

Lived Experiences And Emergent Practices: Eight Conversations With
Metro Vancouver Urban Environmental Educators

by

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Abstract

Urban environmental education (UEE) as a sub-genre of environmental education is still a relatively novel field of study, but an especially relevant one in Canada given its population's concentration in urban centres. Rather than perpetuating the trope of urban centres as environmentally deficient, UEE presents an opportunity to empower urban residents toward learning and acting sustainably in vibrant and interconnected urban social-ecological systems and landscapes. Participant interviews were conducted with eight Metro Vancouver UEE practitioners and analyzed using a hermeneutic phenomenology approach to elucidate their experiences and propose how they may inform emergent practice. As major Canadian cities increasingly infuse their strategic plans and land-use decisions with environmental targets, further study of UEE in Metro Vancouver would enhance the planning and programming capacity of policy-makers, not-for-profits, educators, all levels of government, and all other interested stakeholders.

Keywords: Urban Environmental Education, Metro Vancouver, Hermeneutic Phenomenology, Self-stories, Emergent Practice.

Table of Contents

Abstract	4
Table of Contents.....	5
Acknowledgments	8
Terminology	15
Introduction	18
Research Question and Significance.....	23
Literature Review	24
Distinguishing Urban Environmental Education within Environmental Education.....	24
Social-Ecological Systems and Eco-evolution.....	25
Ecological Identities.....	26
Cultural Ecosystem Services	28
Political Ecology and Environmental Justice	29
Communities of Practice	30
Emergent Practice	31
Research Methodology	33
Overview	33
Project Participants	34
Data Collection	36
Interviews	37
Data Analysis.....	37
Plausibility and Validity.....	39
Introduction to Reflections.....	40
Why Reflections?.....	40
The Reflective Turn as an Extension of Interpretive and Critical Tools	41
Story-telling as a Tool of Action	42
Practitioner Introductions.....	45
Ryan Vasseur	45
Jada Natalie Stevens.....	45
Laurel Dykstra	46
Elaine Su.....	46

Adria Hussain	47
Dr. Janet Moore	47
Dr. Jeff Schiffer	47
Janey Chang.....	48
I. Ecological Identities	49
Reflection One: Meeting with Ryan Vasseur	49
Discussion: Ecological Identities.....	50
How Might Ryan’s Practice Inform Emergent Practice?.....	54
Reflection Two: Meeting with Jada Natalie Stevens	57
Discussion Continued: Ecological Identities.....	58
How Might Jada’s Practice Inform Emergent Practice?	63
II. Political Ecology and Environmental Justice	65
Reflection Three: Meeting with Laurel Dykstra.....	65
Discussion: Political Ecology and Environmental Justice	66
How Might Laurel’s Practice Inform Emergent Practice?.....	70
Reflection Four: Meeting with Elaine Su.....	73
Discussion Continued: Political Ecology and Environmental Justice	74
How Might Elaine’s Practice Inform Emergent Practice?	78
III. Communities of Practice	81
Reflection Five: Meeting with Adria Hussain.....	81
Discussion: Communities of Practice	82
How Might Adria’s Practice Inform Emergent Practice?	88
Reflection Six: Meeting with Dr. Janet Moore.....	91
Discussion Continued: Communities of Practice	92
How Might Dr. Moore’s Practice Inform Emergent Practice?.....	96
IV. Cultural Ecosystem Services and Social-Ecological Systems	99
Reflection Seven: Meeting with Dr. Jeff Schiffer	99
Discussion: Cultural Ecosystem Services	100
How Might Dr. Schiffer’s Practice Inform Emergent Practice?	104
Reflection Eight: Meeting with Janey Chang.....	107
Discussion Continued: Cultural Ecosystem Services	108
How Might Janey’s Practice Inform Emergent Practice?	112

Conclusion.....	115
Engaging in UEE Requires a Profoundly Social Focus	115
Connecting Emergent Practices	116
Semi-structured Interview Guide.....	121
Interview Chronology and Location	123
Informed Consent Form	124
References	127

Acknowledgments

I recognize what is today known as Metro Vancouver as the territories of the q̓ic̓əy̓ (Katzie), q̓wa:n̓l̓ə̓n̓ (Kwantlen), k̓wik̓w̓ə̓l̓əm̓ (Kwkwetlum), Matsqui, x̓m̓ə̓θ̓k̓w̓ə̓y̓əm̓ (Musqueam), q̓iq̓éy̓t (Qayqayt), Semiahmoo, S̓k̓w̓x̓w̓ú̓7̓mesh (Squamish), s̓c̓ə̓wa̓θ̓ən̓ m̓ə̓stey̓ə̓x̓w̓ (Tsawwassen), and s̓əl̓il̓w̓ə̓t̓əl̓ (Tsleil-Waututh) First Nations. I am committed to seeing their territories, including lands and water, returned or compensated for.¹

Given the challenges of land acknowledgements (Asher, Curnow, & Davis, 2018; Vowel, 2016) and the centrality of place and lived experience to my thesis, this question from Dr. Hayden King is instructive:

It's one thing to say, "Hey, we're on the territory of the Mississaugas or the Anishinaabek and the Haudenosaunee." It's another thing to say, "We're on the territory of the Anishinaabek and the Haudenosaunee *and here's what that compels me to do* [emphasis added]." (as cited in Deerchild, 2019, para. 13)

Reflecting on the territorial acknowledgement he helped prepare for X University,² Hayden King—a Gchi'mnissing Anishinaabe writer and educator from Beau Soleil First Nation—expresses regret. Territorial acknowledgments can initiate helpful dialogue, he says, particularly when they are first introduced. At the same time, they can offer non-Indigenous people “an alibi for doing the hard work of learning about their neighbours and learning about the treaties of the

¹ Adapted from Khelsilem, S̓k̓w̓x̓w̓ú̓7̓mesh Ú̓x̓w̓um̓ix̓w̓ Council Chairperson (2020).

² X University is the transitional name for the university formerly named after Egerton Ryerson—a designer of Canada’s residential school systems. The name transition was announced by the university following an Indigenous student-led campaign including the 2020-2021 cohort of the Master of Arts, Immigration, and Settlement Studies Students who collectively submitted their major papers (a graduation requirement) including the “X University Acknowledgement” (Ameh et al., 2021).

territory and learning about those [N]ations that should have jurisdiction” (as cited in Deerchild, 2019, para. 15). Given a chance to start over, he would rather offer a framework that could be personalized by each speaker to highlight the “obligation that comes on the back end of [a territorial acknowledgment]” (as cited in Deerchild, 2019, para. 12) King suggests to join the *acknowledgement with action*: “This is the land that we're on and this is what we're going to do to breathe life into our obligations to those communities and those treaties” (as cited in Deerchild, 2019, para. 20).³

In that spirit, this thesis *process*, more than the thesis *product*, resets the path of my practice. It is a pledge to understand my actions as incomplete without sufficient support for the self-determination of the First Nations who are and have been in deep relationship with these lands and waters since time immemorial—to move towards better relations through reconciliation and decolonization work.⁴ At my specific location, it is to continually question how am I “breathing life” into my obligations as a settler on unceded x^wməθk^wəyəm (Musqueam), S_kw_xwú7mesh (Squamish) and səlilwətał (Tsleil-Waututh) territories? Put another way, how are my actions extending beyond land acknowledgements to “restore power to the original people that are...from here who have had their power suppressed, or dispossessed, or taken away, or fought” (Khelsilem, 2016, 31:12).

It is also to engage with the deep contradictions of intentions, knowledge, inaction, complicity, and moves to innocence (Mawhinney, 1998; Tuck & Yang, 2012) in settler

³ There are few treaties in place in British Columbia between Canada and First Nations. Still, agents of the colonial government created reserves where they expected local First Nations to reside (Barman, 2007). With that in mind, Dr. Hayden King’s question of obligations looms large here despite the general absence of treaties.

⁴ Ta7talíya Nahanee conjoins “decolonization” and “work” to frame decolonization as an active and ongoing process rather than an end state to be reached (Johal & Nahanee, 2020).

reconciliation work and discourse—including my own. As a brief example, these two things are both true. First, 70% of white Canadians want to “accelerate progress on the Calls to Action from the Truth and Reconciliation Commission” (Canadian Race Relations Foundation, Abacus Data, & The Assembly of First Nations, 2021, p. 40). Second, prior to the Tk’emlúps te Secwépemc announcing in June 2021 that remains of 215 children—Le Estcwéy (“the missing” in Secwepemetsín) (Kooy, 2021)—were found at the Kamloops Indian Residential School,⁵ 69% of white Canadians said they knew “a little” or didn’t “know anything” about residential schools (Canadian Race Relations Foundation et al., 2021, p. 12). This despite the Truth and Reconciliation Commission (2015a) report’s clarity that residential schools were instruments of genocide in Canada.⁶ Indeed, even Jean Chrétien—former Prime Minister and Minister of Indian Affairs—recently claimed that abuse endemic in the residential schools “was never mentioned when I was a minister. Never” (Barrera, 2021, para. 8). This typifies the ahistorical and contradictory status quo that, in the spaces and relations that I can access, I must work to re-orient.

Using my practice to question the intersections of UEE with historical and ongoing state violence can and should also extend beyond Indigenous-settler state relations and systems.

Particularly because of this thesis’s focus on UEE, it is important to recognize that “education

⁵ This announcement was an event of national prominence. At the time of writing, nine of the 139 former federally-funded residential school lands across Canada have been searched for unmarked graves. The Truth and Reconciliation Commission (TRC) only reported on those residential schools but, including ones runs by churches and other levels of governments, there were 1300 schools (Shoush, 2021). The specific reported number of unmarked graves is expected to rise significantly over time. As of October 2021, over 1300 potential unmarked burials had been located (Deer, 2021), and the TRC estimates at least 4000 children died in residential schools (Truth and Reconciliation Commission of Canada, 2015a).

⁶ These truths are reported on further in related reports such as the National Inquiry into Missing and Murdered Indigenous Women and Girls (2019). It is worth noting, as well, that these reports confirm, not create, truths that Indigenous Peoples would have known vividly at the time through their own experiences.

systems reflect what is valued by the people who create them” (Chrona, 2021, para. 1). To different degrees over time, British Columbia’s names, stories, laws, and policies, have centred the political power, ambitions, and property of white people (Claxton et al., 2021; Mawani, 2005; Price, 2013), and those dynamics also transcend into Canadian environmental education (McLean, 2013). It does a disservice to all communities I work with and to my own integrity as an educator to cleave that lineage from my practice as we explore interconnections of people and place. I understand systemic racism to also include the erasure or diminishing of racial and ethnic injustices within environmental education. Such a separation prolongs a status quo that misguides core elements of UEE, depresses civic engagement and confounds the opportunities, health and wellness of Indigenous and racialized peoples. My commitment, then, is that my work must support the rights of those dismissed and disenfranchised by white supremacy and colonialism, before and now. It must help reimagine and reconstruct a new way. The *all in it together* hagiography does not meet the challenges of today.

I will make mistakes in this work. Those errors may be magnified over time as language and social structures change. Knowing that cannot excuse inaction, nor close off valid criticism because, in my eyes, my intent was well-meaning. In her blog *Native Appropriations*, Dr. Adrienne Keene—a citizen of the Cherokee Nation—describes the iterative cycle of learning when one acts on issues that are deeply personal, critical of the status quo, and shared in an interactive medium. Quoting a conversation with a colleague, she describes the idea of “consenting to learn in public” (Keene, 2018). Applying that concept to my work, it is a commitment to lifelong learning, creating welcoming conditions for dialogue should folks wish to share their knowledge and lived experiences with me, and to treat those interactions with

humility and curiosity. Already, as I complete this thesis, there are many steps that I would do differently were I to begin again.

I wish to thank the folks I interviewed for my thesis. Their lived experiences were essential to my learning. In their gardens and around their kitchen tables they invoked their life stories to lay bare what latches them to their work and their place of practice. The *what's next* of emergent practice in Metro Vancouver synthesizes their lives, interests, families, and communities.

Another group significantly influenced my research and writing process. In some cases, their work appears and is cited in my thesis in a typical academic way—such as with a direct quote, or noting that a work of theirs supports a point I have made. If my citations stopped there, I would be omitting people who—through their micropublications on Twitter, or content I was linked to from there—helped me to challenge myself, empathize, and extend my analysis. That might look like watching Barbados's Prime Minister Mia Mottley deliver her impassioned *Code Red* speech (2021) as part of COP 26 and being called to re-read and re-adjust the voice of my writing for greater clarity, urgency, and accountability. Or, it might look like reading a Twitter thread by Dr. Katherine Crocker on the retraumatizing effects of researching structural racism (Crocker, 2021) that directed me to Eve Tuck's *Suspending Damages* (2009), and then a review of the implicit theory of change in my thesis. On a more personal level, it could also look like the sharing of their city-immersed poems and balcony-garden recipes, moments of bike-riding joy and public-square struggles, or childhood memories and their enduring love for the drama of professional wrestling. Social media opens the gates for this type of sharing and learning—from macro to hyper local sources—and also presents the peril of subsuming ideas without fair

citation (Eidinger, 2019). This project is a full-spectrum reminder that the UEE I am researching is, at its core, about people whose whole lived experiences matter and ought to be centred.

And so, the way this connects matters. In describing citations as a “reproductive technology” (2013, para. 3), Sara Ahmed argues that citation practices reproduce not only the discipline they emerge from, but also the “techniques of selection, ways of making certain bodies and thematics core to the discipline, and others not even part” (2013, para. 4). In practice, this core-forming could come in the form of non-Indigenous academics consuming and reproducing Indigenous ways of knowing and being or lines of thought without acknowledgement (Todd, 2016), or, more insidiously, artists and scholars who claim Indigeneity to advance their careers (Forester, 2021). There are course correctives that challenge writers to expand the prevalent academic canon (Eidinger, 2019; MacLeod, 2021; McCracken, 2019; Mills, 2021; C. A. Smith, Williams, Wadud, Pirtle, & The Cite Black Women Collective, 2021; Sumner, 2020; Tuck, Yang, & Gaztambide-Fernández, 2015; Williams & Collier, 2020). With that in mind, and reformulations of bibliography such as Daniel Heath Justice’s *Bibliographic Essay* (2018), I thought it right to reveal more about my learning process and research context.

These are epistemological and axiological questions: what counts, what is credentialed and credible, what is frivolous? How might these canon-building conversations reify the status quo and disarm the possibility of creative and analytical tools to unmake the intersecting crises of now? Who would that serve or harm? These questions must continue to be asked. Because of the tendency to develop papers in reference to already heavily-cited works, a failure to do so would lead to a further “ossification of canon” (Chu & Evans, 2021, p. 1). If this thesis is my thinking through of how the experiences of select UEE practitioners might inform emergent

practice, I wanted to work toward a wider understanding of what matters in pluralistic communities—and cite it. As a white, male, settler doing academic research, this is a minimal standard given that “citational segregation” has helped reinforce “academia’s pervasive white masculinity” (Chakravartty, Kuo, Grubbs, & McIlwain, 2018, pp. 260, 257).⁷

So, in the spirit of having “sought teachers in all areas of my life who would challenge me beyond what I might select for myself” (Hooks, 1994, p. 207), thank you, to folks such as: Stephanie Allen (@builtjustice), Dr. Billy Ray Belcourt (@BillyRayB), Cicely Belle (@cicelybelle_xo), Dr. Cindy Blackstock (@cblackst), Dr. Katherine Crocker (@cricketcrocker), Alicia Elliott (@WordsandGuitar), Daniella Ferguson (@dfergusson), Leah George-Wilson (@GWLeah), Wade Grant (@WadeGrant), Ginger Gosnell-Myers (@Skusgluums), Rhianna Gunn-Wright (@rgunns), Joanne Hammond (@KamloopsArchaeo), Dr. Katherine Hayhoe (@KHayhoe), Mary Annaïse Heglar (@MaryHeglar), Mary Anne Hitt (@maryannehitt), Jess Háusti (@JessHausti), Sandy Hudson (@sandela), Robert Jago (@rjjago), Dr. Ayana Elizabeth Johnson (@ayanaeliza), Anna Jane Joyner (@annajanejoyner), Dr. Adrienne Keene (@NativeApprops), Khelsilem (@Khelsilem), Dr. Renee Lertzman (@reneeertzman), Corina Newsome (@hood_naturalist), Gabrielle Peters (@mssinenomine), Jay Pitter (@Jay_Pitter),

⁷ Writing from Kansas State University, Dr. Kakali Bhattacharya shares: “Somewhere in the United States right now, a woman of color is being denied tenure because her work is too radical, too angry, too anecdotal, too driven by ‘ethnic’ theories, too far from mainstream scholarship in her field, and therefore irrelevant and lacking in scholarly impact. Unable to make her plight clear, to convey to her readers an understanding of her meaning, she is also unable to persuade the dominant group that she matters, her work matters, her struggle matters—or that anyone should care. Without citing those who are frequently cited, her work will be viewed as pedestrian, unsophisticated, and lacking nuance in theory, methodology, analysis, or representation. She must filter her sensibilities through the colonizing academic structures to sound like everyone else, to reorient herself from her ‘backwards’ indigenous epistemic and ontological orientation. Then, and only then, can she participate—even marginally—on the playing field of academia” (2016, pp. 310-311).

Andrea Reimer (@andreareimer), Angela Sterritt (@AngelaSterritt), Kris Statnyk (@Kris_Statnyk), Dr. Leah Stokes (@leahstokes), Dr. Farhana Sultana (@Prof_FSultana), Tanya Tagaq (@tagaq), Tanya Talaga (@TanyaTalaga), Dr. Kim TallBear, (@KimTallBear), Dr. Zoe Todd (@ZoeSTodd), Dr. Eve Tuck (@tuckeve), Harsha Walia (@HarshaWalia), Elissa Washuta (@elissawashuta), Amy Westervelt (@amywestervelt), Matika Wilbur (@matikawilbur), and Amina Yasin (@bambinoir).

If it is true that “all flourishing is mutual” (Kimmerer, 2020, as cited in ‘Cúagilákv (Jess Háusti), 2021; para. 7), it would be wholly improper to not highlight these influential voices and, in doing so, contribute to new ways of citational practices.

I want to thank these lands and express gratitude to the First Nations who have been and continue to be stewards of them. Though I have been lucky to travel and learn elsewhere, most of my life triangulates between Coquitlam, Vancouver, and Squamish. My passion and reason for this work emerges from my relationship with these lands in particular.

Thanks to Dr. Mitchell Thomashow (supervisor) and Dr. Kim Langmaid (committee member). Thanks, too, to the Government of Canada for the SSHRC J. Armand Bombardier CGSM award and to Evans Lake Forest Education Society for the support during this thesis process.

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Terminology

Throughout this thesis, I will use English and Anglicized place names (toponyms). This is consistent with my spoken language, as well as my educational and cultural background.

Centring those names and terms, though, is not a neutral exercise. These names are value-laden:

a part of the colonial project that birthed Canada (C. Gray & Rück, 2019; R. R. Gray, 2015; Truth and Reconciliation Commission of Canada, 2015a), and an extension of the colonial conceptualization of Metro Vancouver (Baloy, 2016; Claxton et al., 2021; Mawani, 2007). Indeed, a similar phenomenon in colonial science exists whereby “the replacement of local forms of knowledge with Western science was considered a mark of success” (Liboiron, 2021, p. 876). Whether intentional or not, my choice to use them confers continued power and status to a colonial way of knowing this region while diminishing the languages and epistemologies of local Nations that have been here since time immemorial. Speaking elsewhere in North America about this trait of colonialism, Jay T. Johnson framed the use of Western names as contributing to the erasure of “the storied landscapes, destroying the libraries embedded within Indigenous toponyms, creating a terra nullius: an empty land awaiting a colonial/neo-colonial history and economy” (2012, p. 829).

As I claim to be an environmental educator and live in Vancouver, my ignorance of *xʷməθkʷəy̓əm* (Musqueam), *Skwxwú7mesh* (Squamish), and *səlililwətaɁ* (Tsleil-Waututh) toponyms and lack of relations is noteworthy, humbling, and points to work yet to be done. In this thesis, I describe the location where I met Ryan Vasseur (one of the practitioners) as the Means of Production Garden at 6th Avenue and St. Catherines in Vancouver, in an area overlooking an industrial area and the East Van Cross (public art). That contrasts vividly with the *Skwxwú7mesh* Snichim (Squamish language) place name—*Skwácháys*—meaning “place where water is drawn down into a hole; whirlpool...water spring, or water coming up from ground beneath” (Benson & Tl'akwasíkan, 2017). Where I met Jada Natalie Stevens (another practitioner), I described a century-old repurposed train station but made no mention of *p̓qáls* or

“white rock” (x^wməθk^wəyəm, 2020). That place name is from the downriver dialect of hənqəmīnəm, the language spoken by x^wməθk^wəyəm (Musqueam) (Stewart, 2018) and səlililwətaʔl (Tsleil-Waututh), among other nations. It describes the white rocks found at the bottom of what is now more commonly called Granville Street—named in 1870 after Lord Granville, the British Secretary of State for the Colonies (Macdonald, 1992). If as Ta7taliya Nahanee asserts “the delivery and mass acceptance of new terms...is the next level in this equation of emancipation” (2018, p. 17), then I share this to situate the colonial trajectory and power systems of the language I use, and the paradox of continuing to lend credence to something that I am also trying to help disrupt and re-imagine.

Introduction

There is an urgency for all citizens to understand what is happening to the worldwide environment, why it is happening, and how we know it is happening...We need to learn how we can live well in a place. This need to learn affords educational value to environmental education. (Hart, Jickling, & Kool, 1999, p. 105)

In *Starting Points*, Hart, Jickling and Kool (1999) renew a discussion of educational quality while discussing the current state and future trajectories of environmental education (EE). They describe EE as a young field still finding its feet in the “messy” and “contentious” (Hart et al., 1999, p. 106) larger context of education. They note how, as a fledgling division of academic research and practice, early guiding documents of EE contain unfortunate and surprising omissions—such as the Tbilisi Declaration (UNESCO, 1978) neglecting environmental philosophy, eco-feminism and, I would add, Indigenous sovereignty and perspectives—and they predict that critical nodes will emerge in the schema that demand inclusion and serious engagement as EE continues to develop (Hart et al., 1999). Just over twenty years after *Starting Points*, it is clear that urban environmental education (UEE) in Canada fits as an emergent field of study and deserving of that scholarship.

In an increasingly urban world where the impacts of human-induced climate continue to aggregate, it is paramount we develop a greater understanding of EE based in the places where most folks live—in cities. Through EE journal content analysis, and interviews with EE researchers and practitioners, Ardoin, Clark, and Kelsey (2013) highlight urban context as one of four core themes for future trends in EE research. Urban land area will quadruple by 2050 from 2000 levels (UN-Habitat, 2016), and the earth will add 2.5 billion people between 2014-2050

(McPhearson et al., 2016). If the concentration of human populations in urban centres is indeed “the defining ecological phenomenon of the twenty-first century” (Newman & Jennings, 2012, p. 2), “a central nexus for the long-term functioning of societies and ecosystems” (Frank, Delano, & Caniglia, 2017, p. 1), and “the most visible signature of the Anthropocene” (Alberti, 2016, p. 11) we must probe urban environmental education in earnest.

The lands and waters of Canada sprawl but the majority of the population groups into city centres. Canada’s urban concentration has increased from 20% in its first 1871 census (Barman, 2007) to 73.7% today (Statistics Canada, 2022a). In British Columbia, 86% of the provincial population exists in 2% of the province’s land by area (Ministry of Sustainable Resource Management, 2003), with Metro Vancouver hosting approximately 52% of the population by itself (British Columbia, 2022; Statistics Canada, 2022b). Due to the anthropogenic drivers of climate change, urban environments and their socio-political dynamics are at least as worthy of study as Canada’s iconic mountains, waterways, forests, tundra, long coastlines, and wildlife.⁸ Yet, EE’s roots in conservation and habitat preservation (Ardoin et al., 2013), as well as the tendency to search out and study “pristine” environments (Collins et al., 2000), have left UEE underexplored, particularly in a Canadian context (Huddart-Kennedy, Beckley, McFarlane, & Nadeau, 2009). Given Canada’s urban concentration, the underrepresentation of UEE in Canada requires urgent action.

⁸ Oft-repeated narratives of Canada’s expansive and unpopulated national parks (Jago, 2017) and sparsely populated rural landscapes can play into terra-nullius thinking and further the erasure of Indigenous Peoples. Due to the genocide of Indigenous Peoples in Canada (Hinton, Woolford, & Benvenuto, 2014; National Inquiry into Missing and Murdered Indigenous Women and Girls, 2019; Özsü, 2020; Truth and Reconciliation Commission of Canada, 2015a), as well as forced resettlements on reserve lands, uncontextualized discussion of Canada’s big landscapes—and the size and location of rural populations—should be read with caution.

Broadening the scope of EE to reverberate in urban areas may counter-weight against the increasing effects of climate change. However, because environmental education is most impactful when it relates to the participants (Palmberg & Kuru, 2000), recognizing peoples' diverse lived experiences in order to build the climate movement will be crucial to realize those adaptive and mitigating benefits. This widening scope cannot only be forward-facing toward the more globally-known and recent elements of Metro Vancouver—a major urban centre and nexus for trade on Canada's Pacific edge, an emerging tech supercluster, and nestled amidst the ocean, mountains, and old-growth forests. As a place-based and people-based practice, UEE in Metro Vancouver also means developing the history, language and rigour to understand how colonialism—better understood as an ongoing structure rather than a past event (Wolfe, 2006)—continues to shape the relationships between this region's landscapes and mindscapes.⁹ To index the beginnings of UEE in Metro Vancouver to a recently-met population density threshold or the start of colonial settlements would be to uncritically preserve the narratives of colonialism. Instead, as part of the broadening, there is an opportunity to centre the long, continuous, and reciprocal connections between the First Nations of this region (and, more recently, the rich contributions of an urban Indigenous population from across the continent) and these lands. If you are here, your story connects somehow to the spectres and possibilities of that history. Serious place-based learning must account for that.

⁹ This need is especially prescient given the IPCC's assessment, with high confidence, that "present development challenges causing high vulnerability are influenced by historical and ongoing patterns of inequity such as colonialism, especially for many Indigenous Peoples and local communities" (IPCC, 2022, p. 12).

Social-ecological systems (SES) bridge these social realities—of histories, cultures, and governance systems—with an environmental framework. A SES is an “integrated system of ecosystems and human society with reciprocal feedback and interdependence” (Folke et al., 2010). Consider that elements of systemic racism and classism—such as employment rights, gentrification, immigration policies, law enforcement, political representation, resource allocation, and residential segregation (Schell et al., 2020)—influence landscape characteristics like surface cover, heat islands and environmental pollutants, which then has demonstrable effects on “ecological and evolutionary patterns and processes” (2020, p. 14). The demonstration of these interrelationships further reinforces the claim that the convention to divide social and natural systems is arbitrary (Berkes, Folke, & Colding, 2000). As such, the SES framework validates a blended and wide-angle definition approach to UEE.

Mapping that example to Metro Vancouver, it demonstrates the interrelatedness of social realities to environmental conditions. Here, the lineage of state-sanctioned racism to maintain the influence of white settlers is well known (Claxton et al., 2021). Beyond the general arc of colonialism, that lineage includes legislation, events, and vestigial impacts such as: the Chinese Head Tax (1885); Anti-Asian Riots (1907); immigration restriction via the “continuous journey” legislation (1908), the Komagata Maru (1914), the City of Vancouver hiring a racial segregationist (Harland Bartholomew) to create its first city plan (1926) which included directives to illegally expropriate *xʷməθkʷəy̓əm* (Musqueam) and *Sḵw̓x̓wú7mesh* (Squamish) lands (Stanger-Ross, 2008); immigration quotas for South Asian immigration (1951), race restrictive property covenants (Hopper, 2014), and anti-Black racism present in Vancouver’s city planning process (Allen, 2019), to name a few. Climate change is likely to induce “the greatest

wave of global migration the world has seen” (Times & Lustgarten, 2020, para. 4), and “migration waves often spawn a resurgence of nationalism and/or racism” (Thomashow, 2020, p. 120). We must make clear-eyed connections between global climate forces, local UEE, and the miasma of racism that accompanied colonialism to this region and never left. In an urban SES where “social processes alter ecological properties that reciprocally influence human societies” (Schell et al., 2020, p. 1), these discriminatory acts and systems of social organization shape some of the topography of possibilities for the people of Metro Vancouver.

UEE practitioners are sensitive instruments from whom we learn about urban environmental education’s emergent practice. Beyond how macro-phenomena like climate-induced migration, colonialism and systemic racism shape and position their practice, they are able to reveal how the microphenomena of one’s identity, relations, politics, culture, and history inform their practice. In the context of Metro Vancouver’s already-high and increasing urban concentration, the necessity to understand and engage with the social levers of SES grows. Toward the social elements of those urban SES, I propose themes to invigorate the discussion: ecological identity, political ecology and environmental justice, communities of practice, and cultural ecosystem services (CES). Because phenomenological methods can disrupt established narratives by elevated individual experiences (Lester, 1999), I will interview eight Metro Vancouver UEE practitioners and analyze their lived experiences to glimpse emergent practice. To be clear, each practitioner embodies elements of those social learning/practice themes—all act and interpret via their ecological identities, all contribute to and receive from CES, all reckon with elements of political ecology and environmental justice, and all connect with communities of practice—but my analysis will speak to each theme using the experiences of two of the eight

practitioners. Emergent trends in UEE have been proposed that span cities worldwide (Russ & Krasny, 2015), but these experiences and practices emerge from here and will be significant in how practice in Metro Vancouver develops. Learning about their practices and ambitions may create the enabling conditions to understand the streams of tomorrow's UEE in Metro Vancouver and take on urgent environment learning and action here.

Research Question and Significance

In order to engage this gap, I ask: What are the lived experiences of Metro Vancouver's urban environmental educators, and how may they inform emergent practices?

This research will be most significant for interested parties of the Metro Vancouver region; folks who wish to immerse themselves in the lived-experiences and stories of practitioners in their region, policy-makers seeking to support these communities of practice, and organizations looking to align themselves with an urban ethos that celebrates the potential of urban communities as they reflexively examine our distinct environmental interactions and possibilities. As practitioners re-shape what counts as UEE and who qualifies as an educator in Metro Vancouver, interested readers should also prepare to imagine, provoke, and move towards new ways as this important field emerges here. If there is tension as to whether these eight practices look, sound, and feel like what one might think of as environmental education, that is a positive tension and one that gives agency for further dialogue and action in the developing UEE community.

Literature Review

Distinguishing Urban Environmental Education within Environmental Education

Russ (2016) distinguishes UEE from EE in that it “deals with particular audiences, settings, environmental and social issues, teaching approaches, and goals related to urban sustainability, ecosystem health and human well-being” (p. 2). Others define UEE and its need in contrast to some popular EE arguments, such as Richard Louv’s Nature Deficit Disorder (Louv, 2008), which privileges a particular iteration of environment distant from urban residents (Bellino & Adams, 2017). Swyngedouw and Kaika (2000) broaden that observation and note that “the city often figures in a rather marginal or, worse, antithetical manner” in the “innumerable environmental social movements” (2000, p. 567). In contrast, they propose a vision of cities as “dense networks of interwoven sociospatial processes that are simultaneously human, material, natural, discursive, cultural, and organic” (Swyngedouw & Kaika, 2000, p. 567). Amongst the multiplicity of views on urban spaces, there is an educational opportunity to be seized. Because cities are “engines of innovations, producers of pollution, sources of prosperity, consumers of natural resources, and labs for solutions to social and environmental problems” (Pope et al., 2015, p. 6), and home to an ever-growing portion of the world’s population, UEE requires customized educational tools to engage. UEE values many of the same principles as EE, but the question is: what else? As Russ’s definition suggests, UEE attempts to address some of EE’s incongruities with urban ecosystems by unapologetically studying the interconnectedness of humans and cities with the non-human environment.

Social-Ecological Systems and Eco-evolution

Russ and Krasny (2015) identify several UEE trends, including approaching the city as a social-ecological system (SES). A SES uses a systems-approach to understand interactions and relationships between ecosystems and systems of human uses and governance (Ostrom, 2009).

Describing that trend, Russ and Krasny state that:

(1) Cities are part of the biosphere, they contain nature, people can interact and are impacted by ecological processes in cities, and urban landscapes provide ecosystem services; (2) Cities are evolving, adaptive, and legitimate social-ecological systems: people can design cities that support ecological integrity and human well-being, and where new adaptive approaches to governing ecological and social dimensions are constantly emerging. (Russ & Krasny, 2015, p. 19)

Social-ecological systems (SES) move us beyond the “traditional separation of ecological and social sciences” (Liu et al., 2007, p. 1513) and, particularly, acknowledge humans as drivers of urban systems (Elmqvist, 2013, p. 149). Though “ecological and social sciences have developed independently and do not combine easily” (Ostrom, 2009, p. 419), the SES prism helps situate the relationship between human systems and natural systems. Such a conceptualization, for example, helps us break down and discuss resource-related processes of urban environments such as ecological footprints (Rees, 1999), and how they impact distant seemingly-unconnected landscapes in order to service the needs of cities. An SES prism also considers how locally-produced knowledge—or what Ghisloti Iared, Di Tullio, Payne, and Oliveira (2015) would describe as geo-epistemologies—interact with social and ecological factors to produce systems-level impacts. The implication for this thesis is that the unique experiences of Metro

Vancouver's UEE practitioners have a hand in shaping local knowledge and social systems that will impact ecological factors on a larger systems level.

In imagining how SES interact over time, Alberti (Alberti, 2016; Alberti et al., 2003) suggests that we understand them as “co-evolving human and natural systems” (2016, p. 11):

Cities are, most of all, networks of people. It is through social interactions that people have reconfigured ecosystem patterns and processes to create the human habitat...But we do not know how values, ideas, and knowledge shape humans' interactions with ecological networks and govern their dynamics. (Alberti, 2016, p. 20)

The scale of modern urbanization thrusts humans forward into a new eco-evolutionary system. Viewed this way, human systems are more than linked to ecological systems: they are drivers for the evolutionary change in ecological systems (2016). Within that framework, Alberti states the aim of urban ecology as “understand[ing] the nature of different networks in coupled human-natural systems and...uncover[ing] the principles that govern their evolution” (2016, p. 17). Urban environmental education, more broadly, has the ability to advance that uncovering. Within an eco-evolutionary system of that complexity, UEE could popularize the capacity for reflexive investigation and self-awareness of the human role in altering the biosphere—locally and throughout the reach of their ecological footprints.

Ecological Identities

Ecological identity and sense of place are two related interpretive tools for understanding the experiences of Metro Vancouver Urban Environmental Educators. Thomashow (1996) explains ecological identity as:

all the different ways people construe themselves in relationship to the earth as manifested in personality, values, actions, and sense of self. Nature becomes an object of identification...Ecological identity describes how we extend our sense of self in relationship to nature...To be more specific, each person's path to ecological identity reflects his or her cognitive, intuitive, and affective perceptions of ecological relationships. (p. 3)

Ecological identity can further be understood as an "interpretive orientation" (Thomashow, 1996, p. 4) that has "conceptual integrity because there is evidence suggesting that people take action, or formulate their personality based on their ecological worldview" (1996, p. 4). While holding up its rigour, Thomashow also allows that ecological identity has soft edges that blend with concepts like "ecological consciousness, ecosophy, the ecological self, [and] the ecological unconscious" (1996, p. 19). This collection of "metaphorical terms...offer an approach to knowledge based on an understanding of ecological concepts, not only as they are derived from scientific ecology but also from vernacular cultures and ancient philosophies" (1996, p. 19).

Today, identity is commonly understood as being built and reshaped over time based on one's experiences and socio-cultural circumstances (Hayes-Conroy & Vanderbeck, 2005, p. 313). Thomashow is not prescriptive as to the type of practice or career you must engage in to develop an ecological identity, rather, ecological identity work is akin to an adaptable "reflective processes we use to explore the realm" (1996, p. 5). Simply put, it allows one to conceptualize environmental relationships and sense of self in any circumstance.

In that light, ecological identity as a concept does not require any particular conception of nature, nor is it focused solely on the study of non-human life. Terms like "nature" are

socially constructed and definitions vary from culture to culture, and from individual to individual (Thomashow, 1996). Where one may think of nature as a collection of plants and animals, Thomashow imagines a wider circle that includes the health and wellness of your community (1996, p. 63). Within the UEE framework we are discussing, the ecological identities of urban residents are not diminished, deemed insufficient, or constrained a priori because they live in a major metropolitan area. However, as Tidball and Krasny (2010) highlight, this runs counter to popular narratives of human exceptionalism from nature which leave little room to understand urban residents and built environments in positive terms rather than through deficit-based language. Given that “the degree of and objects of identification must be resolved individually” within an ecological identity framework (Thomashow, 1996, p. 3), this provides an adaptable tool to create a “rich substrate” (1996, p. 24) of understanding, throughout a variety of landscapes, including cities.

Cultural Ecosystem Services

The human veneer—bodies, buildings and infrastructure—can, both, mask some productive ecosystem services being performed by a city’s enmeshed ecosystem, and are also strong indicators of other ecosystem services in action. The Millennium Ecosystem Assessment defines ecosystem services as:

The benefits people obtain from ecosystems. These include *provisioning services* such as food, water, timber, and fiber; *regulating services* that affect climate, floods, disease, wastes, and water quality; *cultural services* that provide recreational, aesthetic, and spiritual benefits; and *supporting services* such as soil formation, photosynthesis, and nutrient cycling. (Millennium Ecosystem Assessment, 2005a, p. 39)

In an urban environment, the *cultural services* elements of ecosystem services deserve special focus due to their “potential to motivate and sustain public support for ecosystem protection” (Daniel et al., 2012, p. 8813). The Millennium Ecosystem Assessment (2005a) explains cultural ecosystem services (CES) as the “nonmaterial benefits people obtain from ecosystems” (p. 40), including: cultural diversity, spiritual and religious values, knowledge systems, educational values, inspiration, aesthetic values, social relations, sense of place, cultural heritage values, and recreation and ecotourism. This definition insists that humans and their culture are not separate from other ecosystem functions. In fact, due to the strong influence of cultural ecosystem services on human behaviour, “spiritual and cultural values of ecosystems [are] as important as other services for many local communities” (Millennium Ecosystem Assessment, 2005a, p. 60).

Relative to other ecosystem services, cultural ecosystem services (CES) are intangible and difficult to quantify (Milcu, Hanspach, Abson, & Fischer, 2013). However, recognizing their potential to strengthen social-ecological connections that benefit human and non-human life, efforts are being made to better define and, therefore, understand them (Nesbitt, Hotte, Barron, Cowan, & Sheppard, 2017).

Political Ecology and Environmental Justice

The human character of urban environments means that a thorough inquiry into the experiences of UEE practitioners in Metro Vancouver ought to engage with power, politics, and justice. From political ecology to environmental justice or climate justice, and from ecological debt to equity and access—a suite of concepts provides the language and access to do so.

Important conceptual distinctions and specifications exist, for example between environmental

justice and political ecology (Svarstad & Benjaminsen, 2020), but some practitioners may find as much inspiration from the common themes as the fine details.

Common themes include Hill and Boxley's (2007) suggestion of a two-pronged concept of justice: "*environmental justice*—the question of the unequal distribution of harmful environments between people—and *ecological justice*—the justice of the relationship between humans and the rest of the world" (p. 37). They also include the observation, here noted by Fassbinder, Nocella II, and Kahn (2012), that separating "environmental literacy from prevailing ethical concerns" remains the "dominant academic tendency" (p. xviii), often leaving the discourse of sustainability in the realm of science. Another, exemplified by Bellino (2016), asserts that the apolitical nature of environmental education perpetuates uncritical EE curriculum that leaves systems of inequality in place. Political ecology, in general, offers a counter-point. Political ecology concentrates on "the relation between the politics of knowledge, political economy, and environmental change" (Meek & Lloro-Bidart, 2017, p. 213), and welcomes power analysis within environmental dialogue and phenomena. Political ecology goes beyond the socio-ecological processes that produce cities to dissect "the political processes through which particular socio-environmental urban conditions are made and remade" (Heynen, Kaika, & Swyngedouw, 2006, p. 2).

Communities of Practice

Communities of practice theory deals with the social learning that comes as a result of working within a community towards a common goal (Krasny, Mukute, Aguilar, Masilela, & Olvitt, 2016). Lave describes that social learning as an "emerging property of [one's] legitimate peripheral participation in communities of practice" (1991, p. 63). Wegner differentiates

communities (in the typical sense) from communities of practice, saying that members of a community of practice are “informally bound by what they do together—from engaging in lunchtime discussions to solving difficult problems—and by what they have learned through their mutual engagement in these activities” (1998, p. 2). Wenger characterizes communities of practice and their social learning outcomes through three questions:

(1) What it is about—its joint enterprise as understood and continually renegotiated by its members; (2) How it functions—the relationships of mutual engagement that bind members together into a social entity; (3) What capability it has produced—the shared repertoire of communal resources (routines, sensibilities, artefacts, vocabular, styles, etc.) that members have developed over time. (1998, p. 2)

In contrast to the distant field studies typical of some EE, the potential for intricate communities of practice in UEE is amplified as it is studied and practised in populous cities. The complexity and connectivity within dense and diverse cities enables the development of highly layered joint enterprises, mutual engagement, and shared repertoires of communal resources.

Emergent Practice

Emergent practice, for the purposes of this thesis, describes the practice that results from peoples’ professional and social activities over time. In that way, it is similar to the socially-learned capabilities described within communities of practice theory. Whereas socially-learned capabilities could remain fairly static over time and reproduce existing ways of doing things, emergent practice has qualities of innovation, responsiveness, and prescience. With some of the eight practitioners I selected, those qualities of emergence are more observable now. With others, the emergence qualities of their practice may be more future-facing. As a group, though,

the collection of practitioners I selected form a composite of what might emerge in Metro Vancouver UEE.

Speaking generally of practice theory, Schatzki (2012) outlines practice as “an organized constellation of different people’s activities...[and] a social phenomenon in the sense that it embraces multiple people” (p. 13). Practices are found in the activities, narratives and customs of communities (Higgs, Barnett, Billett, Hutchings, & Trede, 2013). This property enables practice theory to nest well in dynamic urban systems. In that way, practice theory lends itself well to diverse research areas and varied formulations of practice. Schatzki (2012), in fact, suggests that practice is intrinsically amorphous and in flux—that the idea of practice ceases once rigid rules and processes are finalized and immovable. Still, in order to facilitate ongoing development of practice, Li (2017) suggests “goals, audiences, settings, activities, resources and ideas” (p. 66) as six elements of environmental practice worthy of monitoring and optimization. The framework of practice theory give structure to understand an ever-evolving process based in the experiences of practitioners and communities, and, as Li (2017) notes, and it has been applied to study innovation and emergent practice.

Whereas emergent trends in UEE might curate parallel ideas or capabilities that are observed in geographically-unconnected places (Pope et al., 2015), emergent practice responds to the social conditions and landscape of a particular place. In that light, emergent practice is the crux of local innovation—the front edge and testing ground of future praxis. It is the novel practice that emerges from a specific, localized social-environmental maelstrom.

Research Methodology

Overview

Because I inquired into the lived experiences of Metro Vancouver UEE practitioners, I took a phenomenological approach to my research question. Seamon (2000) describes phenomenology simply as “the interpretive study of the human experience” (para. 1). Phenomenology refers to a way of knowing based on the characteristics of one’s experience in the context of the world around them (Seamon, 2000). Van Manen draws a contrast between phenomenology and most other sciences by saying that phenomenology “attempts to gain insightful descriptions of the way we experience the world pre-reflectively, without taxonomizing, classifying, or abstracting it” (2016, p. 9). Van Manen (2016) adds that “phenomenology differs from some other social or human sciences which may focus not on meanings but on statistical relationships among variables, on the predominance of social opinions, or on the occurrence or frequency of certain behaviours, etc.” (p. 11). As such, the conversations drew out data (the descriptions of participants) to address the research question through the interpretation of the researcher.

I stepped into conversation with UEE practitioners and analyzed the ways that they made meaning of their experiences. This branch of phenomenology—of interpreting descriptions of experience to suggest the kernel of that experience—is known as hermeneutic phenomenology and, Seamon (2000) notes, is closely associated with Paul Ricoeur, as opposed to “pure” or transcendental phenomenology (Husserl), or existential phenomenology (Heidegger and Maurice Merleau-Ponty).

Phenomenological methods are thought to have the capacity to disrupt established narratives and the status quo because they elevate the experiences of individuals (Lester, 1999), which could include marginalized voices and novel experiences. Earlier, I highlighted some points of departure and tension between UEE and EE—with its roots in conservation and land preservation. If we take that dialectic to be true, creating space for the voices of UEE practitioners in Metro Vancouver could have outsized importance in sensing the pulse of regional UEE and anticipating trends based on the voices of practitioners.

To that end, I interviewed eight Metro Vancouver UEE practitioners, used hermeneutic phenomenology to evince common threads from the interview transcripts, and interpreted practitioners' accounts as a way of proposing emergent practice in the region.

Project Participants

To investigate my question, I used a mix of purposive sampling methods—including key informant sampling, criterion sampling and snowball sampling (also known as chain sampling). I chose purposive sampling because it is typically used to discover more nuanced and complex information about a specific phenomenon within a smaller population, as compared to probability sampling (Etikan, Musa, & Alkassim, 2016; Patterson & Williams, 2002; Teddlie & Yu, 2007). Purposive sampling relies on subjectively chosen experts and insiders, rather than mathematical sampling formulas prominent in quantitative research (Teddlie & Yu, 2007). This sampling choice matches the phenomena I studied because the UEE field in Metro Vancouver is in a nascent stage—practitioners are de-centralized, some of the projects and programs in question have not been operating for very long, and few describe their work explicitly as UEE.

Building a strong list of participants in these circumstances may have been challenging without the directed sampling choices that I made.

As the participants were subjectively chosen, purposive sampling requires that I detail my credentials to make the selections and the criteria for doing so (Tongco, 2007). Beyond my positionality which I described in the acknowledgements, I have lived in this region nearly all of my life. My personal and professional networks are centred here, as are the obligations of the work I do. To varying degrees, I have been developing my practice since 1999. As a graduate student, my network has continued to expand to include practitioners connected to environmental education in Metro Vancouver. I further developed that network by following and engaging with UEE practitioners (and those adjacent to the practice) on Twitter. By adding snowball sampling to my participant selection method, I was able to leverage the connections of my network to find other innovative participants.

Using Russ's definition (2016) of UEE, given earlier, I limited practitioner candidates when their curriculum appeared not to significantly factor in the urban setting or audience. For example, some environmental education centres that lay on the edges of urban development seemed to be teaching to the folks from inside the city about the environment outside of it—an idealized environment that the city lacked. This criteria also narrowed the list of potential participants where a practitioner's conservation and preservation ethos seemed to leave little space to investigate the human-nature interconnectedness of urban environments beyond a lens of pollution and degradation. Conversely, the definition had a broadening effect with respect to practitioners whose practice intersected with social issues, teaching approaches, and human well-being angles not typically represented in EE.

Data Collection

Data was collected through semi-structured participant interviews. Interviews are a common phenomenological research practice and are typically tailored to allow the participant to describe their experience of the research topic in detail (Laverty, 2003, p. 29). Consistent with van Manen's (2016) credo to meet folks "*there* where they are naturally engaged in their worlds" (p. 18), I conducted all but one interview in person at an area of Metro Vancouver significant to their practice. For most, that was a place where they deliver their programs. By interviewing in those places, the goal was to stimulate their memories, feelings and visions of their practice. Though I created a list of semi-structured questions, the vocabulary and phrasing of those questions varied slightly by participant as abstract terminology can impede the spontaneous replies and natural expression (Benner, 1994, p. 108).

Steps that I took—such as the particular direction of my literature review, or the presuppositions contained in my semi-structured questions—may appear to direct or bias the end results. However, in hermeneutic phenomenology, the researcher is not seen as an inert force in the investigative process, nor is a structured interview antithetical to the underpinnings of phenomenology (Bevan, 2014). Bevan's three-part method for phenomenological interviewing—contextualization, apprehending the phenomenon, and clarifying the phenomenon (2014, p. 139)—was instructive in formulating the interview process. In my semi-structured interview, questions one through three aimed for contextualization, questions four through six tried to apprehend the phenomenon, and clarifying questions were inserted ad hoc throughout the interviews. As a novice phenomenological researcher, using Bevan's interview method assisted my data collection process and enhanced the validity of my analysis and discussion.

The interviews were recorded (audio) in order to preserve contextual fidelity, facilitate transcription, and allow for subsequent data analysis through a hermeneutic phenomenological lens. All data collection was done in accordance with Royal Roads University's ethics policies.

Interviews

As the credibility of my analysis relies to an extent on how the reader assesses my methods and process (Creswell & Miller, 2000, p. 125), I felt that non-confidential participants would give the reader greater confidence in the participants' accounts, as well as the inferences I drew during data analysis. This method follows a process used by Langmaid (2009), and was detailed to participants prior to their interview. Because the work of the UEE practitioners I interviewed is fairly unique within the region, it would have been impossible to reach a deep level of description and also to guard the identity of the participant.

Data Analysis

I took a hermeneutic phenomenological approach to analyzing my data. I took that approach because, as compared to other branches of phenomenology, hermeneutic phenomenology has the author interpret the descriptions in the data set in order to comprehend the fundamental nature of phenomena (Tan, Wilson, & Olver, 2009). With that interpretive tool in hand, I could then suggest how the practitioners' experiences may inform the region's emergent practice—a present and future phenomenon and, therefore, requiring a degree of narrative license.

After completing the interviews, I conducted a thematic analysis eyeing phenomenological themes as the “structures of the experience” (Van Manen, 2016, p. 79). A hermeneutic orientation holds that it is impossible to bracket or set aside prior knowledge,

cultural understandings, personal histories and past experiences as the researcher engages with the text (Patterson & Williams, 2002, p. 23)—in my case, interview transcripts. My analysis, then, acknowledges that my own presuppositions co-construct the analysis along with the participants' interview transcripts. Patterson and Williams (2002) describe this iterative and dialogic process as the hermeneutic circle—no part can be understood unconnected from the whole.

To arrive at the final transcripts, I:

- 1) Used a digital recorder during the interviews;
- 2) Used Transcription Hub ([transcriptionhub.com](https://www.transcriptionhub.com)) as a transcription service;
- 3) Verified and corrected the draft transcripts from Transcription Hub by re-listening to the digital recordings;
- 4) Shared a copy of the transcript with the participant and asked them to review for accuracy.
- 5) Uploaded the transcripts into Dedoose (dedoose.com)—a qualitative and mixed methods data analysis software. As I reviewed the transcripts, I coded them with themes.
- 6) For the purposes of presenting the analysis in this thesis, I selected two practitioners who, in particular, shared experiences relevant to the theme (e.g. communities of practice). Many of the practitioners shared something relevant to each of the themes, but I focused on particular elements of their experience in order to demonstrate the themes that I heard from them and others in the interviews.

Plausibility and Validity

Hermeneutic phenomenology pays close attention to individual accounts and specific instances of phenomena, in contrast to methodologies that seek large data sets in order to claim statistical significance and generalizability (Patterson & Williams, 2002, p. 25). Transferability and scaling are not features phenomenological examination (Lester, 1999, p. 1). Validity, in hermeneutics, refers to the holistic strategies researchers enact to establish credibility of the researcher's account and claims (Creswell & Miller, 2000, p. 125). The holistic approach reigns because phenomenologist researchers understand that their inquiries are often "paper and pencil affairs, which means that they are *about* the phenomenon being tested rather than a direct living through of it" (Giorgi, 2002, p. 4). However, too much of a relaxation of methodological standards renders the inquiry indistinguishable from untrained analysis, and diminishes the researchers' claims (Hammersley, 2000, p. 124). Despite phenomenology's predilection for detailed descriptions of phenomena, it does not permit "empirical generalizations, the production of law-like statements, or the establishment of functional relationships" (Van Manen, 2016, p. 22). Instead, the plausibility and validity of my claims was established in line with Creswell's "lens of the researcher" (Creswell & Miller, 2000, p. 125), which required me to harvest rich interview data, develop themes that resonate, and build a coherent and sustained argument throughout my writing.

Introduction to Reflections

Why Reflections?

In addition to the interviews and subsequent analysis, I put forward a series of reflections for two reasons. First, the reflections open up the experience that surrounded each interview—their place of practice, my predispositions, and the subsequent places my mind spun from the encounter. They are phenomenological glimpses that broaden the interpretive picture for the reader. That broader picture can be useful in strengthening the connections between ideas, as well as critiquing how they were produced and linked. Second, they assert that stories matter. Paraphrasing Gary Nabhan, Robin Wall Kimmerer argues that ecological *restoration* cannot proceed without *re-story-ation*—as in, reforming the stories we tell about our relationship to place (Swan, 2015). That parts of human story cycles, similar to the carbon cycle, are out of alignment for a sustainable and just planet. Stories are told for and heard by different audiences—from an inner voice to global macro-narratives. My reflections are a normalization, even just for me, of everyday climate-connected thinking. They parallel the emergent practice that expands the circle of what ought to be considered environmentally-related practice and, therefore, included in UEE. They find value and agency in Dan Rubin’s equation that “what you do + climate change = activism” (Rubin, 2019), and Toni Morrison’s advice to those compelled to act: “what can I do from where I am?” (Greenfield-Sanders, 2019). In that sense, they are small phrases of ecological re-story-ation, and an affirmation that story-telling is indeed one of the exploratory and adaptive tools of UEE (Goldstein, Wessells, Lejano, & Butler, 2015; Hughes, Masters, Padilla, Konrad, & Siddall, 2015).

The Reflective Turn as an Extension of Interpretive and Critical Tools

The “reflective turn” refers to the increase of reflexive methods in the social sciences (Venkatesh, 2013). This turn occurs in the context of the Western idea of “distance” between “individual and community, about time and space, knowledge and research, imperialism and colonialism” (L. T. Smith, 2021, p. 58). In this epistemology, distance operates on a gradient: the more separate the individual conceptualizes themselves from the environment and community, the more neutral and objective they can be (L. T. Smith, 2021). This, of course, is not the only way of knowing the world and it stands in contrast, for example, to many Indigenous epistemologies (Braun, Browne, Ka ‘opua, Kim, & Mokuau, 2014; L. T. Smith, 2021). Feminist theory, too, in its many formulations, has also driven challenges to objectivity and singular truth (Stoetzler & Yuval-Davis, 2002), though “Western feminism...has been challenged, particularly by women of colour, for conforming to some very fundamental Western European world views, value systems and attitudes towards the Other” (L. T. Smith, 2021, p. 45). Today, those dynamics—that acknowledge the presence and proximity of the researcher—are being disrupted by academics seeking to interpret social-environmental phenomena. They turn to community and cultural knowledge and wisdom to thread alongside other academic scholarship, and it looks like this:

I intertwined theories, empirics, emotions, and storytelling to ground the theorizations of climate coloniality in lived experiences. I demonstrated how lived experiences are emotionally embodied complex processes and fraught conditions, but are legitimate sites of geopolitical knowledge and counterbalances to hegemonic framings and structural forces. (Sultana, 2022, p. 24)

The reflective turn holds that the researcher's own life experience and social context offers value "to generate insights, establish patterns, and bring the voice of their research subjects to life" (Venkatesh, 2013, p. 4), rather than being "neutral [and] value-free" (Foley, 2002, p. 472). By including my reflections, it helps readers complete the hermeneutic circle (Patterson & Williams, 2002) referred to earlier.

These interpretive, introspective and critical tools may be especially valuable at a time when disruptions to the status quo are required. In a globalized world, embedded values—environmental, socio-cultural, economic—are revealed in some of the particular challenges today: climate emergency, systemic racism, and wealth stratification. To align toward a more sustainable and just future, we would do well to attune toward voices who critique and demystify the presumed objective and singular truths that were foundational to this climate catastrophe.

Story-telling as a Tool of Action

We are our stories. They are personal and we relate to them. Telling self-stories has the effect of "specifying the knower" (Davies, 2012, p. 178), and this can build toward action in two ways.

First, as knowledge is socially-situated, self-stories can help the reader understand the positionality of the author. Who is this author beyond their academic paper? Off-shift and at home with their family? In their community day-dreaming of a better future? Such reflections assist not only with the reader's comprehension of ideas, but also with the potential for solidarity and movement-building—crucial tools of action to combat climate change. The socio-political barriers to enacting faster and farther-reaching action on climate change often cannot be solved through additional scientific data alone (Hayhoe, 2018). Speaking on overcoming the

ideological barriers to climate communications through relationship-building rather than more scientific data, Katharine Hayhoe shares that:

Scientists can be effective communicators by bonding over a value that they genuinely share with the people with whom they're speaking...It could be that both are parents, or live in the same place, or are concerned about water resources or national security, or enjoy the same outdoor activities. Instead of beginning with what most divides scientists from others, start the conversation from a place of agreement and mutual respect. Then, scientists can connect the dots: share from their head and heart why they care. (2018, p. 943)

By modelling UEE that pairs self-stories with research, we build in the expectation of sharing from the head and heart. We welcome a dialectic of ideas mediated through the lived experiences of individuals.

Part of the re-story-ation, then, moves environmental stories to the centre for an ever-growing group in order facilitate collective climate action. Describing the ubiquity of environment to all stories today, Meera Subramanian summarized to journalists that:

“Environment stories are front-page stories. They’re every-page stories. They’re everywhere stories and they’re everybody stories” (2020, 13:30). Echoing that in a braided essay, Mary Heglar describes the permeation like this:

Something remarkable has happened to the climate conversation in the past two years. It's finally found its way out of the academy, oozed out of the Big Green groups and expert circles, and landed in the streets and on everyone's lips. I hear it everywhere: on the

street, in the subway, in the airport, in the changing room at my yoga studio, in the checkout line at the grocery store. It's not niche anymore. It's mainstream. (2020, para. 7)

When Mary Heglar names her essay *We Can't Tackle Climate Change Without You (2020)*, she lays bare that, at this point in the challenge of climate change, your inclusion in this collective movement matters more than your exceptional individual ingenuity. Whoever you are, whatever your talents are and your history is, bring that, be true to that, and act. Just as recent IPCC reports are addressing their overbalance towards positivism and reductionism in earlier reports in search of actionable climate solutions (Schipper, Dubash, & Mulugetta, 2021), climate discourse continues to re-story as the everyday, everyone, everywhere action tool that it needs to be.

Practitioner Introductions

The places of employment listed here were current for all practitioners at the time of our interview. The dates of those interviews can be found after the semi-structured interview guide at the end of this thesis.

Ryan Vasseur

Ryan is the Manager of Living Building Maintenance, and a Green Roof and Living Building Installer and Landscaper with Architek—a prominent living architecture technology company in Metro Vancouver. Supplementing that, he facilitates public education at the Means of Production Garden, leading courses, liaising with community partners, and tending the garden. He is passionate about healthy soils, permaculture, and reorienting priorities toward a regenerative relationship with the planet. Ryan earned a Bachelor's degree in Human Kinetics/Commerce from the University of British Columbia (UBC), a certificate for Decision Making in Climate Change, Sustainability and Environment, and a Permaculture Design Certificate.

I met with Ryan Vasseur at the Means of Production Garden, in Vancouver.

Jada Natalie Stevens

Jada is a Graphic Artist and Wayfinding Specialist in the Customer Communications and Public Affairs Division at Translink—Metro Vancouver's regional transit and transportation authority. She volunteers extensively through the region, including with Vancouver Public Space Network, Abundant Transit BC, the Stanley Park Ecology Society, and with various committees and events for the City of Vancouver. She has an active online presence in urbanist dialogue through Twitter and guest spots on the *Viewpoint Vancouver* (formerly *Price Tags*)

blog. Jada's educational background spans design, public relations, media, marketing and community organization.

I met with Jada Natalie Stevens at Waterfront Station, in Vancouver.

Laurel Dykstra

Reverend Laurel Dykstra is the priest for Salal + Cedar. They are well-known in Metro Vancouver for their blend of faith, advocacy, and action, as well as their social justice work that connects faith-based and secular environmental groups. Rev. Dykstra was the Anglican Church representative to the planning group for the Truth and Reconciliation Commission's British Columbia National Event in 2013. Rev. Dykstra is an author, conference speaker, and earned a Bachelor of Science degree in biology.

I met with Rev. Dykstra in Chinatown at the Waves Coffee House, in Vancouver.

Elaine Su

Elaine is a teacher-librarian at a Metro Vancouver school district and has previously worked at several independent and public schools throughout the region. She has sat on boards, and founded and directed a number of education-focused organizations, including: the Compass Community School (co-founder and director), the Hidden Well Foundation (co-founder), Babies for Climate Action (co-founder), the Hua Foundation (board member), the Big Mountain Youth Society (founder and director), and the Fresh Air Learning Society (board member and president). Elaine earned a Bachelor of Education in elementary education at UBC, and has completed additional professional development via the RADIUS Fellowship in Radical Doing, and Reconciliation Through Indigenous Education (EdX).

I met with Elaine Su at her home, in New Westminster.

Adria Hussain

Adria is the School Programs Manager with the Stanley Park Ecology Society (SPES). She has held numerous environmental education roles with Metro Vancouver Regional Parks, the Beatty Biodiversity Museum, Science World, and Parks Canada. Prior to her current role with SPES, she earned a Bachelor of Education with a specialization in outdoor experiential education at Lakehead University.

I met with Adria Hussain at the SPES office, in Vancouver.

Dr. Janet Moore

Dr. Janet Moore is the board chair and co-founder of CityStudio. Her practice is focused on sustainability, higher education and social innovation. She is a Professor of Professional Practice and has previously been a Director of Simon Fraser University's Semester in Dialogue. Dr. Moore earned a PhD in Curriculum Studies with UBC.

I met with Dr. Moore at the CityStudio office, in Vancouver.

Dr. Jeff Schiffer

Prior to his current role with Native Child & Family Services of Toronto, Dr. Jeff Schiffer practised in a varied of roles in the Metro Vancouver area, including as: the founder of Culturally Relevant Urban Wellness (CRUW), a Special Projects Officer with Vancouver Aboriginal Child and Family Services Society, and the Program Director at the Office of Indigenization at the Justice Institute of British Columbia where he instructed in the Aboriginal Focusing-Oriented Therapy & Complex Trauma Certificate Program. Dr. Schiffer is of

European and Métis ancestry. He earned a PhD in Applied Anthropology through Columbia University.

I spoke with Dr. Schiffer over the phone while he was in Toronto and I was in Vancouver.

Janey Chang

Janey practises ancient technology and outdoor education, is an artist, and a First Nations Support Worker. She leads natural-material maker classes for all ages, leads discussions focused on self-identity and reconciliation, builds specialized props for films, and has taught traditional hide tanning to a Skwxwú7mesh Language Immersion Class. Janey earned a Bachelor of Arts; a diploma in Adventure Tourism, a certificate in Aboriginal Focusing Oriented Therapy & Complex Trauma, and was part of Langara College's Carving for Reconciliation Cohort Program.

I met with Janey Chang at Mount Seymour and her home, in North Vancouver.

I. Ecological Identities

Reflection One: Meeting with Ryan Vasseur

Ryan arrives at the Means of Production Garden at 6th and St. Catherines in Vancouver by bicycle and locks it to a street sign—“Please clean up after your dog”—before joining me at the mouth of the garden. Ten o’clock in early November is brisk, but morning sun plus mulch pile still equals steam. For a time, I lived in an apartment less than a kilometre from here across from the industrial area, just past Ken Lum’s *Monument for East Vancouver* (the East Van Cross), and the VCC-Clark SkyTrain station. Before Ryan, I had never heard of the Means of Production Garden—a terraced wedge at the south-eastern fringe of the False Creek flood plain.

This was my first interview and I was nervous, so I got to the garden early enough to survey the space. I felt soft ground as I walked, saw an arc of willow trunks trimmed waist high, and sensed an immediate adjustment of humidity and temperature underneath the low canopy of fruit trees. This space is cared for, synergistic. I came out breathing slower, if still nervous.

Later, Ryan will tell me that folks come to the garden after dark to sleep for the night. He shares that fruit goes missing: sometimes a few, other times fifty pounds or so. And that before any program begins, staff and participants sweep the garden for needles—hypodermic, not coniferous. What a moment in time. It’s telling that finding somewhere to sleep is a deviant act today. That there is a need for anyone to come in the middle of the night for boxes of apples. That, for many, knowledge of the region’s medicinal plants remains esoteric, suppressed and viewed suspiciously. After our interview, I linger as a man at the garden edge completes a series of movements: methodical, full of concentration, tennis racket in hand. What is it about this

urban corner on a Saturday morning that inspires his softness of breath, a look of momentary peace?

Discussion: Ecological Identities

Ryan has a relationship with the Means of Production Garden (MoPG)—both the land and the human community that has assembled around it. The MoPG is a community-stewarded City of Vancouver park that transformed a grassy, north-facing tranche of land in East Vancouver into a “biodiverse space full of a lot of different kinds of trees [and] different kinds of plants that have significance to people that are artists, or permaculture enthusiasts, or medicine-making enthusiasts.” This is a relationship that brings him fulfillment and he is eager to extend the benefits of that relationship to others through his practice. Speaking from the MoPG, Ryan shares:

This space, I really enjoyed spending time in it. When I came here, I wanted to learn more and share the amazing things that I saw here that it was a multifaceted space where you can come here for food or medicine or spirituality or all kinds of different reasons. One of the beautiful things about a food forest/agro-forestry space is that there are a million different ways to look at it. It has so many benefits for human beings and nature as a whole.

Ryan found the space allowed him to explore and express who he was in relation to the multitude of human and non-human life around him.

Throughout our interview, Ryan describes the nearby environment that he identifies with. It includes non-human life, entities, and systems: apples, plums, cherries, hazelnuts, pears, blackberry roots, tomatoes, carrots, cabbages, bushes, shrubs, flowers, willow trees, eagles,

hummingbirds, mice, squirrels, racoons, the sun, creeks, water, rivers, soil, mycelium, tides, tidal flats, oysters, mussels, forests, and mountains. It also includes the built environment: the city, buildings, downtown, an industrial area, housing, pavement, roads, streets, highways, trains, cars, bike lanes, soccer fields, gardens, and local farms. This is a deliberate practice of wider consideration. He shares:

I try to think of it not just from a human perspective. I think if we're thinking about environmental education for the future, it's: how do we design spaces for other forms of life, not just people...I like to get away from the idea that all we're there to do is to fulfill our needs and not care for the other needs of the millions of other forms of life that exist on this planet.

By envisioning himself in concert with a larger ensemble of life and processes, it opens the door for an expanded circle of care and cause.

That expanded circle—that we are all connected elements of our environment and in relation to larger earth systems—contrasts with what Ryan feels is a “compartmentalized” environmental education that emerged from a 20th century tendency to “separate everything.” Ryan describes that land-use credo as: “we’re going to grow food right here and we’re going to exclude everything else from that area.” This way of understanding ecological relationships fails to connect the city’s sum of people, forests, community gardens, parks, climate, animals, creeks, and even distant bioregions such as Brazil’s forests, Ryan notes.

Ryan’s experience at the MoPG suggests that the space is productive for food, maker-materials, medicine, and human well-being, but perhaps just as importantly as a community education incubator and socializing space. Whether structured activities are organized for

participants or folks are able to experience the space and community, there is an opportunity to probe and grow their ecological identities over time. Perhaps the most important part of Ryan's role is to invite folks into the space and engage them with the community's vision and purpose, even when the gardening never materializes.

We had one day where there really wasn't anything to do and there was tonnes of pears and apples and plums about. We kind of just hung out and chatted. It was a good summer day, you know? For me too that was kind of interesting to realize: you don't need to work super hard all the time when you create a really great space, sometimes you can just enjoy it and sit back and enjoy the fruits of your labour, so to say.

In that way, just as the crops are not rigidly separated, the activities of community members are blended to include labour and leisure; a space to congregate, practise, and reflect.

Ryan draws a contrast between the MoPG model and other community gardens to illustrate the added value of this land-use and community model. In describing what makes this practice distinct, Ryan states:

I think that is a couple different things: it's part of the plants you have here, but it's also part of the people that you bring here too...I love bringing people here that have a diverse group of knowledge...the artist with fibre knowledge, or you bring people here who have more of a fruit tree or pruning knowledge. So, I think that, what is wonderful about this place is, it attracts a diversity of people that love this space but also look at it from a completely different perspective and they bring these different perspectives and then you have a really unique experience that you might not get at a community garden where there are five kinds of plants. There's tomato, there's carrots and that's it. Because you're

really just looking at that community garden in that way—that this is a space and we grow food and that's it. But here there's multiple different levels.

In this model, an individual steps into a community—a community that views itself as an element of the garden. The way the group imagines itself—and how that vision intrigues the individual— impacts how they steward the space. The “diverse group of knowledge” that Ryan refers to is a feature made possible because the garden is within a large and complex urban area. The diversity of the MoPG community members will reproduce itself into the forms and functions of the garden.

Through our discussion, Ryan is light, at ease. He has put a lot of work into this space and it seems he thinks it has put a lot into him. The synergy with the MoPG has given him an outlet to practise ecological reflections through working the land. Ryan explains:

I think there are certain, call it spiritual call it relaxing, element[s] to working within a space that is pretty biodiverse and working the soil. I think that...they're all things that I think people generally want to learn, and we want to learn more about being good stewards of this planet so I think that there's certainly a spiritual element to it and a feel-good element to it to when you can learn how to be...somebody that's stewarding this planet in a good way, and that we can, as human beings, create good and not just be the source of disharmony and trouble and whatnot. Creating a bit of one of the solutions to some of the challenges we have here in the 21st century.

Without an opportunity like this, Ryan would find himself on the wrong side of an interest-action gap—that sense that you would like to do more of something, but cannot find the time, or do not know how to get started. Ryan sees the MoPG and its community as necessary to draw out an

ethos of care in individuals. By bringing that ethos out of the realm of ideas, Ryan shares that “we gain a lot of self-confidence and we gain a lot of meaning when we have an actual space that we can take care of, and show other people, and be responsible stewards for.” His participation allows for care, interest, and identification to accumulate and ingress into his life in a way that classroom learning and conceptual learning, by itself, would not satisfy.

How Might Ryan’s Practice Inform Emergent Practice?

Ryan’s practice encapsulates an emergent practice in Metro Vancouver urban environmental education—land-based community practices that explore and affirm ecological identities. By this, I mean a group that organizes around a space, and whose principles and practice make it so “nature becomes an object of identification” (Thomashow, 1996, p. 3) at a personal and continuing level.

While the things that the MoPG produces—such as fibres, medicines, dyes, and fruits and vegetables—are to be celebrated, the setting and ecological identity-nurturing community in an urban space is the practice to highlight here. This practice is not novel (see, for example, the principles underlying Dr. Schiffer’s CRUW program, discussed later), but I argue that Ryan’s work and groups like the MoPG are deliberately shaped to work within an urban environment: the land-base is small (approximately half an acre), partnerships (with the city and other community groups) supplement the resources the group and garden produce, it is located near a SkyTrain station and rapid bus service in the densifying False Creek Flats district, and it is positioned adjacent to a recently refreshed public park and apartment blocks whose access to gardening space is limited. But, absent the group of people who create community and innovate

through their programming at the MoPG, this description could match many other parks dotted throughout the city.

Drawing on Ryan's experiences, as well as themes of ecological identity, these are some ways that his practice might inform emergent UEE practice in Metro Vancouver. The city's *Greenest City – Vancouver 2020 Action Plan* proposes that “all Vancouver residents live within a five minute walk of a park, greenway, or other green space by 2020” (City of Vancouver, 2012, p. 41), but that strategy says little about what sort of experience and relationships are desirable beyond the simple presence/absence of green space. Still, the goal is laudable and could precede groups like MoPG establishing and curating the experience in those green community assets. This type of relationship—“foster[ing] community-based management of urban ecosystems and natural resources” (Pope et al., 2015, p. 13)—is already highlighted as a trend in urban environmental education circles. So, while city-level action plans might be at the wrong scale to address individual outcomes (such as nurturing ecological identities), community-based management groups can be supported by larger entities (i.e. cities, corporations) to work toward that result.

If operations like the MoPG are seen by cities as desirable and a way to help incubate ecological identities, they might consider integrating biophilic urbanism and design principles to co-produce spaces with valued community organizations. Biophilic urbanism roughly breaks down as a love for the natural world and living things in cities. The idea of biophilic design, then, is that “good design, at the building, site, city and regional scale, must include nature and natural elements” (Beatley & Newman, 2013, p. 3328). We should not expect the existence of greenspace, by itself, to have the greatest impact on ecological identities. However,

collaboration between cities and community-based management groups could inform the space design and, in doing so, give those groups a head start. Municipalities throughout Metro Vancouver could diversify the types of experiences available at their green spaces while expecting that, with support, groups like the MoPG would continue to enhance the space and use it in novel ways that exceed the programming capacity of the city. In this way, the myriad of ways city residents might want to connect with land beyond active recreation—growing food, harvesting craft and maker materials, propagating medicinal and culturally-significant plants, etc.—could be supported within a purpose-built space much in the way that the city already maintains greenspaces (waste removal, landscaping, repairs, etc.). General framework exists for structuring these relationships between diverse rightsholders and stakeholders while simultaneously working toward broader urban sustainability challenges (van der Jagt et al., 2019). How to best enable the conditions for a growth of ecological identity under these arrangements is worthy of further study, but Ryan’s experience certainly advocates for closer collaboration between cities and community-based management groups as a starting point.

Reflection Two: Meeting with Jada Natalie Stevens

I'm in Waterfront Station. It's atypically quiet for Monday morning in Vancouver's busiest transit hub. I scroll the building's Wikipedia entry waiting for Jada—21st century place-based research. The station opened on August 1st, 1914, four days after the First World War began. Much has been written about how that war and the railway shaped a still-young country. Apart from connecting Vancouver to Montreal and points in between, it changed how the country was imagined. Today, Waterfront Station is a hub for two SkyTrain lines and is surrounded by a heliport, float planes touring the Gulf Islands and Coast Mountains, commuter and freight trains, and SeaBuses crossing Burrard Inlet to the North Shore. How might I have been shaped by my ability to move through these lands in 1914? And in 2114?

Later, Jada will talk about relating to her place of practice on an emotional level. She'll tell me of people who connect to their bus routes, like the B-Line, the 20, or the 156. Wow, the 156. It was a ten-minute walk from home in Coquitlam. One way, it went toward Centennial High School. Part way, it dropped you at Parkland Elementary where we played pick-up basketball, shot parts of a short film in high school, and climbed on the roof at night. Looking at the stars? Sometimes, sure. The other way took you to Lougheed Mall, past Burquitlam Plaza where Ted & Wayne cut hair. You could then take the bus to Columbia Skytrain Station and Peter Pan's Pizza where ninety-nine cents for whole wheat crust was just enough to warm you up for the ride along the Fraser River to downtown. As fourteen-year-olds, Gary and I would head to Waterfront Station and walk to Tom Lee and Ward Music where we'd ask to play \$2000 guitars. I was told sternly to treat a sunburst Rickenbacker "like an angel." I know people who

broke up on the 156. When I heard “156,” I was fourteen again, cold and improperly dressed for winter, and asleep to the whirl of the train.

Discussion Continued: Ecological Identities

Amongst towering buildings, the bustle and flow of people, and in a liminal zone of public and private space, Jada is at home in the city. Her narrative as a proud and energized urban resident contrasts with the refrain of city-escapism popular in Metro Vancouver—that night-skiing in the North Shore mountains, or a weekend hike to Dennett Lake provides the restorative energy needed to survive the omnipresent concrete of the city. That rejuvenation is in the outdoors and city life beginning in front of her building. Speaking of her sense of belonging in the city, Jada shares:

For me that’s where I feel connected. This is where I feel peaceful. When I’m removed from this kind of environment, I lose that. When I go home to visit my family, I mean, I grew up in Victoria, it’s a great place. But, I lose—I don’t have as much of a connection to that place anymore. And I miss it. Sometimes I’m awestruck, sometimes I feel humbled, sometimes I feel invigorated. These are the feelings I get as I travel through this city. A lot of people get that when they go to nature. They get those same feelings...I need to be around as many people as possible in the city. And that’s when I feel happy again. That’s where I get my sense of well-being.

Jada identifies as being connected to the world through her home in the city, not in spite of it. In that mindset, she comes to her practice as a Wayfinding Specialist at TransLink—Metro Vancouver’s regional transit and transportation authority—helping millions of residents and visitors conceptualize and navigate the Metro Vancouver region.

Metro Vancouver's transit system continues to grow in all senses—an asset to everyone, but particularly someone like Jada who moves around the region without having ever driven a car. To illustrate the breadth of the system and the regional mobility that it provides Jada, consider that, armed with a Compass Card—a reloadable payment card for TransLink travel—she could traverse the region on the system of SeaBuses and Skytrains and buses. She could commute eighty kilometres on the West Coast Express train from Mission westward to Vancouver; connect by SeaBus and conventional bus lines that terminate at a coastal ferry network that stretches through the Salish Sea to Port Angeles in Washington State or Haida Gwaii off BC's central coast (connecting bus to the north tip of Vancouver Island required); or take the Canada Line SkyTrain to Vancouver International Airport in Richmond for further national or international travel. As the reach expands and the suite of transit options become more ubiquitous in the region, Jada's work shapes the day-to-day travel experience of an ever-growing cohort of transit users.

Within that network, Jada's role is to understand “where customers are going, how they need to connect and what information they need in that time and place,” and then use the visual language of wayfinding and mapmaking to meet their needs. In doing so, her practice influences the user's experience of movement through the region—a daily phenomenon for many. Apart from the movement itself and how it informs their imagination of the region, it's useful to consider what they are moving for and what does that experience mean to them. The visual language of her way-finding helps bring people out of their homes to connect with a friend on the other side of town, to work at a job beyond the range of a self-powered trip, and to visit family after a transoceanic flight.

Attending a roundtable, Jada recalls an elderly man inviting her for a coffee after the event because Jada mentioned that she worked for Translink and he wished to share the impact the transit system for his mobility. As someone assisted by a mobility scooter, his independence is very connected to the system, overall, and deeply to his particular station and bus routes. Jada remembers his message as “that’s my route. This is how I relate to transit [and] to the region: by that bus trip.” Jada repeated and elaborated on this theme—between accessible transit and independence—when she describes the eastward expansion of the transit network into Metro Vancouver’s more spacious edges:

We started a couple of bus routes in Maple Ridge where they never had buses before and Maple Ridge is quite sprawled: there’s a lot of new developments up into the mountains and everybody there drives, everybody has multiple vehicles. Kids up there are fully dependent on their parents to get around. There’s no stores nearby for them to walk to, their school will be a drive away. But then we put in these bus routes and now kids have independence. Now parents can leave their vehicle at home and now they can maybe even not need that second vehicle anymore...It’s really exciting to see people make those decisions because taking transit you could save a lot of money. It’s good for the environment...It’s good for social interactivity with other people.

As Jada shares these snapshots, she connects benefits—like sense of identity, independence, social connectivity, reductions in car-generated GHGs—with the functions of her and her team’s practice: a complement of outreach, public-education, and marketing to new and existing users.

In search of those outcomes, Jada’s practice enhances and supports the experience of folks moving from one place to another throughout Metro Vancouver. Jada immerses herself in

the network to understand the needs of system users. She can be found “wandering around stations, understanding where customers are going, how they need to connect and what information they need in that time and place.” With that information in hand, she can “find a way to interpret that visually. And then, ensure that those pieces of design are throughout the built environment for people to find them, from maps and diagrams.” The network is continually changing and, as it does, Jada works to reconfigure the visual language that helps people keep moving with ease. “The journey is a part of the experience,” Jada offers, not solely a means of reaching your end destination. As an example, she notes that transit gives her “the opportunity to sit, look out the window and watch things go by.” Jada’s UEE practice gives her the opportunity to shape and enhance the experience of public transit users and, as a result, the ways they relate to their region.

The idea of curating public space experiences appears again in Jada’s practice at the Vancouver Public Spaces Network (VPSN). There, she volunteers:

to advocate for better public spaces. Public space includes parks, beaches, plazas. It includes sidewalks and streets. It includes privately owned public spaces which is essentially where we are right now [at Waterfront Station]. And so we advocate for these spaces to be more inclusive or social[ly] equitable, more accessible and better and to have more of them.

As part of this work, Jada helps to implement strategies that allow for comfortable and social outdoor access in Vancouver during the rainy seasons. Jada shares that the average number of rainy days here is 155 per year and that, along with winter darkness, can limit outdoor socializing. This is particularly so, she says, for folks with mobility challenges, seniors, and for

children and young adults. To mitigate that, VPSN launched a design competition for rain-friendly public space ideas and lobbied the City of Vancouver to implement a Rain City Strategy that facilitates public gathering during prolonged wet stretches. Ideas from the design competition included methods to create shelter and “rain proof” outdoor space, while another created a light structure that “kind of replicates sunlight.” A last one looked at creating “pods of heating” for certain outdoor areas, solutions for people who are unhoused, and covered recreation areas for sports, dog parks, and children’s playgrounds. The expanse of ideas from the competition held in common that the connections and sense of belonging that can be achieved through outdoor experiences on warm and dry days are also available with proper design and programming for wet days.

That drive to celebrate everything that makes a city special typifies Jada’s multi-part UEE practice. She synthesizes that zeal of connection in urban life by sharing that:

I live downtown. And when I step out my door, you know, I often feel just a sense of belonging, just, you know, looking up at these tall buildings, and hearing the traffic and seeing the people. And whenever I walk into my Skytrain station, yeah, I feel a sense of ownership there. I don’t own any property. But, I own the city, you know what I mean?

Like, the sidewalk is my backyard. On a daily basis, I feel that kind of connection.

Through the language of way-finding—shaping the experience of people’s mobility through their region—and through her strategizing and lobbying to create easy and social outdoor access year-round, Jada’s practice makes it easier for others to find a sense of self and belonging across Metro Vancouver.

How Might Jada's Practice Inform Emergent Practice?

The experiences of movement through a region yield rich ground for shaping an ecologically-connected identity and sense of self. Planning documents like the draft *Vancouver Plan* and the *Climate Emergency Action Plan* make clear that an increasing number of trips in the city need to be by walking, biking, rolling (wheelchairs, scooters), and transit use (City of Vancouver, 2020, 2022a). Some of that will be accomplished in the redesign of cities to position “90% of people living within an easy walk or roll of their daily needs” (City of Vancouver, 2020, p. 7). Still, the centrality of effective public transit will increase. The experience of transit in Metro Vancouver could be more than “easy, safe and reliable” (City of Vancouver, 2020, p. 6). It could be beautiful. It could be moral. It could be a monument to the collective effort required to re-shape how we move in order to improve the trajectories of climate change. Drawing on Jada's experiences, as well as themes of ecological identity, these are some ways that her practice might inform emergent UEE practice in Metro Vancouver.

If most Metro Vancouver residents canoed to work, the discourse around the nature-connectedness of transport and ecological identities would be far more obvious. Through a thin hull is a waterway that undulates and responds to the paddler's every move. Conceptually and viscerally, that connection is obscured by layers of separation when travelling by car—obscured from sound, from weather, from other people, and by the impervious road surface to the ground below. Indeed, this is part of the convenience and, in many ways, what some folks prefer about private vehicle travel. Most of this disconnection applies to public transit as well. Yet, due to the collective nature of public transit—with its communal stations, the fixed routes of trains and buses, and high number of people per vehicle—there is greater potential for experiential design.

Consider a micro-experience in public transit: the consistent monotones of subway turnstiles. With the *Subway Symphony* project, James Murphy (artist) sought an acoustic redesign of the tones from subway turnstiles in New York (Gambino, 2015). In short, the chime of passing through the subway turnstile would, together with the chimes of other passengers entering the station, create a station-specific soundscape that elaborates during busier times when more passengers enter. Complications shifted the project from subway turnstiles to the Lowline Lab (a stalled underground park concept) and, for now, has not been realized. However, the core idea speaks to the same desire that has created architecturally beautiful train stations: it brings joy and a sense of place to how a space is experienced. A project like this could re-chart city sounds into city songs. In doing so, transit users could experience a more textured sense of place and strengthen area-specific connections.

Refocusing on the theme of collective efforts toward collective solutions, transit and its payment systems like the Compass card could aid with one of the challenges of region-wide collective work: how to best track and visualize the collective progress and impact of transit use. Transit users may struggle to understand the extent to which their individual transit choices have aided in meeting collective local climate targets. So-called “smart cities” have been proposed and cancelled, in part due to privacy concerns (Cecco, 2021). However, some of the those critiques still leave room for the use of publicly-held data to re-story our movement and transit towards regional social-environmental aims and celebrate those incremental achievements.

Jada’s practice blends energizing the public realm along with way-finding and transit experiences and is a harbinger of deeper integration of these elements and future UEE potential.

II. Political Ecology and Environmental Justice

Reflection Three: Meeting with Laurel Dykstra

I met Laurel at the Waves Coffee House on Main and East Pender. We're in an overlap of Chinatown and the Downtown Eastside. This coffee shop is less polished than sibling shops of this franchise and has a broken access switch on the front door. The hot chocolate still warms me. We chat over a loud fan.

In Vancouver, city blocks are my unit of measurement—inconsistent, but simple wayfinding. One block from here, a month after we meet, folks march in solidarity with the Wet'suwet'en Hereditary Chiefs. Their unceded land was forcefully entered by a militarized unit of RCMP officers to enforce Coastal GasLink's work on a pipeline that will transect their territory and drill under the Wedzin Kwa (Morice River). Seven blocks from here, stands Science World (until recently Telus World of Science), built for Expo 86. Four blocks from here stands the *Survivors Totem Pole*, carved by community member Skundaal (Bernie Williams). Encircling the concrete base, it reads: "Sing your song, friend. Tell your story..." (2016).

Tell your story: Hogan's Alley. Megaphone. Downtown Eastside Sacred Circle Society, Massy Books. Japantown. Insite. DTES Market. DERA. VANDU. Portland Housing Society. Firehall Arts Centre. Hives for Humanity. Powell Street Festival. Oppenheimer Park. Union Gospel Mission. Hope in Shadows.

Later, Laurel will tell me of their community: of prayer in a Costco parking lot for the roosting crows, of equity-seeking folks less welcomed in other congregations but finding home here, of a network of some twenty to thirty "wild churches" across North America, and of the inseparability of environment and holistic justice work.

Discussion: Political Ecology and Environmental Justice

In creating an ecological Stations of the Cross on the path of the Trans Mountain Expansion Project (pipeline) on Burnaby Mountain, Reverend Laurel Dykstra was “riffing off of a practice that’s been happening in urban core anti-poverty connected churches.” It was, both, integrative and responsive—wholly contextual to that place, that time, and those people. This approach is central to the mission of Salal + Cedar—a “watershed discipleship community” (Salal + Cedar Watershed Discipleship Community, 2016, para. 13) congregating outdoors in the “lower Fraser river watershed, Coast Salish territory” anywhere between the Pacific Ocean, the US border, the Sunshine Coast, and Hope, British Columbia. In location and in practice, this place-specific interweaving of religion, ecology, and social change typifies Rev. Dykstra’s practice.

Rev. Dykstra situates this outdoor congregation within the “wild churches” movement—one of about twenty to thirty such churches across North America. As is customary of those wild churches, Rev. Dykstra shares that “we don’t have a building, and we don’t rent a building, and we don’t worship in a building.” In contrast to other wild churches, and as their interpretation of the Stations of the Cross exemplifies, Salal + Cedar is unique in that they spend “a much larger proportion of [their] time engaged with the social change aspect...rather than engaged with spiritual ecology.” Rev. Dykstra describes the fusion of their work on Burnaby Mountain where their congregation travelled to “draw a connection between those Biblical passages with the suffering of Jesus and suffering of Creation.”

We are looking at water and risks to water, Indigenous access to water, sanctity of water in Biblical stories. One of the stations this year was at Eagle Creek...There was a report

about how, in April, the cutting that happened on the perimeter of the Trans Mountain property let all of this silt and also sprayed-on seed and ground cover really compromised the salmon spawning stream and so that was one of the places that we were praying. So, that's very much of an interface between humans who identify as protectors, human action around industry resource extraction, and this creek where salmon are spawning.

The way Rev. Dykstra describes their practice, there is a sense that it is beyond boundaries, but not only the boundaries of the walls of a church.

Who Rev. Dykstra includes and how they include them speaks to the purpose of Salal + Cedar. To start, Rev. Dykstra's congregation is "probably by far the queerest and most genderqueer [wild church] community." Additionally, there are folks who connect with Rev. Dykstra's practice as an activist group and who are not "particularly swayed one way or the other by the faith component." Rev. Dykstra adds: "This has been an avenue for a few of them to engage in attending demonstrations or being a part of direct action. They have been looking for the way to do that." Further, the Salal + Cedar congregation defines their area of practice—"where we do what we do," as Rev. Dykstra says—by physical geography (a watershed), not denominational geography (an area drawn to include a religiously-similar community). Though the principles and experience may be informed by scripture and hold extended meaning for the Anglican (specifically) and Christian community members, that background and belief system is not prerequisite.

Knowing the regional history, however, is. It forms part of their community's "spiritual discipline." The social action components of Rev. Dykstra's practice require engagement with it—to wield the tools of dialogue and memory in order to guide how they step in the way of

injustice. Yet, Rev. Dykstra finds that, amongst settler colleagues, this learning has often not happened or has not transformed into practice. The idea that power relations and systems established during colonization are meaningfully intact today seems to be an “unknown currency” for many settler colleagues that Rev. Dykstra encounters in their work. Due to Rev. Dykstra’s insistence that environmental justice and racial justice cannot be siloed while doing UEE in Metro Vancouver, regional history invigorates their practice.

By stepping back to name, acknowledge and connect that heritage with the continuation into today, Rev. Dykstra highlights that personal actions cannot undue systemic knots. System-changing tools are better forged and wielded at the community level. With that in mind, the efforts to shape and sustain community are evident. “We” is the operative plural pronoun as Rev. Dykstra speaks: “Our community meets...we spend time...we are outside...we name out loud...we do that...we do a program event.” Rev. Dykstra notes the less glorious but critical maintenance work of holding a community together: “a significant amount of community building and background time...[includes] sometimes visiting people in the hospital, sometimes looking for funding streams, sometimes just doing the behind the scenes connecting with people to make that stuff happen.” To further illustrate their point, our interview is interrupted by a volunteer who has come to pick up the keys to the church van in order to circulate pamphlets in the neighbourhood for a proportional representation referendum. By considering who their community is and continually moving to strengthen and empower them as they work together, Rev. Dykstra enhances their community’s ability to act on systemic knots.

As a group, who they are is how they act. Rev. Dykstra elaborates on other characteristics of their congregation and how it shapes their activities in an urban environment:

Another way that we interface with the built environment is that we think a lot of our physical accessibility: are there washrooms, are there gender-neutral washrooms, can you get there by the bus, what are the elevation changes like, can we navigate this in a walker and navigate in a wheelchair...And the, the sort of complexities and, and ethics of, you know, to go there we have to drive there? How many of us can do that? How can we do that together? So, a lot of those transportation things and access things...what we do comes up against that.

These trust-building acts cohere community trust. As direct action practices typically ask group members to disrupt the status quo in uncomfortable and courageous ways, the bonds a group holds matter.

Because the challenges Rev. Dykstra acts on have long horizons, their practice works to prepare young folks for the world they are living in now and will encounter later. A two-week live-in summer camp program for youth, hosted by Salal + Cedar, is one move in that direction. Week one covers “the ecological justice issues in the bioregion,” while week two offers “effective tools to respond to those” ecological justice issues. Making and sharing “wonder boxes” is another move. These multi-age curriculum boxes are delivered by Salal + Cedar into the community and the contents and instructions lead children aged three-to-twelve and their families through education activities that range from 15-minutes long to a half day.

In Rev. Dykstra’s practice, though empowering coalitions can be built, the city’s specific systems, conditions, and history shapes what is here:

Because we have dedicated green space, because we have machines that clean up the beach, because all of those things, we have this access but there is also a bit of a post-

apocalyptic quality to it as well. The things that we see the most often are the species that have the capacity to coexist alongside. There is not the kind of variety and diversity there once was, there's the mass numbers of the most hardy, or the most adaptable.

Despite all of the work they do to bring people together, Rev. Dykstra admits that it is “hard to build community in big cities and so similar projects in smaller places have a much higher end of the road philosophy.” Still, by continuing the work that connects, by centering ecological justice, and by affirming the “parallel paths” of individuals and groups with similar interests, Rev. Dykstra persists.

How Might Laurel's Practice Inform Emergent Practice?

The aspects of Laurel's practice that are coalition-forming and community-building recall David Orr's observation about the gulf between scientific knowledge and its broader social implications. Orr offers that:

The overriding fact is that we know much more about the science of ecology than we do about the implications it poses for governance, law, and policy. We still do not know how to translate ecology and earth systems science into the broad and deep dialogue necessary for human survival. The upshot is that any adequate response to our predicament must begin with an understanding of political economy large enough to include ecology and earth systems science and the organizational capacity to make it mainstream. (2020, p. 14)

Drawing on Laurel's experiences, as well as themes of political ecology and environmental justice, these are some ways that their practice might inform emergent UEE practice in Metro Vancouver.

Laurel's practice builds on people and purpose, not pristine parks. Their work is a "spiritual response to ecological grief" (Neufeld, 2019, para. 3). Aligned with Orr's pleading, Rev. Dykstra thinks that "we need structural, institutional and economic change. I am compelled to act for change because of my faith, and in order to keep at it I need spiritual practice and a community that encourages and challenges me" (Neufeld, 2019, para. 9). Were Metro Vancouver's UEE practice to follow Rev. Dykstra's lead, we might see an extension from "learning about" to "acting on." We might see coalition-building between high school leadership classes or environmental clubs and civic action groups—partnerships that outlast the semester. We might hear organizing for, more than opining about, events and rallies on local radio and podcasts. We might speak and use tools of discourse to understand and empathize with the human consequences of local social-ecological systems.

Conceptual tools such as environmental justice and political ecology could be further explored to understand, position, and conjoin UEE action-coalitions, as Rev. Dykstra's practice exemplifies. In particular, the environmental justice "rubric acknowledges that environmental decisionmaking involves the role of power and conflict; that decisions about the environment are not simply a trade-off with the economy in terms of efficiency and jobs, but rather are fundamental issues for societal welfare" (Bowen, Salling, Haynes, & Cyran, 1995, p. 641). By creating subject-matter space within UEE for justice-centred work, practitioners can move beyond (or stay beyond) the false separation of science and politics within environmental education. Summarizing key themes and findings from a 2022 IPCC report (2022), Sarah Burch (a lead author) states that: "Justice is central to accelerated transitions. It leads to deeper ambition, stronger partnerships. A low carbon economy can create more jobs that LAST"

(Burch, 2022). Developing and deploying tools of community organizing could help practitioners develop an iterative placed-based UEE practice that, by grasping environmental justice and political ecology principles, counters life-limiting effects of systemic issues like climate change that cannot be addressed solely at the individual level through lifestyle changes.

Reflection Four: Meeting with Elaine Su

Elaine tells me she lives a short walk from Sapperton SkyTrain station. Here I am, near Boorman's Archery where I buy bows & arrows for summer camp, and a suburban block from Cap's Bicycles where I recently tested an electric bike. In a flash of twelve-year old daydreaming, I'm cruising dirt paths on an e-bike and ramping onto elevated SkyTrain tracks, bow in hand. Post-apocalypse meets post-soccer practice. I blink and knock on her door.

Stepping into Elaine's home, I notice we have the same IKEA couch. Elaine offers me sandals to wear in her home. Big feet, small sandals—what do I do? Elaine's young son reminds me of my daughter, and I'm distracted by it as we chat. I've struggled with the transition to being a dad. Elaine bounces and feeds her son while critiquing the weave of racism and colonialism in Metro Vancouver's environmental education circles. I'm rapt and forget to drink my water or eat the pistachios Elaine kindly shared with me.

Later, Elaine describes a class of grade 7 boys whose idea of giving back to their community is graffiti. Elaine thinks they want their voice heard, but are without space or role. I could know them. I loved ravines—their synthesis of terrain and autonomy— and I remember being twelve and bored. I felt out of place at an elementary school and didn't have friends within walking distance. My school was three schools away because it had a French Immersion program. In another imaginary flash, I'm twelve, standing in a ravine, holding a Bic lighter to the corner of a garbage bag that I've found tied to an alder, and marveling at the sound it makes as it melts into an iridescent liquid and gets lost in litter and top soil. A breeze comes off the creek to cool the dirt-sweat smudge on my forehead. I bought Halloween firecrackers for the first time today but have put them down to wonder: are these the same trees as at summer camp?

Discussion Continued: Political Ecology and Environmental Justice

In the pursuit of high-quality and universally-accessible UEE for children, Elaine Su has piloted curriculum, developed programs, and even completed the early stages of a community-based learning school. That drive to innovate came after teaching at a local school district for a few years as a kindergarten teacher. Elaine became:

quite disenchanted with the bureaucracy, with the boundaries, with the systemic kind of limitations that I felt the education experience had in that setting...I left and decided to take a few years to see what else is out there, what exists what can education look like.

That early experience helped solidify what Elaine felt were foundational deficiencies in UEE, as it was commonly being practised. In short, those programs “self-selected” a “very homogeneous kind of group...of people whose children would be receiving these kinds of education and experiences at home anyway...They’re almost all upper-middle class white families.” Folks were missing by design, including “kids who have two parents with full-time jobs or multiple jobs, who don't have time to take them on these experiences over the weekend.” Rather than teaching in an environmental education program with an over-representation of upper-middle class white families (compared to the neighbourhood demographics), Elaine wanted to be “doing this kind of programming in an ordinary classroom, but in the place and in a way in which I could affect more than just my one classic kid.” Further, she observed that a binary was being offered that narrowed that already-whittled group:

either you are in mainstream conventional school and you receive a very academic education, or you are in environmental education, in which case you receive no academic

instruction, and you spent a lot of time on play-based environmental ed. and I just said that's bullshit, nobody wants that. You're talking about a very small minority of people who want one of those two things. What people want, and what people need, and what children need is a combination of the two. You should be able to spend your days outdoors or your days in your community, and also be at level for reading and numeracy and all that.

What emerged for Elaine was the idea of community-based learning—"that your learning should not be in isolation, you're learning should not be devoid and separate from the community and cultural context."

Elaine outlines the diverse makeup of her school and community as an entry point into demonstrating the responsiveness of her practice to her community:

We are an inner-city school. We have a largely...Vietnamese and Filipino [neighbourhood]. We have a lot of new immigrants, we have a lot of refugee families, so it is a very culturally-mixed community, and I think that informs my practice, at least a lot more than anything else.

In that spirit of responsiveness, community diversity extends beyond its ethnocultural composition. Elaine and her students are fixtures at the local seniors' home socializing, cooking and playing games. To stimulate their thoughts on accessibility, Elaine plans on having her students join her in walking the neighbourhood when she returns from maternity leave to demonstrate how folks with young children or folks in wheelchairs and mobility scooters experience their local urban environment. Armed with a growing appreciation for the multiplicity of neighbourhood experiences, Elaine welcomed in Civix—a not-for-profit that runs

Student Vote and are dedicated to boosting citizen engagement in politics—to organize a debate at her school for local provincial election candidates. She mandated that her students prepare questions. Admittedly, she says, half were “super bored,” but half “super engaged” and asked questions about the gender disparity in a candidate’s party’s leadership, as well as why the school’s library was only funded to be open three days a week. In a variety of ways, Elaine tightly ties her UEE practice to the people of the surrounding neighbourhood: their identities, their relationships, and some of the political structures they must navigate to effectuate change.

A community-based learning approach allows Elaine to better target her students’ community service. This approach contrasts with the rote initiatives sometimes copied and pasted from one school to another. Elaine provides two examples: the first at Fresh Air Learning—who deliver “nature connection programs for children ages 0 to 13” (Fresh Air Learning, 2020, para. 2):

I designed a curriculum for Fresh Air Learning that was about a meaningful service-based learning. So, another pet peeve of mine is getting your service hours and giving sandwiches out to the homeless. Do they want your sandwiches? Do they want to eat your sandwiches? Just the whole going to the Downtown Eastside and handing out sandwiches was a big motivator for me for creating something that was a little bit different. So I used that service-based learning model that asks students to examine what are the needs of your community and what are the ways in which your gifts, can meet those needs.

Elaine developed the second service activity, in part, because her grade six/seven students were interested in graffiti, but thought that writing or painting the graffiti would be the service.

Instead, Elaine asked them to set a ten-minute-walk radius around their home or school and take pictures of all the graffiti they could find. She coached them to speak to community members to see what community art they thought it would be nice to have. In exchange for a neighbourhood clean-up, the city offered them a specific spot where they could “create art for our community that is intentional.” Through conversation, Elaine uncovered a motivating factor for the students’ desire to tag and do graffiti: they wanted to let others know who they were, that they were there, and that they were a part of this community too. “They want to leave a mark,” Elaine relayed, and without the tagging thought “they won’t be able to [let others] know that they were there.”

Dismantling systems that prioritize one group over another and ensuring that everyone can show up figures strongly in Elaine’s practice. To set students up for action—primarily, between home and school—she engages with the identities and cultures of locals in order to inclusively build social cohesion and trust. As a result of a consult that Elaine had helped lead with the Hua Foundation, when her school initiated a soft plastics recycling program Elaine understood the cultural nuances that ought to be considered when communicating and evaluating the program. Rather than using a one-size-fits-all quantification of how much soft plastic an individual student eliminated, Elaine advocated for a system that would build up a family’s capacity and actions based on their current reality. Rather than:

Villainizing families and making people feel shitty about themselves and ignoring the realities of busy working families, and the fact that some of them are going to have their lunches in ziplock bags because they can’t afford to buy fancy reusable bags and reusable

containers...how about we find ways in which we can engage with fixing the problem...whilst recognizing where our families and our students are coming from.

What is the experience of the 11-year old student, she asks, whose parents own a takeout restaurant and hears from teachers that their family is doing this wrong, and then has to educate their own family? By acknowledging the heterogenous cultural and familial starting points of individual students, much as classrooms already do for other aspects of a student's learning plan, Elaine seeks to ensure that the UEE programs of today and tomorrow are more effective and inspiring.

How Might Elaine's Practice Inform Emergent Practice?

Elaine's position as a teacher-librarian—different from a classroom teacher—allows her to lend her subject-matter expertise to all classes in her school. Already, this set up is advantageous and worthy of replication for students at an elementary level who tend not to have a specialist teacher on staff for environmental learning. Additionally, Elaine's work is particularly relevant for regional UEE emergent practice because of her insistence to approach it with a cultural and social justice lens. In light of widespread underestimation—observed in the US but presumably salient in Canada—of the environmental concerns of racialized peoples and the stereotype of environmentalists as white and highly educated, there is a false perception that the environmental beliefs of racialized groups are an impediment to wider public participation in the environmental decision making process (Pearson, Schuldt, Romero-Canyas, Ballew, & Larson-Konar, 2018). This distortion requires remedy and Elaine's community-based learning practice would seem to offer movement in that direction. Drawing on Elaine's experiences, as well as themes of

political ecology and environmental justice, these are some ways that her practice might inform emergent UEE practice in Metro Vancouver.

Over the years, Elaine has seen many of the justice-centred classroom practices she has done move toward the mainstream in Metro Vancouver educational practice. Things like land acknowledgements and attention to the traditions of local First Nations are now more commonplace in BC's K-12 classrooms than they recently were. For many non-Indigenous teachers and the curriculum itself, further engagement with colonialism and Indigenous ways of knowing comes slowly, if at all. Elaine argues that:

Indigeneity is something that's very difficult for [non-Indigenous] people to wrap their heads around...I've come to the conclusion that people don't understand colonialism, and they don't have the vocabulary to deal with that...They're scared off by words like "colonialism" and "white supremacy" and "privilege" and "racism." So, to me, when we engage more in integrating Indigenous ways of knowing and valuing that, and really taking the time to really learn it in a way that's not tokenism, to me that practice seeps through to everything, to your approach to all people, not just Indigenous Peoples, and all marginalized groups.

Elaine has observed improvements with new teachers—they are "well-versed in these topics, well-versed in this vocabulary"—but not so for many of the older teachers, some of whom are "amazing teachers and amazing people" while others are "flat-out racist." Beyond the obvious need to expunge such racism from the teaching profession, the arrival of teachers with the acumen to discuss it—along with deeply embedded systems of colonialism—and how they intersect with UEE is critical.

If, as Elaine shared, the gift of school is to “expand kids’ horizons and expand their view of the world beyond what their family sees,” and K-12 education is one of the primary levers we have to do so, UEE could act as an entry-point into the type of “knowledge pluralism” (Grabowski, Klos, & Monfreda, 2019, p. 70) required to catalyze the largest proportion of people possible toward greater climate action.

Given the need to expand UEE at scale, it is conceivable that Elaine’s idea of a community-based learning school would be supported sometime in the near future should she pursue it further.

III. Communities of Practice

Reflection Five: Meeting with Adria Hussain

I'm walking to meet Adria at the Stanley Park Ecology Society by way of the seawall. Beginning at the Vancouver Convention Centre, historical narratives are displayed outdoors on interpretive panels: the Komagata Maru, an Indigenous longshoreman's union, and the introduction of the telegraph. The panels end but the narrative seems to continue towards Stanley Park. On Georgia street, starchitect projects bloom amidst soaring land values. The old Canada Post building transforms vertically into Amazon's local headquarters, a White Spot restaurant and adjacent gas station was assessed at \$251-million and will be replaced by a luxurious column of glass and greenery. Georgia has been described as a "gateway," but to what and for whom?

I pass the Lord Stanley Memorial Monument and into a mature forest. British Columbia confederated in 1871, Lord Stanley was the Colonial Secretary from 1885-86 and, then, Canada's Governor General—the ruling monarch's representative—from 1888-93. To make way for the park, x^wməθk^wəyəm (Musqueam), S_kw_xwú7mesh (Squamish), and səlilwətał (Tsleil-Waututh) peoples were forcibly cleared from the land, in part, on testimony that "native Indians have no idea of time" (Barman, 2007). Today, Vancouver's Naval Reserve Division still occupies skwtsa7s (Deadman's Island), a tree-burial grounds for S_kw_xwú7mesh Úxwumixw (Squamish Nation). As symbols go, was Stanley Park really a good emblem for Vancouver, a self-designated "city of reconciliation?" Maybe it was.

Later, Adria will tell me of plant identification courses conducted in Stanley Park. She'll explain that some students mistake car sounds for wind—an aural deception that confounds park

boundaries. I wonder how else the students are imagining human-ecological entanglements. I wonder how yesterday, today, and tomorrow's stories are written in this community of tree rings.

Discussion: Communities of Practice

Adria's path to becoming an urban environment educator in Metro Vancouver has a circuitous quality to it:

I studied geography at UBC because I knew that I was interested in the natural world [and] I knew that I liked being outdoors. But, coming out of that degree, I didn't really know what I wanted to do with that, where I wanted to take my career. And I actually started here at the Stanley Park Ecology Society as a volunteer, and that really showed me the opportunities—of jobs I could do, places where I could be outside and sharing that joy of nature, and that joy being outside with other people.

As a young volunteer, Adria linked up with Stanley Park Ecology Society (SPES) after “a friend needed an extra leader on an outdoor hiking group.” Beginning from that point of inspiration, she built her experience up and, eventually, now manages the programs in Metro Vancouver's most iconic park for thousands of children, teachers, and community organizations every year. As a result, she feels “a sense of grounding and foundation because it was so instrumental in the beginning of [her] career as an educator.”

SPES achieves their mission, as their slogan says, by “Connecting People With Nature.” Adria describes their purpose in this way: “The whole goal is to provide experiential hands-on place-based education. So, we're in the spot that we're learning about. We're experiencing the park, the ecosystem by being in it, interacting with it, exploring it.” Stanley Park is a public park. Though there are costs to get there (e.g. transit), the folks attending SPES programs could

access most of the teaching areas without participating in SPES's programs. That the SPES programs are in demand and growing—Adria estimates four times as many groups as they have capacity for would like to come—demonstrates that, in connecting people with nature, the people and programs matter to the students and teachers.

Adria relays stories that suggest that the experience at SPES inspires students and participants to re-imagine how they observe and interact with the landscape, and how they share this lens with their networks. She recalls one student who was used to hiking, but not in the habit of pausing to observe and question what they found. After a SPES program, the student told her: “This stuff is amazing. Next time my family goes hiking I'm gonna tell them to do half as much hiking and twice as much looking.” In another case, the knowledge gained through a SPES program aided students in overcoming the fear of “getting dirty” and “spiders” and they felt safer to explore thereafter. With a group of nurses, Adria presented on the health benefits of specific outdoor recreation activities before inviting the group to workshop an activity they could share with patients. Adria's examples highlight not only the individual learning opportunities, but how those participants might then re-create future nature experiences with those around them.

That schools convene these outdoor learning experiences with SPES speaks, in part, to how Stanley Park is envisioned as a learning space. There is something remarkable about coming together for place-based learning with other educators and students in Stanley Park—a one-thousand-acre park with “remnants of old-growth forests and a huge diversity of plants” adjacent to a “very urban, very developed” downtown core. Inevitably, Adria's practice engages that contrast. To pass from downtown to the North Shore, for example, one could move from

amongst the residential towers of the West End to the broad leafy trees on the park's south side before funnelling north across the Lions Gate Bridge, high above Burrard Inlet. A substantial urban park lives between those boundaries and encircled by a seawall. However, if that construct of separation—between the park and the city—and its attendant adjectives ever did hold, Adria's experience is that they are pierced, permeable, and the exact overlaps are intangible. The “urban-nature interface,” is instead a peripheral zone of overlap where the city goes into the park, and the park into the city. Adria describes listening activities that pick up soaring airplanes and the chop of helicopters. City light diffuses in the forest at night. Resident coyotes “aren't really nocturnal like they should be...because we're out here picnicking.” Traffic mimics wind. The wetland of Beaver Lake houses bird and frog songs while also absorbing, then revealing, urban detritus.

Adria relays another facet of the experience that shapes the student experience: the community of practitioners at SPES. Whether the practitioners are teaming up to deliver the field trip and day camp programs to K-12 students, or the spring break urban camping program, or the festival-style family events designed to attract new audiences to parks, the small staff team are guiding thousands of participants annually. That core programming extends onsite to also include teacher's workshops, adult education programs, and an Indigenous practitioner who, among other contributions, facilitates with groups of First Nations youth from the local high school. Off-site, SPES practitioners collaborate with the Vancouver Park Board and community educators to deliver environmental education out of the city's community centres. While the genesis of their programs, certainly, is the land, Adria also recognizes the cumulative effects of the community of SPES practitioners over time. That surpasses the facilitators to include the

stewardship of board members who have been with SPES for “ages and ages” and volunteers who do weekly conservation work in the park. The coupling of place and people has created a community of learning that leaves Adria “inspired when [she] hear[s] what it means to people who have known this place for a long time.”

Thinking of connection of people to place over time comes up in another context—the history and legacies of colonialism on her place of practice and the SPES community’s direction. That “spot that we’re learning about” via “place-based education,” is also, as Adria says, a place “that has so much meaning in context and historical importance for First Nations in the area.” She describes visiting teachers interested in Indigenous content and perspectives, but without the corresponding representation, relationships and resources within SPES to sufficiently engage those subjects. To address the obligations of a place-based UEE organization teaching in Stanley Park, she refers to an evolving strategic plan to decolonize their organization and a reconciliation action plan due in 2020. Adria further explains how that transformation manifests in her practice:

We're looking to the [Vancouver] Park Board quite a bit, as they've started on this journey of more consultation and listening to the three First Nations, and we are looking at how we can expand the Indigenous education program to make it not just a unit, but to have that traditional knowledge in all of our programs in a respectful and authentic way. Here, Adria’s intentions exceed the actions of her practice, and she looks to leaders of her organization and the city to set the direction for her community of practice to produce new relationships and skills.

Creating the capacity to engage with colonialism and reconciliation through her community of practice parallels two other instances where Adria's practice goes beyond the boundaries of Stanley Park. This spillover creates its own kind of urban-nature interface: the knowledge and ways of knowing that are generated and lived within the park stick and germinate outside it. On an invitation from Langara College, Adria has:

taught a few workshops for groups of nurses from Langara College...The themes of those workshops are nurturing with nature, so looking at all of the health benefits that can come from spending time outdoors and what that might look like if you were to pass those on to your patients or even this for yourself, for your own physical and mental well-being.

In a second instance, Adria recalls leading teacher workshops and touching on where and when environmental education can occur. Countering the notion that there is an inverse correlation between the built environment and the quality of an environmental education experience, Adria invites teachers not to "save [their] environmental education for the field trip where you go to Stanley Park." Instead:

You can start small with the school grounds and have that as your outdoor classroom, and then, from there, build up to the municipal park that's maybe four blocks away from your school, and then build up to a bigger field trip. So, taking advantage of green spaces where you can find them.

These experiences emphasize that a key part of Adria's practice is to expand the membership in her community of practice and the sites where that practice occurs.

Adria offers a vivid example of that expanding community and, in it, lays bare how the inspiration of her practice travels forth with the people she meets. She recounts a student who

attended a SPES program for whom the experience held special relevance because it was led by Adria:

One day I was on a program, there was a student who...had some physical barriers to recreating in parks and probably spending a lot of time outside. And when the field trip was over her dad came up to me and said “My daughter was really curious. She said: ‘Do you think our park ranger’s Indian?’” And I said, “Well I’m not Indian,” but we got into this discussion about our cultural background, and I relayed that to a co-worker later, and I didn't think that much about it. And that co-worker was like, “Adria, you don't know how important that might be to that little girl's life, to see somebody who is reflective of herself in the role wearing a park uniform, being an outdoorsy person when, in the traditional Indian—and in my background, Bengali—culture, that's not really a thing...And so my co-worker made me see that the importance of having diversity reflected in our staff within parks helps our diverse population of Metro Vancouver to realize that ‘Hey, maybe parks are also accessible to me,’ right?...I think having someone that is reflective of you, as an educator, could maybe change your sense of self.

This interaction exemplifies the way that a relational interaction can give a soft place for the seeds of curiosity to land and germinate—that the characteristics of individuals within a community add shape, merit, and potential for human connection and, with it, new members, ideas, and complexity. Adria’s experiences display many ways that UEE is bordered and given boundaries, and many more in which the reciprocity between place and a community of practitioners co-shape each other and the experiences of those they come into contact with.

How Might Adria's Practice Inform Emergent Practice?

Recalling that “communities of practice are formed by people who engage in a process of collective learning in a shared domain of human endeavor” (Wenger-Trayner & Wenger-Trayner, 2015, p. 1), themes of communities of practice theory are evident in Adria's description of her UEE practice. You can see this in Adria's account of the shared environmental interests of SPES staff, visitors, and workshop participants (the domain), the collaborative relationships that persist outside of sessions at Stanley Park (the community), and reciprocal features of the work the community undertakes (the practice) (Wenger-Trayner & Wenger-Trayner, 2015). Drawing on Adria's experiences, as well as themes of communities of practice, these are some ways that her practice might inform emergent UEE practice in Metro Vancouver.

In January 2022, the Vancouver Park Board passed a motion to examine what “co-management”—jointly with x^wməθk^wəyəm (Musqueam), Sk̓w̓x̓wú7mesh (Squamish), and səlilwətał (Tsleil-Waututh) Nations—of the lands currently overseen by the Park Board would look like (McElroy, 2022). The land to be co-managed includes Stanley Park. That direction emerged, in part, out of a colonial audit (C. Smith, 2018) that the Park Board directed staff to complete in order to better understand the Park Board's history and ongoing obligations to x^wməθk^wəyəm (Musqueam), Sk̓w̓x̓wú7mesh (Squamish), and səlilwətał (Tsleil-Waututh) Nations. Were such a co-management arrangement to move ahead, those relationships and shared values would shape the communities of practice who centre their work in and around Stanley Park.

Stanley Park, and organizations there like SPES, could become part of a hub that models the learning and obligation inherent in that co-management mandate. Moving from a mission of

“Connecting People with Nature” instead toward “Interconnecting People and Nature,” a community of practice could incubate the type of talent, teaching, applied research that befits this iconic place and the new character of this partnership.

Overlaps and interfaces of values are baked into relationships. As the management responsibilities change, we might expect other changes, such as: a reset of what should take place in Stanley Park, whose presence is welcomed and celebrated, and what physical and social infrastructure is required to make this all happen.

Adria’s practice foresees site enhancements that could augment the work of this community of practice for decades to come. Some of those enhancements come in the form of small-scale physical infrastructure that could be built immediately, but the possibility of co-management offers more of a re-imagination of the space.

For future practice, those small-scale improvements would have significance, including: increased site accessibility (to and from the park, as well as ease of movement within it), a build-out of undercover shelters throughout the park for the cool and wet seasons, re-purposing the boat houses to train and support community exploration on the water, and digitizing elements of SPES’s work for off-site engagement.

On a larger scale, though, there are examples and precedence, too, for more ambition to mark the shift in the relationship between the Park Board and x^wməθk^wəy’əm (Musqueam), S^kw^xwú7mesh (Squamish), and səlilwətał (Tseilil-Waututh) Nations. That could come in the form of physical infrastructure projects that help people move in and out of the area. The Seoulo 7017 (or the Seoul Skygarden), or the Highline park in New York are but two prominent examples of how you could, dually, extend the park space and create enticing self-propelled

entries for the community. The popularity of the existing seawall is testament to the ability of the park's physical infrastructure to invite folks to engage with the park. However, given the parties in the co-management agreement, a public art series like *Blanketing The City* (2018) by ʔəliχ^wəl^wət (Debra Sparrow), Chep^ximiya Siyam' (Chief Janice George), and q^wənat (Angela George), might be more instructive. It exemplifies the blending of physical and social infrastructure and recognizes the "resurgence and importance of Coast Salish weaving on these lands, and directly combats the ongoing systemic suppression of Indigenous visual culture" (Vancouver Mural Fest, 2022). On consideration of all options, the initiatives that amplify the community of practice the best might not be the grandest. Instead, they might be the most deliberate ones and flow down from the spirit of co-management that is struck.

Reflection Six: Meeting with Dr. Janet Moore

It's raining like December rains in Vancouver when I meet Dr. Moore, but the Cambie Bridge shelters me for the last several hundred metres leading to CityStudio. One year, *Uninterrupted* (Wild, 2017) was projected on the bare concrete underside of the bridge, tracing the Adams River Sockeye's migration from the South Thompson, down the Fraser, into the Pacific, to Alaska and back. The journey is arduous: they're fueled only by a heavy summer diet, and their navigating cues home from the Aleutian Islands are, to Western science, unknown.

Later, Dr. Moore laughs when I ask her about her students' emotional or spiritual experiences of urban environments. She tells me they are persisting through long commutes, make-do housing, and the elevated stress of doing a degree in an age of overwhelm. They need somewhere comfortable to do their school work, together. Somewhere with a wall full of plugs.

I'm writing at Turks Coffee Shop on Commercial Drive—of the area shops, it's open the latest. Despite earplugs, I hear Deerhunter pumping on the stereo. A guy walks in to announce: "The Super Wolf Blood Moon is out." With teas and biscuits put down, a dozen people spill outside. An eclipsed crimson orb hangs in the sky. Derrick, the astro-intervenor, is gone.

My daughter, wife, and I stroll this neighbourhood—the sort of dawdling walk the too-big boots of a toddler demand. Yesterday, we passed someone's front-yard planter whose smell reminded my wife of Sydney, where she grew up. Today, we gazed up to notice bird nests thatched in the canopy of old trees outside our front door. This is our micro-practice of noticing—the signal in the skittering city noise. My daughter stops us to pet the twin cement elephants, Ellie and Fanz, who frame a neighbour's front walkway. She runs the grass hills beside them, eventually breathing deep and sitting down—her signal exhausted until nap time.

Discussion Continued: Communities of Practice

After arriving at McGill University and joyfully opening a thick and exciting course booklet, Dr. Moore learned a lot about how universities organize knowledge and discipline streams. In her first days on campus, she recalls:

“not really understanding what I had signed up [for]. I guess I had ticked the box for science. And I didn’t really even know what that meant...I just did well in math and science and I think I got into both programs: arts and science. I chose science because I liked biology.”

Following her curiosity toward her preferred courses regardless of discipline, however, was not the norm. “I was told, ‘oh no, no, no, no, you actually don’t have a choice, you’re taking chemistry, math, calculus.’ And I thought that sounds awful.” Though it took finding the right person to sign a form to get out of doing a bio-chemistry lab in favour of another course—Dr. Moore cites instead a cross-cultural perspectives on health as a favourite—she found space to disrupt and push back on systems that did not suit her learning track. She also honed that inner voice that lets you know when the exciting track that you were on has drifted.

From a marine biology project linking beached whales, red tides, and increased eutrophication around city sewage outflows, to earning a Master’s degree in Behavioural Ecology while in a lab studying hummingbird wings (a long story, but her supervisor was amazing and an incredible story-teller), Dr. Moore sensed her path was generally but not specifically where she wanted it to be. That feeling was further clarified as she helped teach a first year biology course at UBC where, for field studies, they explored a pond, a forest, and a marine site. For Dr. Moore, this felt like the summer camp flow and learning style that she had

spent eleven years practicing. The camp-like feeling of being back in the field with students and other TAs, running around the forest, and co-creating dynamic group learning, reminded her that she knew how to teach and guide a cohort.

Her disruptive spirit again collided with the rigidity of university norms as Dr. Moore began changing the curriculum as a lab faculty for the twenty TAs she mentored. The types of changes she envisioned, Dr. Moore was told, would require a PhD. She leapt for it. With that leap came a move from science into UBC's Community Regional Planning program and a foundation in social sciences. While her previous studies in science had her studying the environment, she was reframing to focus on people: "all these environmental studies I've been involved with in sciences was all studying this environment. But, no one was talking about the people." That move was "radical" for her and she "had to do this massive undoing of what science had done to [her] as a feminist." The "undoing" put the centrality of scientific method into a new context and reprioritized the "intuitive, interconnected, multidisciplinary systems-thinking" that came naturally for Dr. Moore.

Still, classifications of what counted as environmental learning and sustainability continued to obstruct where Dr. Moore thought the learning could be richest and where action was most needed. As part of her PhD with a focus on sustainability education at UBC, she gravitated toward participatory action research—"start where you're at, look at what's happening"—at a time when UBC was coming out with sustainability policies. But, there was a gulf between what UBC's policy writers and leadership were claiming and what was actually happening on campus. Despite the publication of the policies, on the ground "you couldn't feel it, you couldn't see it, you couldn't taste it." That disconnection and what Dr. Moore felt was an

under-emphasis on the human elements of sustainability clashed with her view of what sustainability stood for: “sustainability was about social justice and ecological justice and economic justice all coming together.” Now further along in her academic and professional career, she had the tools and networks to take action.

Ruminating over that fracture, she began asking “what would the classroom be like if we were going to do this?” It seemed to her that, rather than labels like sustainability, environmental education, or another green-tagged term, the organizing principle would be better expressed broadly as “social innovation.” Out of this tension and wondering, a relationship with Mark Winston at SFU’s Semester in Dialogue, public engagement run by Lindsay Cole on behalf of the City of Vancouver, and a crowd-sourced brainstorm related to the city’s Greenest City Action Team, came CityStudio. It was there that these burgeoning principles and relationships could be iterated and work-shopped:

The work is in cities. The work is in understanding our relationships to systems that exist in the city and my belief is to not call it any of these things. The more I call it environmental education, sustainability, the less people show up. And so, CityStudio allows anyone to show up from any discipline and say, what’s going on? Let’s look at something.

Given that the problems they sought to address existed outside of the classroom, that is where the focus would be: outside the university, where the people are, on the greenways, and at the public engagement pop-ups.

In order to create that human-centred out-of-classroom learning, Dr. Moore and the CityStudio team needed a relational and collaborative energy at the CityStudio centre underneath

Vancouver's Cambie Street Bridge. For someone who has spent time in a classroom, as teacher or student, the roles and responsibilities likely would feel remixed. But CityStudio's hub is more than classroom space. It comes with the amenities and responsibilities more akin to a workspace than a classroom. Dr. Moore shares that:

The space here is really more this creative student centre. And so they have a kitchen that's theirs. They have breakout rooms that are theirs. The whole place is really theirs and I say to them: you make the course instead of take the course. You're responsible [for] this whole place. It's like a job: you have an IT committee, you have a kitchen committee, you have a space committee.

For "dialogue days" (each Thursday at CityStudio), it is the students' responsibility to call the guest speaker, host them, brew the coffee, welcome them in, thank them, follow up, and nurture that relationship much in the way that a teacher might. Dr. Moore supports by curating the overall experience and crystallizes the faculty role as "want[ing] to be in a co-creative space where we are helping you figure this world out together."

Dr. Moore's continued leadership within CityStudio stems from her belief that we all benefit from the involvement and empowerment of youth in sustainability and social innovation praxis. At her best, she is engaging with students non-judgmentally because their involvement and success tends to be hampered by long commutes, unconventional project and writing spaces (e.g. fried chicken restaurants), little or no recreation or leisure time, scant encouragement that their voice matters, and all the mental health challenges that one might expect to come along with that. CityStudio remedies some of this by creating the conditions for connections and friendship. The camp mentality of supporting youth, connecting them with good leadership, and

eating together instead of alone—all of these things enable the cohort connections that lead to richer social and professional experiences. Nurturing these relationships welcomes the ideas, passion, and ingenuity of a new generation into roles and networks that can assess and address the human dimensions of sustainability.

How Might Dr. Moore’s Practice Inform Emergent Practice?

Asked about the future of her work and how it might look if this type of practice was supported in Metro Vancouver, Dr. Moore thinks immediately of the role of community and public assets. She illustrates the gap by referencing her twins’ newly-built elementary school. Because her children were just entering the school at the time the participatory elements of the design process happened, she had not been involved. When she started seeing the plans, she was struck:

Where’s the community? Why wouldn’t this space be opened to community at night?

Are you kidding me? We have these giant buildings, and we have a city full of social isolation, and they’re free and you, you closed them down?

Were Dr. Moore’s experience and themes of communities of practice to inform emergent UEE practice in Metro Vancouver, “we would see the school and education as the centre of the work,” Dr. Moore says. Her work with CityStudio exemplifies successes that can come from attracting interested university students of any discipline into a supportive, solutions-oriented civic action space. CityStudio’s hub, nestled under the Cambie Street Bridge, was not purpose-built but was a city asset commandeered with a vision for social innovation and purpose. Surveying the other public assets throughout the city, including elementary schools, one wonders how much further that model could be taken with the collaborative leadership that CityStudio has established.

In thinking of laddering the model down to high school students, Vancouver does have a well-known TREK outdoor education program—but the focus there is primarily outdoor education. It bills itself as a “place-based program that has the flexibility to create an enriched learning environment” (TREK Outdoor Education Program, n.d., para. 1). Student participants from anywhere in Vancouver can apply to join and, throughout the year, they are introduced to a variety of outdoor recreation and backcountry activities, opportunities for community engagement, and “a greater understanding of the natural world” (TREK Outdoor Education Program, n.d., para. 2). A separate program—following a similar model of cross-district eligibility and accomplishing, both, typical curricular requirements as well as a specialized focus—could be initiated to cover similar ground to CityStudio. If youth involvement in civic processes and social innovation matter, predecessor programs for high school-aged youth across Metro Vancouver could seed the collaborative community-based model for a wider group. Additionally, given the scope of challenges faced by climate change, reconciliation, growing income inequality, systemic racism, and more, strong arguments could be made for publicly available place-based education programs that integrate the learning tools, relationships, and networks to address UEE issues.

The laddering can also move towards a continuing education or citizen’s assembly-type of set up for community members out of high school and not in university (either never attended or already graduated). An idea like this would go beyond the citizen-led advisory boards that some cities have, including the City of Vancouver. This is akin to Dr. Moore, around 2009, hearing about Vancouver’s newly created Greenest City Action Team, and thinking:

I want to be on the Greenest City Action Team. Everyone should be on the Greenest City Action Team. It shouldn't be just these twenty people. So, we imagined our class as part of that and we said what if we just start acting like we're on the team?

Emergent UEE practice in Vancouver must find ways to expand the team. The team will need places to work—perhaps spaces like elementary or high schools in the evenings—and we will need talented leaders who can convene, focus, and guide those collective efforts. Dr. Moore's practice offers a model for that growth.

IV. Cultural Ecosystem Services and Social-Ecological Systems

Reflection Seven: Meeting with Dr. Jeff Schiffer

I'm in bed about to connect with Dr. Schiffer by phone for my final interview. It's 1PM, but my bedroom, with no desk or chair, is my office. In Vancouver, the dialogue of the day fixates on revelations that money laundered from the sale of opioids aided to uncouple the local economy from housing prices. Whole conversations will cover levers to engage this—control “shadow flipping,” tweak the Empty Homes Tax, increase buildable FSR...and what about character homes (?)—with little mention of the sacredness of the 10,000 people who have died in BC since I began grad school in July, 2015, from a poisoned drug supply (British Columbia Coroners Service, 2022, p. 4) without no commensurate policy intervention.

Later, Dr. Schiffer will share his interest in the ways humans reproduce their culture via relationships with their environment. My relationship to the environment includes this conversation with him in Toronto—the casual conversion of my voice into electrical signal, then radio wave, caught by a copper antenna, and re-vocalized for him. Its air formed and propelled by my body then travelling at the speed of light as energy in the earth's electromagnetic spectrum. My voice exists simultaneously somewhere else in the world, mimicked by a vibrating speaker apparatus of industrially-assembled paper, plastic and metal.

The call finishes. His voice is gone and I'm aware again that I'm sitting alone in my dry, lit, temperature-regulated room. All of this is so fascinating and so lonely. An ambulance wails between the raindrops. Outside of the interviews, this thesis has disconnected me from the places and people that sustain me, and the issues of my community. I've missed a chain of seasons. Still, I treasure the learning from this journey. I'll have many questions to answer

through practice when this thesis is complete, not the least of which: who am I and what does my relationship with these lands compel me to do?

Discussion: Cultural Ecosystem Services

Dr. Schiffer came to be a UEE practitioner in Metro Vancouver through his PhD in anthropology and education. His PhD focused on decolonizing Indigenous child welfare, and it aligned with his work at the time at Vancouver Aboriginal Child & Family Services Society (VACFSS). As part of his PhD work, he shadowed social workers and reflected on how to do social work better. Coming from his anthropology and education background, his understanding of education is more expansive than K-12 curriculum and lesson plans. Dr. Schiffer shares that education is:

about how humans develop and reproduce culture through relationships with our environment. And for Indigenous Peoples that's a very land-based process that involves a lot of different relationships: physical, ceremonial, cognitive, emotional with the physical world they inhabit with what mainstream folk would typically discuss as "the environment."

Furthering that thought, he adds that the environment is not conceptually distinct and separate from the body but, instead, "from an Indigenous perspective, it's just part of all of our relations." To close this idea, he illustrates that, as we inhale and exhale air, we are in constant connection with the world around us. This idea of a practice grounded in cultural knowledge permeates his account of his UEE practice.

Building on a conversation with Dr. Lee Brown—a Cherokee Elder and the Director of the Institute for Aboriginal Health at the University of British Columbia (UBC) at the time— Dr. Schiffer designed the Culturally Relevant Urban Wellness Program (or CRUW Program). It was

a “land-based program for Indigenous youth” that brought some youth in care from VACFSS to the UBC Farm to “reconnect with land and learn about their culture and Aboriginal practice and ceremony.” Being a land-based program centred at the UBC Farm, he knew to first broach the idea with x^wməθk^wəyəm (Musqueam) Elders that he had met during his undergrad at UBC. Out of those discussions came a philosophy, structure, and place-understanding that was specific to that part of x^wməθk^wəyəm (Musqueam) territory. Around that time, Larry Grant, a x^wməθk^wəyəm (Musqueam) Elder, gifted the UBC Farm a hənqəminəm name: x^wciç ‘əsəm (place of growing) (UBC Faculty of Land and Food Systems, 2021). The intention behind the name, Dr. Schiffer says, was to describe the growing and developing of humans; a fitting alignment with CRUW. Different for other programs that teach “concrete skills,” but then participants “don’t have enough holistic health to be able to implement those skills,” CRUW aimed to “connect youth to land and that connection to land would be a catalyst for them developing a very deep understanding about their culture and presence.”

After an idea from Cindy Blackstock (Gitksan First Nation) at a Nicola Valley Institute of Technology lecture that Dr. Schiffer heard, he and the x^wməθk^wəyəm (Musqueam) Elders opted to blend the CRUW membership to be about two-thirds Indigenous and one-third non-Indigenous. “It would be phenomenal,” Dr. Schiffer relayed the Elders saying, “if we have Musqueam kids...for them to connect to Musqueam territory,” but the leadership group believed strongly that “kids from anywhere in the world could connect with that land to learn a little bit about themselves.” Reflecting on some of the universal benefits available to all participants, he shared that “it said something fundamental about the relationship and the connection between humans and their environments and a wellness that’s derived from that.”

Dr. Schiffer's practice includes several examples of knowledge that may have only just been accepted into a "mainstream perspective," if at all, yet has been known and practised by Indigenous Peoples for years. For example, this comes up when discussing the:

evidence-based research that shows that green space is good for kids with ADHD, [that] it mediates mental health and calms anxiety... We know from a mainstream perspective, as well, that what the Elders have been saying for thousands of years is, in fact, evidence-based."

Similarly, he shares that "the Elders always say the forest is our pharmacy," and that played out in very personal ways for him. Because the CRUW program launched at the same time his first son was born, he was taught by the x^wməθk^wəyəm (Musqueam) Elders how to make a diaper cream from local plants. It was the only one he used for both of his children. For emotional regulation and alleviating feelings of stress, he learned to crush a tiny ball of cedar until the oil released and to inhale through his nose. While these medicinal or wellness properties parallel closely enough with how medicines might be extracted and distilled in a Western sense, he follows up by relaying a critical difference in perspective.

For the CRUW participants, beyond the medicinal properties of teas and salves, Dr. Schiffer also invited guest speakers to share the teachings behind those plants. This reshaped the connection with a particular plant from a use-value (e.g. this plant resolves a rash), into a relationship context. He frames that shift:

Learning how to identify plants in your environment, understand[ing] their medicinal values, actually process[ing] medicines out of them and then utiliz[ing] them on a daily or a weekly basis, forms a relationship. Because you are noticing those plants, you

understand what they do and you're caring for them. You're cultivating them in a good way, you're processing them and you're taking them into your body.

Because the plants CRUW utilized were harvested in place, the linked benefits and teachings are always rooted to that specific land. Any place and time thereafter that these plants are found in the bioregion, the CRUW participants can be reminded of that relationship and can practise and strengthen it outside of the program.

However, Dr. Schiffer's practice also illustrates some of the complications of mentoring land-connections through a program, rather than ongoing and easily accessible community practice. As is fairly standard for a program, CRUW welcomes in a set number of participants—twenty in the first year—and, at some point, participants complete the program and make way for others. He invited four of the original cohort back as youth mentors the year after they graduated. After one year, they wanted to return for a second. After the second year, they refused to leave behind this community they were a part of. Wanting to give space for new youth mentors and still maintain a connection with the original mentors, he helped them develop a youth mentor committee with help from a Vancouver Foundation grant. This led to a more a “longitudinal relationship” with the youth. Still, it demonstrated that, through the program, youth learned and practised land relationships and connection to a community that needed to stay intact. The knowledge they learned did raise their sense of efficacy and independence to cultivate plants for wellness purposes and aligned with the associated teachings, but those benefits were best continued in connection to one another rather than a term-limited program.

Dr. Schiffer closes by wondering again about education's role in reproducing culture and, in doing so, problematizes the expectation that the current K-12 education system can deliver all that is needed. He offers that:

We go through the educational system and we come out and we've learned particular values and ideas about being in the world, right? And a lot of the values and ideas and relationships that are being formed by the current system are destructive. They're not getting us to where we need to be to live in balance with our ecology, with our world.

And so I think it's still going back to some of these really old ancestral Indigenous values and understandings that we can start to transform schooling and education because those are the same thing. Schooling in the school system but also education more broadly.

He believes that the current public education system can feel "very industrial" and that the move toward more place-based UEE would be transformative, "particularly for Indigenous youth but really for all youth." His practice exemplifies the space for complementary education offerings, and the need to engage with the local ecosystem in culturally-responsive ways.

How Might Dr. Schiffer's Practice Inform Emergent Practice?

If we take as a starting point that "the human species, while buffered against environmental changes by culture and technology, is fundamentally dependent on the flow of ecosystem services" (Millennium Ecosystem Assessment, 2005b, p. v), and that dependency includes cultural ecosystem services (CES) "that provide recreational, aesthetic, and spiritual benefits," then the specific zeitgeist of this region is a central concern to UEE. Drawing on Dr. Schiffer's experiences, as well as themes of CES, these are some ways that his practice might inform emergent UEE practice in Metro Vancouver.

If, as Dr. Schiffer proposed, education is how we reproduce our culture, in Metro Vancouver—an aggregate of local First Nations, Indigenous Peoples from across North America, settler-colonial and pluralistic cultures—emergent practice in UEE could attend to CES by better defining what that means for the diverse people here and then helping to propagate those opportunities widely throughout the region. In doing so, governments, arts and cultural leaders, and those who influence the built form and greenspaces of cities may be able to augment the availability and quality of CES experiences beyond those already offered through events and programs. While events and programs can connect and expand communities and give space for CES introduction and exploration, they are usually small and unconnected moments in time. The CRUW participants who returned as student mentors and then, later, formed an ongoing advisory council, exemplify that distinct social-cultural experiences matter to UEE, and that once a meaningful avenue has been established, there is a desire to continue beyond a time-limited program.

However, while the path to understanding what the diverse population of Metro Vancouver seeks from CES requires broad engagement, emergent practice here requires specific engagement with the local First Nations of this region. Reflecting on the idea that “each territory has its own teachings”—that there are socio-ecological phenomena endemic to here— Dr. Schiffer offers that:

“every territory has been cultivated by a relationship with people over tens of thousands of years. And through that history of relationship it takes on its own physicality but also

its own presence. And some would say its own spirituality. And so there's something very special about Coast Salish territory that I cannot experience [elsewhere].”

Paraphrasing Jo Chrona's argument about the perils of embedding First Nations, Inuit and Métis into a Canadian multicultural narrative (2021)—flattening the local First Nations into a cultural mosaic with other cultures here “ignores, or tries to deny, the specific land-based rights” (2021, para. 22) that they have in these lands. Further, because this is the only place in the world where these First Nations' languages, oral and written literatures, and land-rooted knowledge systems reside (Chrona, 2021), there is a particular duty to support First Nations-led effectuation of CES here.

Emergent practice, then, might look like the types of practice that would arise from the Indigenous-led, purpose-built new Vancouver campus for the Urban Native Youth Association (UNYA) and the Nicola Valley Institute of Technology (NVIT) (Office of the Premier, 2022). The future centre will be on a rapid transit corridor and will bring together culture, education, wellness and empowerment and feature child care, affordable homes for Indigenous Peoples and families, a community kitchen, a bookstore, an outdoor gathering area, community spaces for Elders, a health and wellness clinic, and ceremonial spaces (Office of the Premier, 2022). Dr. Schiffer's practice affirms that land-based UEE practice is inextricable from cultural values, norms, and history. If we take, as a given, that other types of ecosystem services ought to be secured—for example, provisioning ecosystem services provide many things including food and water—so, too, should CES. A centre like this would advance practices that augment the access and richness of CES in this region.

Reflection Eight: Meeting with Janey Chang

The day before our interview, I answered an email from Janey: “Any chance we could make it a sunrise hike at Mount Seymour?” This was decidedly less tame than my day-to-day as a new-ish dad with recurrent sciatica; one who was working full-time and doing a thesis. I spent most of the day thinking that I should probably decline. How would my recording gear work for the interview? I normally cook breakfast for my wife and daughter; it’s one of the few independent ways I feel I can help daily. I waited until the evening and replied. “Well...I’m in,” followed by a few questions about route and distance, self-doubt barely masked.

And then there I was buzzing over the Ironworkers Memorial Bridge, above Burrard Inlet, eating leftover French toast in the dark. If you push two together with dulce de leche from the fridge, that’s a sandwich. This was the fuel I hoped would keep me warm, dry, and strong.

Janey took care of me like a good friend would: attentive to my pace, bearing licorice tea and homemade granola, and, after, inviting me back to her home to finish our conversation over matcha. We ascended to Mount Seymour’s parking lot, scurried to an early lookout, and faced south. Sun traced the horizon like tangerine lip liner. Early-morning fog draped over the Lions Gate Bridge and the downtown peninsula. It clung to a spine of Burnaby towers and, further east, I mistook it for an arm of the Fraser River. Granite was cold on my butt. I was happy I came.

Later, Janey talked to me about a body’s memory of experiences and movements from before this life. Memories out of time. Cultural memories, maybe. I wondered what long-ago memory I was accessing—of setting eyes on a river delta from atop a mountain—that predisposed my brain to fire with glee. What deep recollection I had of contemplating far-as-my-eyes-can-see weather systems that exceeded my brain’s ability to question: and then what?

Discussion Continued: Cultural Ecosystem Services

Janey describes Mount Seymour as her “source”—where she can “feel a little more raw in good ways,” and where she learnt “about how to become a teacher and an educator as well.” Over decades of practice, her self-perception and relationship to this ecosystem has become clearer:

I’ve realized now that I don’t want to be one thing. I don’t fit into any of that. I’m not, even as an outdoor educator, I’m not just an outdoor educator. I’m a whole human being that has different needs and has a need to create and a need to share, and connect, and move, and take action, and all of those things.

Janey circles back to this concept—a holistic self with diverse needs and interests—throughout our conversation in reference to herself and also her aims as a practitioner. Through work in backcountry guiding, film, the K-12 school system, ancient technology, and as an independent contractor with both youth and adults, Janey draws on a history of practice long and wide when she shares that these narrow job titles and classifications impede some of the impacts we hope to achieve.

The day after Janey graduated from the University of Toronto, she answered a “crazy call...[a] magnetic pull to come back” to BC. Once here, she replied to a poster she noticed in the Roundhouse Community Centre (downtown Vancouver), and found herself camping on a sandspit up the Elaho Valley, drinking directly from Sims Creek, and living in community with folks from the Uts’am Witness Project. She describes:

not really knowing what was going on and why I was there and feeling all these unfamiliar things. Which, later, I realized was connection and community for the first

time in my life, and then feeling spiritual connections to the land and witnessing the beauty and the destruction because there was a lot of logging and clearcutting going on, heli-logging happening right in front of our eyes. And then hearing Squamish songs at night: singing and dancing, hearing the language and seeing people in comfort on the land and feeling this comfort on land too.

Observant of and responsive to her surroundings, living and learning in community, Janey felt “these missing pieces from my life just filling it all in.” Beyond pulling water from Sims Creek, and finding shelter on a sandspit, Janey found something else with those folks in that ecosystem: belonging, inspiration, and identity. After an early career where she had more of a focus on backcountry travel, she now finds herself leading a practice that directs participants back toward those foundational principles.

A focus on those principles does not mean that Janey has eschewed skill acquisition, far from it. Ancient technology work—which includes the use of natural materials for fibre cordage, hide tanning, fish skin leather, friction fire, leather tooling, and more—now makes up the bulk of her practice. In addition to that inward turn to identity and belonging, Janey also sees untapped potential to use that practice as an entry to other disciplines: investigating “science and, socials and chemistry...and cultural connections” through ancient technology.

Still, that knowledge ought to be rooted in deeper context, Janey says: who am I, how do I belong in all of this, and, in a nod to her favourite question from Wade Davis, what does it mean to be human and alive? Speaking of these emerging themes of her practice, Janey shares:

A lot of it has to do with being human, doing what humans are meant to be doing and

really living and being alive while we're here. But also, belonging. Where do we belong? How do we belong...in this whole big context—urban, wild, whatever—where do we belong? And so that piece comes up...and who am I? Those are themes that come up a lot. What is your connection to this place, or whatever it is that we're doing?

Catalyzed by her time up the Elaho Valley, Janey now attempts to stimulate that connection and reflection between participants' sense of self, community and place. Whether making coal-burned spoons or fish skin leather, she integrates a spirit of questioning that insists on reflexivity and land relationships in UEE.

To provoke that connective inquiry, Janey asks simple and direct questions. Recalling that process at Mount Seymour, Janey reflects that the land is as complex as the individuals she practised with.

This land is all very interesting. I really grappled with it when I worked here because this is Metro Vancouver, where we were was Mount Seymour, all of this is mostly within a BC Provincial Park and all on Squamish and Tsleil-Waututh territory. So, I started getting my staff team to acknowledge the land that we're on. All of the different facets starting with 'we're in five different places at once – how can that be?' ...It's like a convergence of many places and things and meanings and histories, all on top. There are so many layers there: from government, to management (like forest management), to social history, and cultural history and then there's me. 'Who am I on this land that's all jumbled up?' ...It gets really silly because if you look at the maps—Metro Vancouver—they draw lines and then BC Parks draws lines and then the controlled recreation area has lines...So, it's just an interesting space because it's so many things but ultimately is this

beautiful place with a human history... I just plant seeds of, hopefully, awareness that is going to grow, because that is causing disconnection. Barrier upon barrier upon barrier for the human being to connect with the land that they're on. So how can you truly practise place-based education without removing all those boundaries and pulling back all those layers and really getting to the essence of the land?

As Janey points out, Mount Seymour is within the Metro Vancouver boundaries. Along with the rest of North Shore mountains, it frames the northern edge. More often than not these days, Janey finds it more likely for a program to run if she can facilitate the experience with the students at their school, rather than the students leaving their school to travel somewhere like Mount Seymour, regardless of its placement within city limits of Metro Vancouver. Janey has found that “there's still a lot of red tape around...just taking kids off of the school grounds.” And so, there you'll find her “tanning hides in [a] school and the school ground is underneath the Lions Gate Bridge,” or scraping hides with a group in the fenced outdoor compound attached to an urban high school. With a fire pit supplemented by outdoor heat lamps, they are “doing something that was traditionally done outside on the land and in community with kids around helping and witnessing what's going on.” Students would:

come up to the scraping beam, and scrape away, swear a little, grunt a bit, and then be done and they would pass on to the next person, and then there were some people that were in the rhythm. And you could see a certain quality about their gaze that indicated an immersion in the activity—real connection. And that was just so beautiful to watch because what I think I was doing was a joy and a remembering and, with all that, some level of connection to our humanity, our humanness. Those are pretty profound.

Whether by tanning hides, or “sensory engagement with green space” on walks on the sea wall around False Creek, Janey’s practice is re-imagining what is possible, where it is possible in urban spaces, and how all of these things can remind us of what it means to be human and alive.

How Might Janey’s Practice Inform Emergent Practice?

Recalling that cultural ecosystem services (CES) include the “aesthetic inspiration, cultural identity, sense of home, and spiritual experience related to the natural environment” (Food and Agriculture Organization of the United Nations, 2022, para. 1), and are thus an important lens through which we can understand human well-being in cities (Nesbitt et al., 2017), Janey’s practice lays bare this aspect of ecosystem engagement. Drawing on Janey’s experiences, as well as themes of CES, these are some ways that her practice might inform emergent UEE practice in Metro Vancouver.

CES can help ask and answer Wade Davis’s question that Janey embodies: “What does it mean to be human and alive?” This riveting question can and should be central to neighbourhood and regional planning in order to maximize CES benefits and, with that, UEE potential. Janey described Mount Seymour as her “source,” but how might neighbourhoods be the source for those who live there? Unlike distant field studies, UEE addresses its place-based aims by staying exactly where students reside. Drinking out of daylighted urban creeks as Janey drank out of Elaho Valley creeks is unlikely in the near term, but, on the other hand, blue infrastructure such as the St. George Rainway (City of Vancouver, 2022b) is slowly being restitched into the urban fabric. The City of Vancouver’s *Climate Emergency Action Plan* and draft *Vancouver Plan* both commit to “complete neighbourhoods” (City of Vancouver, 2020, 2022a). Complete neighbourhoods are described as having “what we love about our

neighbourhoods and what matters most like affordable rental housing, local businesses, arts and culture, and places and spaces where we come together” (City of Vancouver, 2022a, "Equitable Housing and Complete Neighbourhoods," para. 4). Janey’s practice, and the value afforded to people by CES, suggests that a definition of “completeness” should include the proximity and means to enact work like hers for those inspired to take part.

Though not always expressed through CES-framework, many scalable examples of CES exist now. On a less complex level, some classrooms in Metro Vancouver schools assist in salmon spawning by hosting and monitoring salmon tanks in their classrooms (Day, 2006). Such programs could expand through, as Janey does in her practice, making salmon skin leather or holding two-week deer hide tanning camps in the school yard. These examples aim to connect students with ecological processes and cultural practices in their local area. On a more integrated level, looking to Sk̓wx̓wú7mesh Úxwumixw (Squamish Nation), for example, principles aligned with CES are embedded within land development partnerships with x̓w̓məθk̓w̓əy̓əm (Musqueam) and səlilwətəl (Tsleil-Waututh) Nations (Campbell, 2015); revitalizing land-based practices (such as cultivating plants for health, food and well-being) (Joseph, Cuerrier, & Mathews, 2022); and social work practice (McReynolds, 2021).

To expand the availability of initiatives like the hide-tanning and the fashioning of salmon skin leather would miss the emergent practice if it did not include the introspection inherent Janey’s paraphrasing of Wade Davis. Ruminating on the tendency to distill EE as self-contained, Janey shares that:

I think that environmental education is going to have to become intimately connected to the cultural piece, 'cause we talk about the environment like it's this thing in a vacuum, a world around us, but it's not. The human element has to be there too.

The emergent practice that might be informed by Janey's experience is not simply to broaden the urban cultivation and foraging of berries and medicines, for example. It is to link those land-based practices—ones that are specific to this place—to deeper questions about who we are, who our community is, and what we value. It is to manifest cultural meaning into UEE practice rather than a solely a narrower skills-based experience.

Conclusion

Urban environmental education in Metro Vancouver is, at times, hard to see, but already here, and crucial. Though a hermeneutic phenomenological approach resists generalizing the experiences of a few, there are compelling reasons to connect emergent threads from the eight practitioners I interviewed and place them here for the reader's own evaluation.

UEE, generally, has been flagged as an emergent trend within environmental education (Ardoin et al., 2013), and, further, trends within UEE have been described (Russ & Krasny, 2015). At this stage, UEE practice—the doing of the work—outpaces its codification. That ordering will happen over time as practitioners and researchers analyze and reiterate ongoing practice. In the meantime, practitioners are innovating the work and the impacts of climate change are aggregating. If there is value in UEE, it behooves us to try to understand and amplify it with speed, even if the early descriptions of emergent practice take a different direction in the long term.

Engaging in UEE Requires a Profoundly Social Focus

Within urban social-ecological systems, the bodies of research that I linked practitioners with in this thesis are more directly part of UEE's social realm: ecological identities, environmental justice and political ecology, communities of practice, cultural ecosystem services, and the reflective writing I shared. Ample scientific evidence exists that the climate of our one and only home planet is experiencing rapid and profound change that is human-induced. This fact leaves unanswered some compelling questions: why is it that our¹⁰ actions are not

¹⁰ The collective “our” here must acknowledge the great disparities in the creation of those climate-threatening global emissions and the asymmetrical climate vulnerabilities for the nations least responsible for creating those

commensurate with the import of that fact? Why have we not more quickly re-storied and re-aligned the paths forward and what we are willing to do for communities larger than our own? These are social questions—not technical questions about the parts per million of atmospheric CO₂—whose answers must be implemented through practitioners here.

Connecting Emergent Practices

If one can connect and generalize some emergent practices from these eight Metro Vancouver UEE practitioners, it could be summarized in answering these five questions:

1. Where are we?
2. What counts as UEE?
3. What shall we call it and why does that matter?
4. Who is included?
5. How can we do it together?

Given that the UEE work will always continue, these five questions can be answered in community, translated in action, and the process restarted on an ongoing basis.

First, as a place-based and people-responsive practice, territorial dispossession must be addressed and remedied for the First Nations who have inhabited this region since time immemorial. UEE, with its political ecology and environmental justice components, absolutely has a role in problematizing and stimulating responses towards that unjust status quo.

Practitioners could do so in line with the TRC's Call to Action 47¹¹ (Truth and Reconciliation

emissions. By one count, the Global North accounts for 92% of excess global CO₂ emissions over a safe global carbon budget (Hickel, 2020).

¹¹ Call to Action 47 reads: "We call upon federal, provincial, territorial, and municipal governments to repudiate concepts used to justify European sovereignty over Indigenous [P]eoples and lands, such as the Doctrine of

Commission of Canada, 2015b). These educational efforts most certainly can follow the direction of the local First Nations themselves whose existing land-based work and advocacy leads by example¹² on their home territories. The eight practitioners are engaged with this quagmire in a variety of ways, such as through culturally-relevant program collaborations (Dr. Schiffer), aligned practice that piggy-backs on Vancouver Parks Board's direct relationship with the three Nations on whose territory their organization works (Adria), and "adjacent to, in partnership [with], [or] in similar directions with a lot of Indigenous-led climate justice" initiatives (Rev. Dykstra). In support of and in relationship with the local First Nations, non-Indigenous practitioners could continue that work but should be aware of critiques that crossover from the actioning of the Truth and Reconciliation Commission's Calls to Action.¹³

Second, because "environment stories are front-page stories. They're every-page stories. They're everywhere stories and they're everybody stories" (Subramanian, 2020, 13:30), subject-matter taxonomies may refigure toward more open, holistic, and integrative ones. Meeting with community members in your place of practice to just socialize and eat the fruit you have grown is UEE (Ryan). Studying transit systems and mapping how we direct movement in cities, for example, is UEE (Jada). Janey honed in on this disconnect when she shared that:

Discovery and *terra nullius*, and to reform those laws, government policies, and litigation strategies that continue to rely on such concepts" (p. 5)

¹² As but one example, Ta7taliya Nahanee relays that: "the United Nations Declaration on the Rights of Indigenous Peoples was accepted in Canada in 2016 under pressure from the growing body of emancipative work by Indigenous scholars and their settler allies" (2018, p. 17).

¹³ Eva Jewell and Ian Mosby wonder whether the current aims and shape of reconciliation amounts instead to recolonization (Jewell & Mosby, 2020) and note that, in the six years that had passed since the release of the Truth and Reconciliation Commission's final report, the only calls to action that had been fulfilled (11 of 94) were symbolic rather than structural (2021).

one problem with school is that they teach science, and English and socials and gym, when, really, it's life—it's one subject—and you can't fully understand science unless you know how it's impacted human beings which is...the social aspect of it, right? You can't separate them.

In re-balancing the social realm of UEE and urban SES's, it is no longer tenable, if it ever was, to view practices like these as beyond or subordinate to environmental learning. As a corollary, by expanding the boundaries of UEE, it is easier to imagine, discuss, and act on a more environmentally-integrated life.

Third, UEE will last as an organizing principle, but it is unimportant whether that specific term does. Elaine, for example, speaks of her “community-based learning practice,” Janey teaches “ancient technology,” and Dr. Moore frames her practice as “social innovation.” In fact, reflecting on the range of terminology, Dr. Moore shared that:

I don't think you'll get anywhere calling [it] urban environmental education. If I've learned anything over time, it's environmental education is going to be niche forever...Community-based, place-based, experiential, interdisciplinary those things don't raise any flags and I think people can be really diverse and have a lot of different experiences and you get to the same outcomes.

In the languaging that follows, erring toward the inclusion of diverse practices would line up with the open definition of UEE used in this thesis—that it “deals with particular audiences, settings, environmental and social issues, teaching approaches, and goals related to urban sustainability, ecosystem health and human well-being” (Russ, 2016, p. 2). The value of a

consistent, high-level umbrella term like UEE, however, would be that it could collect a sweeping set of practices for networking, support, and scaling.

Fourth, to ensure that community members can stay active and involved in UEE, practitioners are (re)imagining who teachers, students, and community members are. Doing so invigorates the need for cultural responsiveness and competencies in a metropolitan area. If we need social tipping points towards restoration, resiliency, and adaptation, in order to combat the ecological tipping points that we are steadily moving toward, we cannot leave anyone out. For these practitioners, that looked like affirming that de-centring whiteness in UEE furthers, rather than affronts, environmental learning (Elaine). It also looks like inspiring students who share cultural similarities and challenge gender norms (Adria). Or, it could be Dr. Schiffer's decision, inspired by conversations with x^wməθk^wəyəm (Musqueam) Elders and a lecture from Cindy Blackstock, to blend x^wməθk^wəyəm (Musqueam) youth with other Indigenous and non-Indigenous youth for the CRUW program. Anticipating future climate-induced migration to Metro Vancouver from all over the world, UEE would do well to build in the expectation that practice would include the culture, values, and stories of the teachers, participants, and community, without flattening Indigenous education into a multicultural narrative that ignores or denies "the specific land-based rights that Indigenous [P]eoples have in this land" (Chrona, 2021, para. 19).

Fifth, people need to do this work together. Building on the knowledge that "experiences in nature are deeply social" (Kellert et al., 2017, p. 4), all practitioners spoke to the generative effects of their community. That was echoed in Rev. Dykstra's sharing that "our community meets...we spend time...we are outside...we name out loud...we do that...we do a program

event.” It was also in Janey’s re-telling of camping on a sandspit up the Elaho Valley, drinking directly from Sims Creek, and living in community with folks from the Uts’am Witness Project. In some cases the specific places of practice—for reasons such as the infrastructure there, ease of accessibility, historical significance, or uniqueness as a teaching site—enhanced the kind of togetherness that was possible. It is difficult to imagine Dr. Moore and CityStudio’s work, for example, without their hub under the Cambie Street Bridge.¹⁴ Or Adria and SPES’s work taken out of Stanley Park. Or even Rev. Dykstra’s mobile practice if Salal + Cedar’s movement was curtailed. The people and places were described as a compression of ideas and experiences, and emergent UEE practice in Metro Vancouver would do well to grow people and place together.

These eight practitioners are entrepreneurs of new educational ideas. Their emergent practices are the by-product of their lived experiences and ingenuity. Whatever Metro Vancouver UEE looks like in the future, a look-back will include how practitioners, like these eight, sensed a need and met it with a curiosity for place, community, and care. For now, the re-storying continues.

¹⁴ CityStudio does run what they call “campus courses” located at partner post-secondary institutions in Metro Vancouver (e.g. Simon Fraser University, University of British Columbia, British Columbia Institute of Technology, and Langara College). However, in our interview, Dr. Moore primarily described the experience of the “studio courses” which are held off campus and, usually, in CityStudio’s Vancouver headquarters.

Semi-structured Interview Guide

Thank you for speaking with me today as I seek to learn more about your **experience as an urban environmental educator in Metro Vancouver**.

A few things before we begin, I want to acknowledge that our discussion is taking place on the unceded traditional territory of the Musqueam, Squamish and Tsleil-Waututh. I'd further like to recognize that I use the term "Metro Vancouver" in my questions, but that "Metro Vancouver" sits atop the unceded traditional territory of the q̓ícəy̓ (Katzie), Kwantlen, kʷikʷəłəm (Kwikwetlum), Matsqui, xʷməθkʷəy̓əm (Musqueam), q̓iq̓éyt (Qayqayt), Semiahmoo, Sḵw̓x̓wú7mesh (Squamish), scəwaθən məsteyəxʷ (Tsawwassen), and səlilwətəl (Tsleil-Waututh) First Nations.

Also, I want to set a wide-angle lens on the term *urban environmental education/educator*, and who are *participants* of your practice. Alex Russ defines *urban environmental education* as a practice that "deals with particular audiences, settings, environmental and social issues, teaching approaches, and goals related to urban sustainability, ecosystem health and human well-being." If I refer to "participants" in your practice, that broadly means anyone who interacts with your practice.

Lastly, this is a semi-structured interview and the questions are fairly open-ended, so please take us wherever your experience says we should go.

Ok, to start, let me ask...

1. Tell me how and why you came to be an urban environmental educator in Metro Vancouver.
2. Tell me about a typical day as an urban environmental educator in Metro Vancouver.
3. Describe at least one specific impactful experience that you have had exploring the intersections of humans and urban environments.
4. I'm curious how you experience Metro Vancouver's urban environment on a sensory level when you teach.
 - a. Imagine we are in your place of practice now –
 - i. What does it sound like?
 - ii. Describe the smells?
 - iii. Describe what you see as you teach?
 - iv. What do you feel with your hands?
 - v. What emotions are with you now as you are imagining it?
 - b. Can you describe any endemic experiences—experiences that could only happen here (in your place of work)?
 - c. How do you think participants of your practice experience nonmaterial benefits of Metro Vancouver's urban environment (such as recreational, aesthetic and spiritual benefits)?

5. I'd like to hear how humans and the *built environments* (human-made surroundings) of Metro Vancouver appear in your practice.
 - a. How do you experience the coupling of human-natural systems that appear in urban environments and how do you help your participants to experience that in your practice? (e.g. a practitioner who teaches about the natural water cycle and Metro Vancouver's water/sewage system & infrastructure)
 - b. How does your urban environmental education practice feature regional-level demand for, consumption of, and disposal of goods (i.e. region-level input/outputs of materials and energy, sometimes referred to as *urban metabolism*)?
 - c. Describe the ways in which your practice leads participants to connect the urban environment with their sense of self.
 - d. Do themes of social justice, equity, and environmental access appear in your urban environmental education practice and, if so, how?
6. I'd like to learn more about how your experience as an urban environmental educator in Metro Vancouver changed over time.
 - a. Tell me how you prepare differently for your practice now that when you began.
 - b. Describe how new elements of your practice have been created through your experiences over time.
 - c. Describe how your practice would change if UEE was made an explicit goal and focus for the region.
 - d. Describe the changes and emergent practices that you are experiencing as part of the loose UEE community in Metro Vancouver.

Interview Chronology and Location

Name	Interview Date & Location
Vasseur, Ryan	November 10 th , 2018 - Means of Production Garden, Vancouver, BC
Chang, Janey	November 12 th , 2018 - Mt. Seymour, Janey's car, Janey's home, North Vancouver, BC
Su, Elaine	November 27 th , 2018 - Elaine's home, New Westminster, BC
Dykstra, Rev. Laurel	December 4 th , 2018 - Waves Coffee, Vancouver, BC
Stevens, Jada	December 10 th , 2018 - Waterfront Station, Vancouver, BC
Hussain, Adria	December 10 th , 2018 - Stanley Park Ecology Society office, Vancouver, BC
Moore, Dr. Janet	December 11 th , 2018 - CityStudio, Vancouver, BC
Schiffer, Dr. Jeff	January 8 th , 2019 - Telephone interview

Informed Consent Form

Dear _____,

Thank you for your interest in my master's thesis research. The purpose of this letter is to inform you about the nature of my study and to gather your written permission to use the information discussed in our interview.

My credentials with Royal Roads University can be established by contacting Dr. Hilary Leighton, School of Environment and Sustainability, Royal Roads University, [email]. See full contact information below.

In order to participate, you need to be over the age of 18, and aware that you will receive no financial gain for your time. If you do choose to participate, you are free to withdraw at any time.

I am happy to address any questions you have before proceeding with participation in this study.

Purpose of my research

The purpose of my research is to understand the experience of urban environmental educators within Metro Vancouver. You have been chosen as a participant in my research because of your professional practice, either as an individual, as part of a project, or a program. The thesis is tentatively titled: Lived Experiences and Emergent Practices: Five Conversations with Metro Vancouver Urban Environmental Education Practitioners. My specific research question is: What are the experiences of Vancouver's urban environmental educators, and how may they inform emergent practices?

What we will talk about during the interview

I am asking you to participate in a sixty- to ninety-minute, audio-recorded interview to talk about your experiences conducting urban environmental education in Metro Vancouver. Through the process of interviewing you I hope to gain a better understanding of three things: 1) Your own descriptions of your experience as an urban environmental educator in Metro Vancouver, 2) how your work is changing over time and through experience, and what has influenced that change, and 3) how your experiences may inform emergent urban environmental practices of the region. Later, I will provide you with a transcript of our interview so that you may review it, edit it, and approve it. Including the interview, the time to review the transcript, and any other communications related to my research, I estimate the time commitment for participating will be around two and a half hours. When the final thesis has been accepted and published by Royal Roads University, an electronic copy will be provided to all participants.

How will data be stored

Data about associated with this project will be stored on password protected computers and hard drives where the password is only known to the researcher.

Confidentiality and anonymity

Given that my research aims to uncover specific personal experiences of folks who are part of a small community in Metro Vancouver, it may be difficult to keep your identity anonymous. For that reason, and because including your name and specific projects and initiatives will give the reader a richer understanding of your experience, I wish to use your name in my thesis and any subsequent academic work related to my research. I will provide you with a transcript of our interview so that you may review it, edit it, and approve it. I intend to archive all information related to this thesis project in case it is helpful for future research or projects that emerge from my work on this thesis.

Benefits to society

I believe the sharing of your experiences, and those of other urban environmental educators in Metro Vancouver, will allow for a variety of people to better understand this phenomena, including: folks who wish to immerse themselves in the lived-experiences and stories of practitioners in their region, policy-makers seeking to support this community of practice, and organizations looking to align themselves with an urban ethos that celebrates the potential of urban communities.

The results of my thesis research may be used after initial publication of my thesis for the future development of urban environmental education programs, and/or presentations about urban environmental education to interested parties.

Conflicts of interest

I work for an organization (Evans Lake Forest Education Society) that has discussed expanding our education programs into urban environmental education, though no specific programs are currently in development. There is a chance that, in the future, we will develop urban environmental education plans and those programs may be informed by the research conducted in this thesis project.

Possible risks associated with this study

The foreseeable risks to you associated with your participation in this research are: 1) the thesis will reveal information about your work to the public. Exactly what is revealed will depend on what you share and approve after reviewing the interview transcript; and, 2) through the course of the interview we may discuss topics that evoke an emotional reaction. You are free not to respond to any questions that you feel are sensitive. You are free to withdraw at any time up until the time that you have completed the interview, and read and approved our interview transcript. If you work for an organization, you may want to review your organization's policies to ensure that you are able to participate in a research project like this. You are welcome to ask me any questions, and I will answer them. Your participation is strictly voluntary. Excerpts from our interview may be incorporated into public documents such as my thesis, journal articles, and books. Your identity and the program or project you are associated with (if applicable) will be divulged as detailed above.

Research Consent

I, _____, given the added value for the thesis reader of revealing my name and specific organization, project, and program affiliations in the interview with researcher Conor Lorimer, knowingly and voluntarily permit Conor Lorimer the full use of this information (including audio tapes and transcriptions and all other materials in this accession), hereby grant and assign to Conor Lorimer all rights pertaining to this information, whether or not such rights are known, recognized, or contemplated.

(Signature of Research Participant)

(Date)

Understood and agreed to:

(Signature of Researcher Conor Lorimer)

(Date)

Contact Person for Questions about this Research Project:

Conor Lorimer

[address]

[address]

[address]

Email: [email]

[phone number] (mobile phone)

[phone number] (work phone)

Contact Person for Questions about your Rights as a Research Volunteer:

Hilary Leighton, Ph.D.

Program Head MA Environmental Education and Communication

Royal Roads University

Phone: [phone number]

Fax: [fax number] Email: [email]

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