s a great idea, let’s do it, (then) the opposite

happens. How often do they have to hear this in order to actually see something's changing for them? ...So they can actually move forward and be in their rightful place and way again?" [F]

"I feel the more we get a chance to get to know each other, we can feel a greater appreciation for what has happened...and make new alliances for moving forward...If you don't know anyone from the other culture that's different, if you don't have any experience just on a basic human level, it's very easy to heighten the differences and to let there be fences between you. But when you start to know the person...something about their family, or... where they live, you know about the things that are meaningful for them. Then you're connected. It changes things... We need to have opportunities for Indigenous people and settler people to meet each other." [H]

"Reconciliation is both the acknowledgement and the values of communities which were here before the colonizers. That their culture is unique and necessary to be maintained and to be incorporated in other cultures...That's how I see reconciliation – not changing one for the other – not deleting everything and changing back to the old ways. Allowing cultures to co-exist without anyone feeling bad or shaming or feeling one is higher than the other. These sessions were examples of people learning about the other culture to incorporate it...in their daily life and how they view the world." [L]

"Decolonization first: any exposure to anything you may have been taught in history, books, politics, news, whatever – an actual encounter with an actual person, their full particular humour, intelligence, timbre of their voice and whatnot, you are decolonizing your mind. Towards reconciliation, you bet. Building trust... because the educators...were so generous. There was an opportunity for people to share their knowledge. It wasn't just question and fill me up. Let's also have a conversation, and crack some jokes and be friendly." [I]

"Humour – how important it is! To keep it light. At the Witness Ceremony, We tried to keep us all from goin' down! And how much I appreciate that in interesting and difficult times... Humour... brings people up. It prevents us from sinking – recognizing the genocide and the ecocide....And really trying to go there and feel it....How does it make me feel? That we have lost this; that we have valued this way of being in the world. I think it's important to go there. I want to be able to have some strength to carry on and fight." [E]

Grieving and Healing

"That brings the emotion in it. It's not just about: 'Well you had land, we took it. We're sorry. Let's move on.' No, there's emotion there. And that's not something you can ignore. Every person was affected in some way. Talking about the experiences with Residential Schools or how development has impacted the natural landscapes. Going down to the Fraser River at Musqueam, talking about how there used to be white sand beaches full of shellfish. And seeing it now...And hearing about the first canoe journey to Bella Bella; just reclaiming that culture and heritage and sharing and how powerful that is!" [M]

It cannot be understated that many of the problems our society has with reconciliation and decolonization is that those who are descended from people who first occupied the land – as well as subsequent immigrants – are still disproportionately benefitting from predominant western beliefs, which began with colonization. Most non-Indigenous people have not grieved their own negative associations with colonial history since they have little sense resolution is necessary. However, acknowledgment of inequities and the difficult emotions these thoughts bring are necessary steps. In the post-session interviews, I was struck by the sensitivity and insight of the research participants. They seemed to understand the role annexation played and the work that is required to repair old wounds.

Today, First Nations continue to be impacted by modern neo-classical economics and the effect this leading worldview has on all lands and people. Many Indigenous societies worldwide are fighting on the front lines of resource extraction activities and the massive pollution and devastation they produce. Robin Wall-Kimmerer speaks about the mindset that allows extractive industries to get away with ecocide in the name of profit. How does one respond honestly to an invasive position which continues unabated? Wall-Kimmerer explains:

Philosopher Joanna Macy writes of the oblivion we manufacture for ourselves to keep us from looking environmental problems straight in the eye. She quotes R.J. Clifton, a psychologist studying human response to catastrophe: ‘Suppression of our natural responses to disaster is part of the disease of our time. The refusal to acknowledge these responses cause a dangerous splitting. It divorces our mental calculations from our intuitive, emotional and biological embeddedness in the matrix of life. That split allows us passively to acquiesce in the preparations of our own demise.’ (Wall-Kimmerer, 2003, pp. 326-327)

Macy adds: “until we can grieve for our planet we cannot love it – grieving is a sign of spiritual health.” (Wall-Kimmerer, 2003, p. 327) This brings us to the crucial business of healing.

Restoring Relationships, Restoring the Land

“We need to do it. If we do it, the land will do it. It’s all interconnected. It’s not just those Indigenous people who need healing. We are the invasive species.” [E]

Then how do we fix it? To start, the western habit of regarding First Nations from the position of ‘voyeur’ or observer will likely not enhance reconciliation. Positive steps can be gained by one group appreciating the other. But real change happens with personal engagement; actively learning, sharing and working together with Indigenous people on their own terms.

Some initiatives have presented positive results. For example, in the Vancouver area *Pulling Together* (Pulling Together, 2001) operates as a First Nations-led activity. They use the bonding experience of journeying in a canoe to learn how to get along in a good way. Since a lot of negative interaction occurs between Vancouver police officers and First Nations youth who leave their reserve to live in the city, a trip is created every summer where everyone canoes together. For a short while, notions of *Them* and *Us* are blurred and a community is created.

When land is central to the discussion, restoration is a tremendous way to allow people to work in tandem, while also rejuvenating nature. Wall-Kimmerer says:

It is not enough to weep for our lost landscapes; we have to put our hands in the earth to make us whole again. Even a wounded world holds us, giving us moments of wonder and joy. I chose joy over despair. Not because I have my head in the sand, but because joy is what the earth gives me daily and I must return the gift. (Wall-Kimmerer, 2003, p. 327)

How does one actually act positively to revitalize the land, while also “returning the gift?” Unfortunately, such an activity is not easy since most of society is predominately focused on financial profit. But the need is urgent. Eco-psychology educator Elan Shapiro affirms this:

These glimpses reveal aspects of a blossoming, grass-roots movement...Through environmental restoration, people are coming back to Earth with their bodies: cleaning up and decontaminating; clearing out and planting; building erosion-control structures and sapling protectors; and weeding, mulching and monitoring. They are learning, through their hands and hearts, to identify with pain and healing of the ecosystems that sustain them. (Shapiro, 1995, p. 225)

In an Indigenous worldview, it would mean, as Shapiro describes, altering the world created by the *head* and the *hands* and adding the *heart* in order to give back. This challenges the original forces of colonization, which caused mass disruption in the first place. The intention is to transform the land back to our common *home* once more. For Indigenous and non-Indigenous alike, such an activity is not only completely possible, it is imperative. The objective must be strong to renew and rejuvenate the earth *and* the soul of the people doing the work in a way that transforms everyone and everything. It should not just feed a false economy. Instead, prosperity of life and spirit could be created for all who participate. The land is what everyone shares. Building a healthy home on earth is inspirational; it’s a collective goal worth pursuing.

“I am studying biology and interested in ecology conservation. Restoration processes are really hard....to know what works and what doesn’t. It’s definitely valuable to...consult people who have been using those processes for a long time. It’s not as though they’ve dealt with the same kind of degradation before. I don’t think they had ever seen such a decrease in salmon. But they...have some insights on how to go about it. So it’s both trial and error...the merging of modern and traditional knowledge.” [L]

“The only way that we can get to decolonization is through building personal relationships. It doesn’t come through big speeches and laws. It comes through one on one interaction. And more importantly, more and more I’m realizing that you can’t take away something without filling the hole with something else. You need to have re-indigenizing. After you’ve taken out the colonial, you have to put back something good; putting this traditional knowledge into our brains.”[K]

7. Then How Do We Practice Sustainability?

“If you want to save the world, get to know the place you live and be responsible...Like everything else, it’s become globalized and abstract. We can remind people that what is necessary is accountability for where you walk...even in a small amount of space... A lot can be offered where you are. To start, you have to learn what’s under your feet: streams, land. In order to live in a sustainable way, be in partnership and connection with the natural world around you.” [K]

Notions of sustainability grew in the 17th century Enlightenment with the rise of market economics. Individual wealth greatly increased among the upper classes as the earth’s natural riches were perceived as infinite and intensely exploited. Any thoughts of limits were ignored since resource wealth beckoned. Presently, people’s intentions are better placed. However, there still exists an underlying idea that sustainability will just ‘happen’ without a great deal of effort.

When Atleo describes how difficult a sustainable lifestyle was for Indigenous people on the west coast of Vancouver Island when life was treacherous braving the elements, (Atleo, 2011, p. 142) it’s hard to imagine things will be simple for today’s much more comfortable and wasteful society. But the outcome of doing nothing and continuing in the same destructive trajectory is not an option if we wish to offer a living planet to future generations thirty or three hundred years from now.

Even though all the research participants could define sustainability, many had mixed feelings about it. Some rejected the classification outright. One person [G] grew up in rural communities in the Northwestern United States. Her father had Indigenous background and he supported the family by trapping, hunting and fishing. She only became aware of an unsustainable world when her family moved to a larger community. Now, many years later, she is disappointed at our culture’s minimal progress. The other participants commented:

“I am more likely to be conscious of making changes in my life when I’m involved in a community that is also passionate and aware of such causes.” [N]

“As a teacher watching teenagers – their concept of sustainability is so different...Because of convenience....their instinct is to act alone. Connectedness needs to be somehow consciously reworked back into (their lives)...At a philosophical level, if we’re looking to become more sustainable, we have to reconfigure relationship. Here’s a generation that for the most part doesn’t understand relational. How are they going to understand sustainability?” [F]

“If you change things too much, if you’re not responsible for your environment, if you don’t think about the things that you really need, you can lose them and they can be gone forever. Even though the Musqueam people did have a mindset of sustainability, they’re still trying. They’ve never lost that and they’re trying to be stewards of their environment despite obstacles. It’s not something you do. It’s how you live. We try to...make sustainable choices. But I think...it’s exhausting to try and think about every little thing. If it wasn’t something you had to choose, if it was just the way you existed, it wouldn’t be exhausting at all.” [M]

“How do I feel about sustainability? Well, in a sense I feel even a little more depressed about it... We’ve done so much damage. And nobody had talked about (the Indigenous) way of (restoring Musqueam Creek). We do it in an engineering way when we reclaim. But this was a hell of a lot simpler! It’s very depressing to me that we don’t (do it in an Indigenous way); that we don’t look at life and sustainability more in those ways. We could do things a whole lot simpler. Work with nature, rather than raping her.” [D]

What Sustainability is Not

“We can’t fiddle with what we’ve got and have conditions improve...The native people’s connection to land is a different way of being... It’s not an excuse to get what you want by couching the words.” [C]

When incorporating sustainable principles today, few Indigenous people believe that the western idea of sustainability coupled with economic growth is a viable solution. Wall-Kimmerer recounts a situation when her Algonquin First Nation ecologist friend “told the story of requesting funding from her tribal council to attend a (sustainability) conference. The elders asked: “What is this about, this notion of sustainability? What are they talking about?” The ecologist “gave them a standard definition.” The elders “were quiet for a while, considering. Finally, one said...this sustainable development sounds to me like they just want to be able to keep on taking like they always have. It’s always about taking. You go there and tell them that in

our way, our first thoughts are not ‘What can we take?’ but ‘What can we give to Mother Earth?’ That’s how it’s supposed to be.” (Wall-Kimmerer, 2003, pp. 189-190)

Originally life was very challenging for Indigenous people. Atleo recounts the story of Bear:

...creation is set up in such a way that resources are juxtaposed with, rather than held in common by, any number of different communities. Resources...are in a natural state and this is the way in which creation is presented. How these different communities respond... is a matter of choice. There is no obvious handbook to explain to these communities how to negotiate... Life forms have freedom of choice. In this theory, and in contemporary language, the choice for these different communities is between survival of the fittest or mutual respect, between brute force or sustainable living. (Atleo, 2011, p. 142)

Current discussions frequently mention ‘common sense,’ or ‘the common good.’ If sustainability is supposed to benefit all, but little formal emphasis exists to back it up, how do these beliefs help? Wall-Kimmerer says “the traditional ecological knowledge of Indigenous harvesters is rich in prescription for sustainability.” There exists: “cautionary stories for the consequences of taking too much.” However, she notices that “it’s hard to recall a single (precaution) in English. Perhaps it helps to explain why we seem to be caught in a trap of overconsumption, which is as destructive to ourselves as to those we consume.” (Wall-Kimmerer, 2003, p. 179) This way of life is certainly not sustainable. Gregory Bateson pointed out that addictive behavior is consistent with ‘Cartesian dualism’ which pits mind against matter. He concludes, “It is doubtful whether a species having both an advanced technology *and* this strange polarized way of looking at the world can survive.” (Bateson G. , 1972, p. 337)

Atleo states most lifeforms are “naturally resistant to change.” His tradition offers the story of Son of Mucus; when he “returned to earth to transform the first peoples into the biodiversity that exists today, he met with fierce resistance.” But “the very means of resistance

became part of the means of transformation.” Presently, liberal democracy is in its early stages. As well, a strong capacity exists for dictators to abuse power. (Atleo, 2011, pp. 160-161) We may soon be facing hard choices. Chief Oren Lyons of the Onodaga Nation proclaims:

I don't believe, personally, that we've reached a point of no return in this situation we're in, but we're approaching it. The farther you're away from a point of no return, the more options you have. As we move each day closer...we lose that day's option. And there will come a point when we won't have an option. (Lyons, 2008, pp. 22-23)

Atleo claims that when we “hit bottom,” a shift is possible since few escapes remain:

Given the current trajectory of the globe indicated by climate change, it appears that the earth may be close to its fullness of time. If this is true, then the shift from one worldview to another may suddenly become possible...allow(ing) some of the principles of *hahūulism* to be considered as *part* of a set of possible solutions to a global crisis. (Atleo, 2011, p. 162)

Indigenous Sustainability: Nature as Teacher

“I think the thing that struck me most was ‘the stream knows how to right itself if we give it a chance.’ That recognition of stewardship that doesn't know, because we tend to know (everything) in our western cultures...I found that really heartening and encouraging. Because it gave me a sense that there's a wider wisdom that's still accessible even with all the things we've done that aren't good.” [C]

The research sessions which discussed outdoor elements – plants, stream restoration and canoeing – were the most influential for understanding how to treat ecosystems in a respectful manner. Reciprocity of all species to each other, including humans, offers nature back its original agency. The Indigenous educators are taught to read the land and work with it. After understanding the challenges and offering a little help, they step back and allow nature to heal itself. Having enough humility to learn from a fish, or a bird, a forest or a river feels uncomfortable at first, but it is a necessary skill to acquire. Nature shows the way. *Homo sapiens* was the last to be created – if it's the Turtle Island story of Indigenous people (Wall-Kimmerer,

2003, pp. 205-206) or the Adam and Eve narrative from the Hebrew Bible. (Sultar, 1998, pp. 20-21) Humility is what's called for since the world was working perfectly before humans arrived.

Braiding Science and Indigenous Knowledge Together

As a plant person, Wall-Kimmerer describes the reciprocity which exists between two late summer wildflowers: goldenrod and asters. Curiously, the colours of gold and purple are opposites on the colour wheel and act as an equally beautiful draw for pollinators. In the same way, magic happens when scientific and Indigenous wisdom combines:

Why are they beautiful together? It is a phenomenon simultaneously material and spiritual, for which we need all wavelengths, for which we need depth perception. When I stare too long at the world with science eyes, I see an afterimage of traditional knowledge. Might science and traditional be purple and golden to one another, might they be goldenrods and the asters? We see the world more fully when we use them both. (Wall-Kimmerer, 2003, p. 46)

Sonya Atalay, an archeologist and professor at University of Massachusetts states that her people, the Anishinabek First Nation, have a prophecy. They:

...along with others globally, will face a choice between two paths. One path is made of scorched grass, signifying short-term success but eventual destruction. The other path is a lush trail that leads to a future of lasting peace. The teaching states that the second path is one of compassion. Choosing this path involves finding ways to combine our Indigenous systems of knowledge and traditional ways of understanding with those of Western science. Joining these forms of knowledge can increase our strength as a society. Our spiritual leaders tell us we have reached the time to choose paths. The challenge for *our* generation is to work co-operatively – to use the diverse knowledge of all to build strength on the path to mutual success and peace. (Atalay, 2012, p. ix)

She speaks about 'braiding knowledge,' which is what her elders have asked people to undertake. Science specializes in research on sustainability. No doubt these two complimentary systems could come together for the benefit of us all. (Atalay, 2012, p. x)

8. Conclusion – Embracing Possibilities

“For a million years or more, we humans lived outside, under the sun and stars, our lives guided by the seasons, the weather and the tides. For all this time, we were a part of a community of plants and animals where day-to-day living, landscape and spirituality were intertwined. The *Uts’am* Witness camping weekends reconnect us, however briefly, with that world. When we drink from the cold mountains streams or sit around the fire at night, we are coming home to the place from which we all evolved.”

John Clarke – *Xwexwsélkn*

The late mountaineer John Clarke was one of the founders of the Witness Project along with Chief Bill Williams *telàsemkin-siyam*, of the Squamish Nation and artist-photographer Nancy Bleck *Slanay Sp’ak’wus*. (Bleck, 2013, pp. 37-43) The camping workshops took place next to the wild creeks and old growth forests of the Upper Elaho Valley in the Squamish River Watershed – a three-hour drive from Vancouver, mostly on logging roads. I participated for at least one weekend a summer for its decade-long lifespan. I formed new relationships, which I have kept to this day. All the Witness ceremonies and events changed my life. They taught me other ways of being and brought me back – as John Clarke said – to the world of our ancestors.

In my research project ‘Paths to Sustainability,’ I organized sessions that offered fourteen engaged participants a glimpse of some of the Indigenous knowledge I had acquired. Could a mere fifteen hours of instruction change how people interpreted sustainability? From what I discovered, if the seeds are planted and nourished correctly, they are well placed to grow healthy ideas and actions. During the interviews before the sessions, I asked everyone about an early and clear memory of the power and companionship of nature. Suddenly, they became their childlike selves again. One person [M] talked about how her father taught her to handle the frogs who lived in the stream by their house in the Fraser Valley. Care and attention was needed not to harm their sensitive skin and she suddenly realized how fragile nature could be. Another [D]

spoke about growing up in Kerrisdale, a residential district in SW Vancouver. She spent time outside with friends, playing on the “*wild edges*” of the neighbourhood late into the night. She remembers feeling “*fear and awe*” when imagining the scope of the natural world beyond. A third participant [I] told the story of watching a colony of ants working in her backyard. She became transfixed with the intelligence of the greater world which acted on its particular power, existing in a parallel universe to her own. And then, a fourth [E] immediately responded by crying when I asked for her memories on nature. “*No one’s ever asked me that before, but that is such an important question!*” she exclaimed as she considered her strong reaction.

The same outpouring of deep-seated emotion came in the post-session interviews when I asked for ‘a-ha moments’ of transformation. For some people [L] [E], the Witness ceremony made a strong impression since they reflected insights back to a large crowd. For others [C] [K], Musqueam Creek impacted them when they discovered First Nations were working with nature and using their own wisdom, not employing engineers or landscape architects. The knowledge that elders only received a mere 10 salmon that year made some participants [H] [D] aghast at how much damage had been done. Or the realization that only six Musqueam language speakers remained from thousands was hard to process. They recognized how much colonization “*screwed things up.*” Then the next thought was: how much more are we all missing?

Meeting Rick Harry at his house was significant for some [M] [N] since he made his family an integral part of his work and teachings. Another found comfort being told by Wes that when you are out on the deep ocean, balanced together in a canoe on a cold autumn day in the pouring rain, “*the seals are in their longhouse below the water.*” Meeting with Wes, Larry and Danielle, sharing food at the Squamish Ocean Family Club House and listening to the

discussions that ensued made a strong impression on several people. Walking away from that event, two participants [B] [N] felt welcomed and at peace; as if they had “*come home.*” One [H] had strong recollections of the story she heard that spoke about how Indigenous Hawaiian people were brought to Vancouver as labourers. They then intermarried with the local First Nations. She was imagining the complex story of humanity, which is often invisible; how people always travelled the world and put down roots and what impact these actions had.

In our present-day society, notions of sustainability first calls up subjects such as recycling and composting, carbon credits, electric cars, green buildings and high-speed transit. Then the edges soften a little and further talk continues about native plants, the importance of trees, pollinator-friendly gardens, stream restoration and storm water management. In an Indigenous context, the discussion begins with plants, water, birds and fish. It talks about elders who instruct people how to be in nature and have relationships with flora and fauna, land and water. In essence, the approach is about why humans should care about the earth community in the first place and how to accomplish this when the intention is right.

The participants were excited to learn traditional knowledge. But later they realized this also meant acquiring a more rooted and meaningful context for the Coast Salish land and its people. It got them thinking more deeply about why an earth connection is imperative and how much a sustainable lifestyle depends on a strong base. It took them back to a time before the western view decreed modern economics was humankind’s guiding principle. Even in primarily clear-cut and paved over landscapes, nature breaks through. Poet and songwriter Leonard Cohen sang: “There’s a crack in everything. That’s how the light gets in.” (Cohen, 1992) The participants understood that if our First Nations neighbours can find inspiration in a broken

world by focusing on the living earth and re-vitalizing their rich ancient culture, everyone could follow their example.

Humans can use their ecological intelligence to re-connect with creation. A bird calls. A salmonberry ripens. A body of water beckons. A tree provides shade. A fish offers sustenance. When people come together to repair and renew the land, to honestly re-plant the spiritual landscape in their hearts and minds, they touch those parts which have been poisoned, polluted and in-hiding. This experience allows them to open up to beliefs which existed long before society decided that people's desires and monetary wealth accumulation mattered so much. Nature and human community offer simple but profound medicines for the health of all beings on our planet. It's time to return and give these crucial remedies a try.

“Sustainability? It's the ability to take things seriously. Every little bit counts. The Witness Ceremony was so beautiful, partially because when Wes spoke – I feel like he was speaking his truth. You go to any ceremony, big house or whatever, any culture, any ritual that's doing what any proper ritual should do; shifting your subjectivity. When I take those seriously – they make a difference...even if it's just rewiring my neurons. And then my physical actions are different in the world. And I inspire or catalyze one other person. It's massive. So sustainability – taking that stuff seriously. I don't mean heavy – precious, precious. I mean, we really are doing this. Who else is encountering face-to-face, in that kind of intimate context...in a closed room. Sharing food, speaking words, being vulnerable. In that kind of intimacy? I'm grateful I've been doing this work for a long time. It doesn't feel weird to me anymore. But for some, it's awkward. We're not going to get over awkwardness unless we practice. Otherwise we're not going to get to the sustainability where each one of us is reverent, recognizing place above ego.” [I]

“Mistakes happen, and hardly ever does the world end. In fact, humans of many nations and varieties have made huge mistakes. The world has never ended. So it's safe to assume we can make some mistakes and continue to learn more to walk in beauty on the planet. That's the goal. I think it can happen. I want to believe that can happen. But we have to deal with the impact on the earth and our impact on each other. We have to. You're carrying your ancestor's stories. Even if you didn't know them, you still have responsibility. I do believe that the more aware we become of those stories and learn to have compassion, the more we can make decisions based on other criteria – such as what is good for all the children of the planet. Let's start with that.” [G]

“This was more than wonderful; far reaching. A deeply lived experience!” [B]

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