

Ecological encounters in outdoor early childhood education programs: Pedagogies for childhood,
nature and place

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Abstract

This paper explores how nature, place, and pedagogical practice are perceived by educators in three Canadian outdoor early childhood education programs. Intersections between ideologies in early childhood education and interests in environmental education are introduced to highlight possibilities for collaboration in education for social transformation and ecological justice. Thematic issues and philosophical undercurrents of modern culture are explored and how they shape human and nature relations in educational settings. This research is situated in the movement to reconnect children to nature, whose goals include more outdoor play, enhancing children's well-being and fostering environmental concern. Elements of critical theory, ethnography, phenomenology, grounded theory, and documents analysis were crafted to inform questions and code for themes that emerged from interviews with educators from the outdoor early childhood programs. Findings revealed that what the educators perceived from outdoor play was that children were more experientially engaged with movement, the land, and the local flora and fauna they encountered outside. The combination of democratic, child-led, and emergent pedagogical approaches with the educator's conceptualizations of ecological literacy allowed children to construct reciprocal and affective ways of knowing and meaning making in the outdoors. This alternative form of pedagogical praxis, revealed from the educators' experiences and the immersion of learning and play in the outdoors, demonstrates tangible possibilities for transformative education that honours embodied ways of knowing and reconfigures human and nature relations towards sustaining life and an ethics of co-existence.

Foreword

My decision to pursue a Masters in Environmental Studies (MES) emerged from my combined interests in early childhood education, the outdoors, environmental issues and social justice education. My learning as an early childhood educator over the past decade allowed me to gain experiential knowledge of reciprocity, connection, relationship, communication, and resilience. Spending time in the outdoors was an integral part of the play-based, emergent curriculum that I planned and implemented for preschool and kindergarten programs. It was a natural extension of my own interests and passions to engage children with ecological encounters and relationship with the local flora and fauna that live among Toronto's urban community. Deeply inspired by models of Forest Kindergartens, Outdoor Preschools, and Emergent Curriculum, it was my hope to create change in education that fosters more outdoor early childhood experiences and to support educators in applying a critical lens to their work and relations with the world.

My MES graduate coursework, field experiences, and research focused on integrating ecological literacy into early childhood education programs, and this paper links the three main components of my Plan of Study: Environmental Education and Young Children; Early Childhood Education and Ecology; and Socio-ecological issues and Education. Embedded within these components is an overarching goal to shift modern education towards greater ecological consciousness and to inspire social and ecological change. Through coursework, field experiences, and research I met my learning objectives by exploring various models, organizations, and educational philosophies that connect early childhood with environmental education. In doing so, I have employed an analysis of philosophies, policies and practice that challenge modernity, neoliberalism, capitalism, and dynamics of oppression, such as critical pedagogy, eco-feminism, post-humanism, critical animals studies, and phenomenology. I was interested in pedagogical practice that create places and naturecultures of play and learning that nurture young children's relationships with ecological life, along with engaging

educators towards critical ecological pedagogies that support an ethics of care for all species and ecosystems.

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Chapter I: Introduction

The current state of how humans relate to each other, and all the other earthlings we share the land with, requires a massive shift in how we respond to children and the unique ways they make meaning in the world. If children come into the world intrinsically connected to nature and biologically designed to form loving attachments with the world, then what are we doing as adults, and more broadly as a culture, to nurture such loving connections? For centuries, modern Western philosophies have weaned human cultures away from healthy, sustainable, and loving relations with each other and the land. The escalation of modernist interests in rationality, civilization, industry, progress, economics, and other ways of abstracting and fragmenting life leaves little space for life sustaining qualities to flourish in the world, such as communication, relationship, diversity, and love. The proliferation of war, violence, discrimination, exploitation, colonization, and ecological devastation that is happening in the world – often hidden behind a mirage of mass media, marketing, and political spin – indicates the world is in crisis. The normalization of violence towards humans and nature in modern society speaks to the insidious ways dynamics of oppression play out in our daily lives. It also highlights the need to rethink how society responds to early experiences. How do we change the way children are socialized so they may *feel* the love and respect that may help heal the trauma and suffering in the world?

Initiatives in ecological literacy, environmental education, and social justice education are usually geared towards elementary and secondary schools or adults, but the field of education often neglects the early years as a vital time to support social transformation and environmental concern. The field of education is also strongly influenced by the interests of modernity and is being held in the tight grip of neoliberalism. Inspiring care and concern for the rights of people, the land, and nature is a common thread in critical pedagogy and environmental education, yet the seeds of *how* to care are often planted during the early years. The lack of societal concern for young children and their experiences in the world reflects broad systemic neglect of what children need to flourish. This is also

combined with a massive disregard for the possibilities children have in participating in the world as active citizens. Unfortunately, modern society and the field of education lack preparedness in supporting the needs of young children. If education for sustainability is serious about encouraging students to be active citizens for a sustainable future, then there needs to be a greater interest and accountability in education to support sustainable childhoods. This research project explores ways of integrating environmental and social justice education into early childhood programs and reveals my hopes and dreams about changing our perceptions about how the education of young children happens.

A little note about a big issue: Childcare, early childhood education, and kindergarten

There are huge gaps of understanding in public perception about how an adequately funded and accessible system of early childhood education and childcare can contribute to significant social change and transformation. I feel it is important to share what I value about early childhood education – particularly from a social and ecological justice position, because there are misunderstandings regarding how early childhood education can support important change in education. Some misunderstandings include the perception that childcare is a form of glorified babysitting or that it is a private matter and should not concern people who do not have children. From an ideological perspective, Early Childhood Education (ECE) follows interests that contribute to women's rights and reduces child poverty. It follows the notion that, through play, children explore the world through a range of social, emotional, cognitive, and physical aspects of their development, and understands that children exist in the context of their family dynamics, cultural nuances, norms, and language. Finally, ECE promotes inclusion so that children with diverse abilities, types of families, and cultural backgrounds are accepted and celebrated for who they are. Decades of research in child development, sociology, and more recently economics also that reveal the importance of establishing quality child care programs and how it contributes to social and economic benefit to society (McCain & McCuaig, 2011; Peisner-Feinberg, Burchinal, Clifford, Culkin, Howes, Kagan, & Yazejian, 2001; and Shonkoff

& Phillips, 2001). In my own experience as an Early Childhood Educator working primarily with three to six year olds, the most significant aspect of my work is supporting children with emotional expression, non-violent forms of communication, and acceptance of the different ways of being that each child brings to the world. Families often struggle with knowing how to respond to children's emerging development and ECEs are trained to offer support and education for families about how to respond to various early childhood issues. I hope and believe that if all early childhood education programs work towards the above-mentioned interests, then humans may be happier; be better suited to meet suffering and challenges in the world, and have greater concern for sustaining life.

The reality of childcare in Canada, however, sees that the provision of early childhood education programs is fragmented, with massive gaps in the availability and access to good childcare. Unlike other countries with national child care programs—who also experience greater gender equity, lower rates of child poverty and higher literacy rates—childcare in Canada is arranged as a market-driven service, funded primarily through parent fees and fee subsidies for low-income families. Despite the growing need among Canadian families for childcare, parents often settle for whatever program is nearby and affordable for them, which may not be in the best interests of young children. Families are also unaware of what factors to look for when deciding on child care arrangements. For example, indicators of quality childcare include, “regulation, training in early childhood education, wages and working conditions, staff-child ratios and group size, educational elements and auspice” (Childcare Resource and Research Unit and Canadian Union of Postal Workers, 2013). However, programs that meet expectations for “quality” are usually very expensive and only accessible to families who can afford it. In 1970, the Royal Commission on the Status of Women recommended a national childcare program that would support women's equity, but several decades later Canada is still slow-to-warm on this recommendation. More recently, arguments for a national childcare program have included interest around “an emphasis on human development as it is interpreted in conceptions

about prosperity in modern societies” (Friendly, 2007, p. 7). Working within a neoliberal political climate,

the human capital approach has most recently been one of the main Canadian drivers for the early learning and child care debate, a parallel idea about children – more consistent with the Convention on the Rights of the Child – that the child is a citizen with rights and a voice that should be listened to, emphasizing the value of early childhood as an important stage in its own right – has been much less clearly articulated in Canada. (Ibid., p. 8)

Despite decades of debate about the implementation of a universally accessible childcare program, children continue to be excluded from holding any influence as citizens who deserve social acceptance and spaces for their unique ways of knowing their worlds through play.

In parts of Canada where early childhood education is becoming integrated with education, many tensions exist between ideological conceptualizations and public perception of what early childhood education means and what it is for. Education demonstrates trepidation in embracing early childhood education for reasons which are tangled with notions of how society views “women’s” work and its subordinate association with caregiving; and pedagogical differences between holistic, developmentally appropriate and play-based curriculum versus siloed subjects and didactic lesson planning. Early childhood educators are hopeful that integration with the education system means that early childhood education will gain recognition and value for how it contributes to life-long learning. This integration of early childhood education with kindergarten also meets the divide between the early learning as a publicly accessible system and the market-driven approach to childcare. However, when integration is carried out by increasing ratios and including ECEs as *assistants* in a kindergarten program, rather than as a colleague and collaborator, then possibilities for enhancing early childhood experiences become diminished. The emerging possibilities for interprofessional collaboration between education and early childhood education means the early years can be recognized as a time when humans begin their relationships with the world. It is my hope that our sociopolitical climate can

shift education towards creating inclusive spaces that honour childhood and foster concern for the world.

Bridging Environmental Education (EE) and Early Childhood Education (ECE)

Further to my hopes for early childhood programs to be sites of social transformation, there also exists a possibility for them to become communities that are inclusive of local flora and fauna and do justice to the environment. I believe that Environmental Education (EE) and ECE can collaborate to foster the critical change that is required to shift education towards social transformation and ecological justice. To put it simply, EE can learn a lot from ECE about how to create holistic, inclusive, and play-based learning environments that will support children's self-esteem and well-being, while ECE can learn a lot from EE about the intricate interconnections that exist in the environment.

Environmental education appears to be on a trajectory to shift away from learning *about* the environment towards learning *with* the environment. Usually, environmental education is marginalized as a subject area in schools and is typically relegated to a component in the science curriculum. EE is exploring how to make learning about the environment more meaningful for students and discovering the importance of supporting experiential learning of the natural world. Contradictions are evident when EE is traditionally offered through text or audiovisual learning experiences and siloed within science class, yet the field of ecology increasingly emphasizes the interconnectedness of ecosystems and their entanglement with humans. More broadly, education fails to recognize the interconnections that exist among all the disciplines, such as math, science, the arts, and literacy. EE is also learning that in order to care about the environment, humans must have an affective relationship with the environment, but how does this happen when children spend all their time indoors or when most school grounds are comprised of concrete? Education, within our technocratic neoliberal climate, limits human potential for creative and emotional expression by emphasizing numeracy and literacy over the arts. Also, how can affectivity in education be supported when schools are typically not equipped to

support emotional well-being? For EE to be interesting and meaningful for children it requires that children are engaging in embodied and affective relations with their environments.

Advocates for environmental education are challenging the broader institution of education to open up to more holistic and alternative forms of learning that are more meaningful for children and more sustainable for the planet. The concept of “ecological literacy” is applied to help people understand their relationships and interconnections with ecological systems. According to Orr (1992), “the ecologically literate person has the knowledge necessary to comprehend interrelatedness, and an attitude of care or stewardship” (p. 92) towards the world. Orr continues that ecological literacy requires a development of ecological consciousness and a critical lens to see “how social structures, religion, science, politics, technology, patriarchy, culture, agriculture, and human cussedness combine as causes of our [ecological crisis]” (Ibid., p. 93). Ecological literacy is also taken up in systems theory discourse, suggesting human institutions, such as education, must be redesigned and modeled towards principles of ecology (Capra, 2005). As systems theorist Capra explains, “[b]ecause living systems are rooted in patterns of relationships, understanding the principles of ecology requires a new way of seeing the world and of thinking – in terms of *relationships, connectedness, and context* – that goes against the grain of Western science and education” (Ibid., p. 20, original emphasis). However, ideologies in ECE already embrace these ecological principles as part of the complexities of relationships that exist in early childhood.

Research and practice in early childhood education understands that children’s experiences exist within embodied relationships with human sociopolitical systems such as families, communities, and institutions, but rarely does it include the ecosystem as part of our entanglement with the world. Dynamic systems theorist, Bronfenbrenner (1976), developed an ecological theory of child development illustrating the relationship between a child and their interactions with family systems, community systems, institutional systems, and political systems (Hetherington, Parke, & Schmuckler, 2003), without considering human relationships with the natural world. As mentioned earlier, society is

gaining broader awareness of the importance of the early years for setting trajectories for a child's future well-being, and early childhood education is heavily informed by the interaction of nature and nurture in early brain development. However, across North America, ECE is in a state of crisis due to decades of inadequate resources, funding, and political will.

Although ECE is familiar with how the environment influences childhood, when developmental psychology references “ecologies of childhood” or “children’s environments” they are primarily referring to a child’s relationship to other humans, human artifacts, or human built environments. Eco-psychologist, Fisher (2013), reveals that

[d]evelopmental psychologists have effectively shut out the world of butterflies, ponds, and porcupines – a condition little changed since Searles first remarked on it forty years ago. It has thus not occurred to researchers, furthermore, to ask about the possible ongoing harm of being restricted to domestic, human-dominated settings – as opposed to the more wild, multispecific sorts that have been the norm for all humans up until only recent times. (p. 140)

Davis (1998) also identified that “the term ‘environment’ is already so embedded in early childhood, [that it] narrowly relates to the child’s immediate environment [and is] not expansive enough to embrace the broad range of ecological and social concerns that we are now facing” (p. 120).

Combined with burgeoning crisis among political and social systems and increasing violence and poverty, children are meeting a world that is burnt out, stressed out, and tuned out. It does not help that our modern Western cultural apparatus of neoliberalism is driving the earth and its inhabitants towards decimation, while simultaneously tucking humans to sleep with enchantments of commodities, consumption, and capitalist catharsis.

In the cracks between Early Childhood Education, Environmental Education, and educational institutions, outdoor early childhood programs are emerging in Canada, revealing tangible possibilities for transforming human relations with the world. Awareness of ecological and sociological strife that exist in the world, combined with uncovering the layers of human influence and interaction with ecology, is an important element to shifting human and nature relations towards “flourishing and co-

existence” (Cuomo, 1998) with each other. The integration of environmental education and early childhood education in these outdoor programs generates considerations for how critical place-based and ecological literacy can happen in the early years. What follows in this research paper is a deeper exploration of some thematic issues that highlight how modern education influences children, nature, and early socialization with the world. In chapter two I outline a number of thematic issues that relate to modernity and how it contributes to the effects of technocracy, commodification, and anthropocentrism on young children. Further in the chapter I provide a framework of how spaces for play and outdoor play are critical for children’s meaning-making. And I wrap up the chapter by highlighting how this research is situated in the social movement to connect children to nature, along with some critical questions about its relationship to Indigenous ways of knowing and posthumanist philosophies. In chapter three I introduce the three outdoor early childhood programs and my application of critical and grounded theory to develop interview questions. The analysis and discussion of my findings in chapter four are framed by how the educators perceived children’s relationship with embodiment, the program praxis, and the outdoors. Finally, in chapter five I conclude the paper with my hopes and recommendations for education. Thus, by investigating outdoor early childhood education programs, this paper aims to share pedagogical praxis that honours children and their early encounters with the world. For, “we cannot win this battle to save species and environments without forging an emotional bond between ourselves and nature as well—for we will not fight to save what we do not love” (Gould, 1994, p. 40).

Chapter II: Thematic issues around Modernity, Children, and Nature

This chapter begins with an attempt to highlight how modernity, capitalism, technocracy and anthropocentrism influence education and children's ways of knowing. Dynamics around children's access to spaces for play in modern educational settings are explored, followed by an introduction to the emerging social movement to connect children to nature. The goals of this movement include improving children's health and chances for a sustainable future, and some complexities about how this movement meets constructions of childhood, commodification of nature and colonization are shared.

Modernity

Modern education's influence on children's day-to-day lived experiences impact how they may respond to lived experiences, and ongoing relationships with the world. The marred human and nature relations stemming from decades of industrial progress, capitalism, consumption, and philosophical values of anthropocentrism are now manifesting as extensive, and sometimes subtle, dynamics of oppression among people and nature. Attempts to integrate ecological literacy in education are often subjected to the realities of modernist, neoliberal motivations, which are evidenced by hierarchical, competitive, and incentive-based projects, such as Eco-Schools. When environmental education programs reward schools with gold stars for recycling, rather than nurturing embodied relationships with local flora and fauna, ecological literacy becomes emphasized for its external rewards, rather than being intrinsically motivated. Learning about ecology or the "environment" is often relegated to science class in abstract forms, with little outdoor experiential learning *with* nature. Environmental education, as a subject, is marginalized in the curriculum (similar to the arts, outdoor and physical education), and funding is prioritized for literacy, numeracy, and technology. Although governments responsible for education are developing policy frameworks to embed environmental education throughout K-12 programs, there is a lack of pre-service education about what ecological and environmental literacy is, how to integrate it across subject areas, and how to take learning experiences

outside the classroom. Instead, many K-12 classrooms—rather than exploring ecological literacy outside and throughout the seasons—may arrange token “nature” visits to an outdoor education centre or a nature program.

Some alternative education programs offer pedagogical approaches that counter the modern trend in education where “schools [...] have become factories with assembly-line controls and engineered inputs, cranking out either grades and test scores” (Ableman, 2005, p. 178). The “trajectories of the neoliberalism project” (H. Giroux, personal communication, October 25, 2012), see that children are reduced to numbers while the layers and complexities of each child’s experience, and ways of making meaning in the world, are erased. Also caught up in a neoliberal paradigm are early childhood education programs “where young children (‘the raw material’) are processed, to reproduce a body of knowledge and dominant cultural values (‘prespecified products’) that will equip them to become adults adapted to the economic and social needs of society” (Dahlberg, Pence, & Moss, 2007, p. 66). In attempts to be validated as an important *quality* public service for children and families, many early childhood education programs are under pressure to codify children’s play into specific skills within developmental domains. As a result, children’s experiences, relationships, and interactions with the world become reduced to checklists and criteria for quality.

At the heart of this [quality] discourse is a striving for universality and stability, normalization and standardization, through what has been termed ‘criteriology’, ‘the quest for permanent or stable criteria of rationality founded in the desire for objectivism and the belief that we must somehow transcend the limitations to knowing that are the inevitable consequence of our sociotemporal perspective as knowers’. (Schwandt as cited in Dahlberg, Moss, & Pence, 2007, p. 93)

Rather than eliminating the lived experiences and multiple ways of knowing that happen in children’s experiences, how may we explore possibilities for redefining early childhood education programs so they “can be understood as *public forums situated in a civil society in which children and adults participate together in projects of social, cultural, political and economic significance*” (Ibid, p. 72,

original emphasis)? When children are honoured for their unique ways of knowing and interaction with the world, how may power dynamics shift towards the more democratic participation of children?

Capitalism and the commodification of childhood

The commodification of both childhood and nature is another thematic issue that may influence how children's lived experiences are co-opted into market-driven goals and nature is reduced to "raw material for humanization" (Haraway, 1988, p. 593). Inherent in capitalist relations is treatment of members from disenfranchised communities as mere recipients, hardened passive objects at the service of capital, rather than sentient and actively engaged citizens of the world (Darder & Yiamouyannis, 2009, p. 9). In North American society, where provision of early childhood services are inadequately funded and not regarded as a public good, "parents and children will be constructed and think of themselves less and less as members of a community and more and more as consumers of services (Dahlberg, Moss, & Pence, 2007, p. 69). In modern society, children's experiences become defined and modified through capitalist motivations, which may encourage a cultural façade of economic benefit, while children are being socialized out of an intrinsic and critically attuned relationship with themselves and the world. Santa Claus, and other *hallmarked* holidays, reveal the "[p]ervasiveness of the product universe into which children [are] drawn, and the magnitude of the corporate assault through which 'childhood' [is] reconstructed as something to be consumed" (Langer, 2002, p. 69). Eco-psychologist, Fisher (2013) describes early conditioning towards capitalism as a process where "[w]e are born into a social world in which our need for personal viability or security gets 'met' by being twisted down along narrow economic pathways which then becomes difficult to leave, for both emotional and structural reasons" (p. 87). The primacy of children's experiences with plastics, products, and technology over relationships with the "multiplicity of styles of being alive" (D. Abram, personal communication, July 30, 2012) indirectly teaches a curriculum of capitalism and ecological exploitation. Early childhood education programs need to become aware of how they engage children in human and nature relations so that

nature [is not cast] merely [as] a finite set of resources and threatened ecologies existing outside the political common but rather is an active force that structure sensation and in turn impacts the development of imaginative worlds both directly and indirectly. (Lewis & Kahn, 2010, p. 35)

Technocratic society and early childhood education

Education increasingly conforms to pressure around standardized testing and industrialized factory models of learning. The complexity of children's lived experiences are then reduced to a "growing 'trust in number' and the developing technology of quantification [and] reducing the world in its complexity and diversity to standardize comparable, objective, measurable categories " (Dahlberg, Moss & Pence, 2007, p. 88). Evernden's (1985) description of the objectification of nature as a system where "the human becomes the measure of all things, and the world becomes nothing but a collection of things for us to measure" (p. 85), may be extended towards "the field of early childhood education [where] we can see a growing body of experts – researchers, consultants, inspectors, evaluators, and so on – whose job it is to define and measure quality" (Dahlberg, Moss & Pence, 2007, p. 92).

Problematizing the technocratic emphasis of systems that universalize and normalize early childhood experiences follows Harding's suggestion that "irreducible difference and radical multiplicity of local knowledges" (as cited in Haraway, 1988, p. 579) in childhood becomes devalued.

The essentializing of early childhood as a period of meeting developmental milestones or provincial curriculum standards, denies the variation and diversity of how children experience the world. As Lather (1991) indicates, "the discourse of quality 'is inadequate for understanding a world of multiple cause and effects, interacting complex nonlinear ways all of which are rooted in a limitless array of historical and cultural specificities'" (as cited in Dahlberg, Moss & Pence, 2007, p.106).

When a technocratic and reductive approach to early childhood pedagogy is enforced, programs "can readily become normative, deadening innovation and inspiration. They focus our attention on the map, rather than the actual terrain" (Ibid., p.115) of children's lived experiences. The modern trends to

reduce children's lives are similarly observed in how modern culture objectifies life among all ecology.

The violence of the disruption of our embodied experience is revealed when

our organic attunement to the local earth is thwarted by our ever-increasing intercourse with our own signs. Transfixed by our technologies, we short-circuit the sensorial reciprocity between our breathing bodies and the bodily terrain. Human awareness folds in upon itself, and the senses — once the crucial site of our engagement with the wild and animate earth — become mere adjuncts of an isolate an abstract mind bent on overcoming inorganic reality that now seems disturbingly aloof and arbitrary. (Abram, 1996, p. 267)

An example of how early learning experiences in Ontario are being reduced to numerical codification is revealed in the provincial curriculum framework, *Early Learning for Every Child Today (ELECT): A framework for Ontario early childhood settings* (Best Start Expert Panel on Early Learning, 2007). In this framework, a limited number of domains and skills are referenced to help educators identify what skills a child or group of children may be exploring in any given observation of children's play.

Although this framework acts as a tool to build parental and public awareness of the types of learning children engage in through play, it engages educators in applying an adult-centric interpretation of the meaning-making children are exploring. Enforcing curriculum frameworks, such as ELECT, into practice needs to be challenged for how it colonizes children's play towards technocratic interests.

Socializations in anthropocentrism

We comfort ourselves all too easily with the illusion that the relations of another kind of subject to the things of its environment play out in the same space and time as the relations that link us to the things of our human environment. This illusion is fed by the belief in the existence of one and only one world, in which all living beings are encased. From this arises the widely held conviction that that there must be only one space and one time for all living beings. (von Uexhüll, 2010, p. 54)

Fawcett (2002) describes that through “the process of socialization, children are integrating their experiences into the dominant cultural stories of how-to-be in relation to other animals” (p. 127). How adults and educators respond to children's experiences of “nature” and ecology may reinforce a cultural separation between human and nonhuman, and instill human privilege.

Children's lives are saturated with "vicarious representations" (Kellert, 2005) of animals and the natural world, which range from nursery rhymes and songs about animals, to films, figurines and stuffed animals. The current climate of childhood also reveals that children's lives are highly supervised, scheduled and often spent indoors, engaging with various forms of digital media. Evernden (1985) describes human detachment from ecology as "separate[ing] the vocal chords of the world" (p. 16) in order to transform the materiality of the world into "[r]esourcism [...] a kind of modern religion which casts all of creation into categories of utility" (Ibid., p. 23). As the cultural hegemony (Gramsci, as cited in Simon, 1982) of human domination and hierarchy over animals and nature continues, Bell and Russell (2000) remind educators that "they would do well to draw on the literature of environmental thought in order to come to grips with the misguided sense of independence, premised on freedom from nature, that informs such notions as 'empowerment'" (p. 198). While children demonstrate an affinity for animals and insects (Myers, 2007), educators and families need to become attuned to how animal attractions, such as zoos and marine parks, indirectly teach children that it is "normal" for animals to live in human captivity.

The extent of how "anthropocentrism has become naturalized" (Fudge, 2002, p. 46) has become so ingrained in modern culture that speciesism, as an issue, is rarely explored. Yet, the cultural apparatus that concedes racism, ableism, patriarchy, sexism, heteronormativity, colonization, and other forms of oppression, are at play when the violence and ethics around animals and nature are considered (Grosz, 2005; Haraway, 1989; Kahn, 2011; Livingston, 1994; Plumwood, 2002). How may children be liberated from *Homo sapien* homogenization? All living things that exist in the world are made up of the same matter, just arranged differently. However, our human "intelligence" subordinates the myriad combinations of life –brilliant and multiple in our diversity. Continuing a push in early childhood education for modern values of school readiness, independence, and achievement masks a "hidden curriculum" (Dewey, 1916; Friere, 1970; Giroux, 1983; hooks, 2003) of human superiority. As Livingston (1994) warns,

[t]he ‘development’ ideologues do not hear the screaming of the buttressed trees or the wailing of the rivers or the weeping of the soils. They do not hear the sentient agony and anguish of the non-human multitudes – torn, shredded, crushed, incinerated, choked, dispossessed. These are merely the external, incalculable, and incidental side-effects of the necessary progress of human civilization in its highest form. (p. 60)

How may early childhood experiences foster children’s affiliation with nature, while also doing justice to the multiplicity of species children may socialize with? The emerging and unfolding ways of being and becoming in early experiences includes intersubjectivity with squirrels, spiders, worms, dogs, wind, snow and trees. Awareness of these intersubjectivities requires “[a] coherent conversation between people and animals [that] depends on our recognition of their ‘otherworldly’ subject status” (Haraway, 2008, p. 178). While humans may never “know” the experiences of our co-earthlings, children often wonder about these “otherworlds”. Thus, how educators respond to children’s wonder with the world may have implications for future human and nature relations.

Childhood and Nature

Relations between nature and culture as a relation of ramification and elaboration, or in the language of science, as a form of emergent complexity, rather than one of opposition, the one, nature, finding both the means and the material for the other’s elaboration, and the other, culture, providing the latest torsions, vectors, enforces the operations of an ever-changing, temporarily sensitive nature, cultural studies can no longer afford to ignore the inputs of the natural sciences if they are to become self-aware. (Grosz, 2005, p. 47)

Modernity’s influence on education, early childhood education and children’s lived experiences relate to how children are socialized with nature and increasingly disconnected to the land and ecology that surround us. Education and early childhood education programs alike find children primarily indoors, in classrooms, all year. The Cartesian legacy that dual-ized mind/body, nature/culture, and human/animal permeates how we socialize children in their worldly encounters and extends towards fragmented and siloed approaches to learning and development. The modern trend of digitalization and redirecting our bodies and relations towards technology, products, and built environments, limits our perception of all the living organisms and systems we co-exist with. It is a shame that colonization

severed reciprocal and loving relations between humans and the land. It is a shame modern culture denies life and death simultaneously. However, there are possibilities for education to recognize that “[e]cology is a reminder of a multi-species and multi-existent ‘we’ that modern humanism chose to forget, or rather struggled to exempt and/or except the human species from” (Smith, n.d., para. 22). Further, how educators respond to “ecological issues, require[s] critical knowledge of the dialectical relationship between mainstream lifestyle and a dominant social structure, require[ing] a much more radical and more complex form of ecoliteracy than is presently possessed by the population at large” (Kahn, 2010, p. 6). Thus, meaningful approaches to children’s learning requires opening up beyond anthropocentric, adult-centered constructs to create deeper and more embodied relationships with the world.

Ecologists, psychologists, philosophers, and educators are exploring possibilities for nourishing children’s relations with the multisensory and multi-species enticements that emerge from the landscape. Abram (1996) shares that,

[t]he countless human artifacts with which we are commonly involved — asphalt roads, chain-link fences, telephone wires, buildings, lightbulbs, ballpoint pens, automobiles, street signs, plastic containers, newspapers, radios, television screens — all begin to exhibit a common style, and so to lose some of their distinctiveness; meanwhile, organic entities — crows, squirrels, the trees and wild weeds that surround our house, humming insects, streambeds, clouds and rainfalls — all these begin to display a new vitality, each coaxing the breathing body into a unique dance. (p. 63)

Yet, the embodied, experiential, and intertwined context of human perception reveals that “there is no human experience not experienced in a body” (Elisha, 2010, p. 59). Early childhood phenomenologist, Simms (2008) posits that “[w]e begin life not as separate monads but as entwined presences, as aspects of significant wholes where the newborn’s actions finds its complement and completion in the actions of the (m)other” (p. 15, original emphasis). The wonder children express in their engagement, interaction, and response to the world reveals a capacity for

an intimate reciprocity to the senses; as we touch the bark of a tree, we feel the tree touching us, as we lend our ears to the local sounds and ally our nose

to the seasonal scents, the terrain gradually tunes us in turn. (Abram, 1996, p. 268)

Bachelard also notes that the “material imagination of earth, air, water, and fire [...] provides us with the most basic affective qualities that condition our openness to the world around us” (as cited in Steeves, 2004, p. 124). Bai, Elza, Kovacs, and Romanycia (2010), raise concerns that “by the time we are out of childhood and through formal schooling most of us have largely disposed of the animate sensuous perception of the world” (p. 141). With environmental education becoming increasingly integrated into education programs, Evernden (1988) warns of the neoliberal and technocratic values that

promote "sustainable development" [...] to sanitize semantically the habitual project of planetary domestication and to provide a sense of salvation without the discomfort of authentic change. To be able to speak of the globe as ‘our environment’ permits us to reinforce the notion of a single, human world and consequently to place ourselves in direct confrontation with virtually every other life-form. (p. 151)

Thus, the pedagogical “task is to reclaim a body that walks on, and is nourished by, the living earth” (Fisher, 2013, p. 59) and to move beyond a “history of ‘White Capitalist Patriarchy’ [...] that turns everything into a resource for appropriation” (Haraway, 1988, p. 592).

The children and nature movement weaves intersecting threads of possibilities for encouraging lifelong environmental concern and stewardship, healthy development, and fostering children’s biophilic tendencies. An increasing amount of research about children and nature is emerging from fields interested in psychology, environmental education, early childhood education, children’s geographies, health, and child development. For example, experiences with nature enhance health and well-being (de Groot & Steg, 2008; Dunlap, Van Leire, Mertig, & Jones, 2000; Dutcher, Finley, Luloff, & Johnson, 2007; Feral, 1998; Maller, 2009; Mayer & Frantz, 2004; Thompson & Barton, 1994; Nisbett, Zelenski, & Murphy, 2011); and a connection to nature in childhood contributes to care and concern for ecology (Carrus, Passafaro, & Bonnes, 2007; Chawla, 2007; Dutcher, Finley, Luloff, & Johnson, 2007; Ewert, Place, & Sibthorp, 2005; Hay, 2005; Hinds & Sparks, 2007; Mayer & Frantz,

2004; Phenice & Griffore, 2003; Schultz, Gouveia, Cameron, Tankha, Schmuck, & Franěk, 2005; Strife & Downey, 2009). The field of eco-psychology calls for “a more ecologically-based understanding of child development” (Barrows, 1995, p.105), that goes beyond human designed environments (Shepard, 1982; Fisher, 2013). Further, Kellert (2005), claims that “no degree of finely executed fabricated or artificial product can fully replicate the vital, ambient qualities of living nature” (p. 82), suggesting that child development theory is missing a large component of stimuli that influences children. Spitzform (2000) considers that

[t]he building, or yard in which you sit rests in a watershed with particular characteristics: It has its own seasonal cycles and flora, and is frequented by other species of animals some of whom may be familiar. These are contextual aspects of relatedness that ask much less from us than our encounters with wildlife, landscape, pets or plants. How are all these phenomena affecting our self-experience? (p. 266)

Abram (2007) also expresses concern that “[w]e consistently ignore and overlook the embodied nature of all our thoughts and theories [and] repress our carnal presence” (p. 165). Gruenewald (2003) identifies that “educational research and practices often suggest the benefits of using ‘learning communities’ and connecting learning to ‘real life’ [yet] the significance of the relationship between education and local space remains undertheorized and underdeveloped” (p. 642). An example of a socioecological connection to place may include early childhood education programs located in glass buildings. Children may regularly witness birds crashing into buildings or be found dead on the playgrounds because birds are not perceiving the glass barrier. Such situations create an entanglement of affective experiences related to human, nature, and animal relations, including an acceptance or denial of death (depending on the response of the educators or cultural views of death) and anthropocentric building design. In every day encounters with the world, children’s play and their affective relationships with peers and educators becomes “an intertwined matrix of sensations and perceptions, a collective of experience lived through many different angles” (Abram, 1996, p. 39). In a study on embodiment in early development, Gibson’s ecological theory of perception describes that

“humans perceive in order to act and they act in order to perceive, thus casting perception and action as two processes inextricably bound (as cited in Needham & Libertus, 2010, p. 117). Findings from some research in children’s perceptions of nature include that

children’s linguistic inquiry demonstrates their sense of biophilia: they presented no fear of the aspects of nature they were observing. Rather, they posed questions that were personally meaningful and connected with their current experiences. However, adults’ responses to the young children’s inquiry were biophobic. (Hyun, 2005, 208)

Thus, it is important for educators to consider how children feel and what they think about what they perceive before applying their own judgments to aspects of ecology.

Throughout human civilization there are varying ideas about what form children’s relationship with nature may take and it links to various cultural constructions of childhood. The current movement to connect children to nature include Romantic undercurrents that create “[u]niversalizing narratives about children, irrespective of the aged, gendered, racialized diversity of the category ‘children’” (Kraftl, 2009, p. 74). Some motivation behind the child and nature movement “invokes notions of futurity and anxieties about the future of society” (Ibid., p. 75), by adults who appear nostalgic for childhoods that were spent roaming fields, woods, and ponds. When the child and nature movement encourages children’s relationships with woods, ponds, trees, and forests, it misses the stark reality that most children live and learn in urban settings, which effectively squeeze out natural and wild places. Jones (2002) problematizes narratives that “‘childhood’ and the ‘urban’ are, at best, uneasy companions, and, at worst, symbolically incompatible” (p. 17). While Jones suggests that children’s “imagination and their intimate, fine-grained relationship with landscape means that they can find space and play opportunities in all manner of situations” (Ibid., p. 27), it is important for urban planning to be inclusive of children *and* ecology to support children and ecological well-being . Historically, the playground industry capitalizes on “the restriction of children’s opportunities to use urban public space, opening up markets for the private provision of play” (Ibid., p. 26). In an effort to support a child and nature connection in urban settings, a number of programs are in the *business* of

naturalizing playgrounds and schoolgrounds. While being a commendable endeavor, the way in which “nature” becomes commodified and manufactured through such projects are indirectly linked to a neoliberal paradigm that markets nature for human benefit.

The technocratic nature of schooling – reflected in large classes, curriculum, hierarchical evaluation methods and standardized testing – denies meaningful, responsive relationships, empathy, and an ethics of care and concern for living beings, both human and other-than human. While early learning and care is increasingly acknowledged for its role in education, this recognition comes with an orientation towards future school readiness and economic investment. There is concern that children at a much younger age will be coerced into the dominant hegemonic interests of technocratic advancement, despite its impediment to the “potentialities of everyday experiences” (Kraftl, 2009, p. 79), such as moments of wonder and curiosity. For example, “[h]ighly didactic, performance-oriented early childhood classrooms have been found to depress young children’s motivation” (Shonkoff & Phillips, 2000, pp. 157-158). There is also concern that an early disruption of bonding with nature may encourage a lack of care with all that is living and non-human. Instead, how may early childhood education programs honour early “becomings” (James et al., as cited in Kraftl, 2009, p. 75) in their relationship with ecological life?

Possibilities of play

Children engage in the world is primarily through play, yet the options for children to experience play are diminishing as society shifts towards strictly regimented lives and lifestyles. When children spend most of their days in school (or childcare) and evenings are filled with swim, soccer, or piano lessons, it doesn’t leave much time for children to self-determine their own kinesthetic and embodied engagement with the world through play. In Sheets-Johnstone’s (2003) multidisciplinary discussion of play, she identifies that “rough and tumble play between children is non-injurious [,] does not harm their social relationship and may even strengthen long-term prospects for their cooperation” (p. 411). Cultures of play are further described as moments where:

[...] empathic understandings of others come by way of corporeal-kinetic transfers of sense. [C]reative energies and degrees of freedom are compounded so that play can be and often is on the verge of breaking out into something new at the same time that it is corporeally structured in the kinetically and kinesthetically known. Playing with others [...] complexifies the fundamental pleasure, fun, and delight of movement. (Ibid., p. 418)

This follows a phenomenological consideration of play as a form of intersubjective response to the world. Winnicott (1971) shares that “the place where cultural experience is located is in the potential space between the individual and the environment (originally the object)[which also] can be said of playing” (p. 100).

In the work of Gregory Bateson, Cary Wolfe (2003) has importantly emphasized how play is a zone in distinction where preverbal, nonhuman communication and human communication pass through one another, creating a temp rezoning and distinction that travels binaries between species – an opening to the transversal commonwealth. (as cited in Lewis & Kahn, 2010, p. 71)

Lewis and Kahn (2010) introduce “Deleuze and Guattari’s theory of ‘transversal communications’, which situates the commonwealth in a radically open system/field that traverses fidelities to anthropocentric fantasies of human exceptionalism” (p. 35). It is the nonsensical nature of children’s play that subordinates children to being less-than-human, or referred to as little monsters in their “messy” and “uncivilized” existence, rather than allowing play to exist as part of the myriad of being in the commonwealth of the world. Education and modern parenting practice tends to hurry children out of their current state of being and encourages young children to always be in a state of becoming, such as becoming future doctors, scientists, or lawyers. Also, the way modern society limits children’s ways of being invokes political and ethical questions around play, such as what and for whom is play for? It is important that education learns how “the ways in which children use play [is part of how they] establish their own agency and power and how they negotiate multiple identities” (Wood, 2010, p. 13).

Play is typically subordinated as being “childish” and nonsensical and is strictly denied in formal school settings. It is also rare that children have the option to participate in, and inform, the

design of schoolgrounds, classroom spaces, playgrounds, parks, and various play structures. A recent study about children's physical activity identified that children are more likely to experience physical activity if they attend childcare, however the children's play was often colonized to suit societal values such as school readiness and safety (Copeland, Sherman, Kendeigh, Kalkwarf, & Saelens, 2012). If children's way of knowing and making meaning of the world is primarily through play, then modernity – and education – require a radical shift away from the subordination of play and expose the “profanation of educational immunization, thus suspending the fundamental dialectic that transforms life into death, investment into abandonment, and citizenship into bare life” (Lewis & Kahn, 2010, p. 31).

Outdoor play

Part of the growing child and nature movement is the development of outdoor preschools, nature kindergartens, and forest schools, however the notion of learning with nature has historical roots in the work of educational philosophers, such as Rousseau, Pestalozzi, Frobel, and MacMillan (Joyce, 2012). Pestalozzi and Frobel, for example, who all despised the harsh, meaningless teaching methods they were subjected to and worked at creating systems that would engage children using meaningful, first-hand and sensory experiences (Ibid., p. 111). Further, Macmillan's work created awareness of how the outdoors and experiences in nature contribute to children's health (Ibid., p. 68). Models of outdoor early learning programs existing in Scandinavian countries, such as Sweden and Norway, are inspiring many current and emerging outdoor early childhood programs in North America. In these settings, children are outdoors either all day or for half the day, and throughout all seasons and weather. Swedish outdoor educator, Gösta Frohm, developed a pedagogy “of first-hand sensory experiences, which included regular visits to the forest, [that] would compensate children from the strictures of modern-day living by reconnecting them with nature (Ibid., p. 84). Frohm believed that in order to develop love and respect for nature, it is important to start with young children before they are corrupted by the lure of society, technology and commercialism (Ibid., p. 88).

The current national curriculum in Sweden integrates outdoor educational interests into practice by emphasizing “values in children’s rights, gender equity, and education for sustainable development” (Sandberg & Årlemalm-Hagsér, 2011, p. 44). Further, early learning programs in Norway implement a pedagogical approach, which extends from

Norwegians’ [...] close cultural attachment to nature and as a result Norwegian kindergarten teachers make use of the outdoor environment when working with young children in their care. Extensive outdoor play areas are available for the children to play in, and they often have access to the wild landscape in the neighbouring areas. Recreation associated with outdoor play and activity in the natural forest landscape are part of the everyday kindergarten experience and hence provide the location for much of the children’s learning. (Aasena, Grindheim & Waters, 2009, p. 8)

Many educators and researchers from Western countries are flocking to outdoor early childhood programs in Scandinavian countries to learn about the Scandinavians’ approach to child-centered, democratic, participatory, and nature-based early learning programs. These programs expose some philosophical and pedagogical gaps for sustainable education and they are inspiring a movement of educational change.

The development of Forest Schools in the UK that are modeled after Scandinavian programs are re-shaping how education happens. According to Joyce (2012),

Forest School philosophy is properly thought out and designed to enhance mainstream education and offer, in a professional manner, an alternative curriculum in an outdoor context. It is based in a desire to provide young children with an education that inspires appreciation of the natural world, and in so doing, encourage a responsible attitude to the natural world later in life. (p.103)

Research into Forest Schools also reveal characteristics that support children’s unique ways of being in the world, including a preference for being outdoors and children’s right to participation (Aasen, Grindheim, & Waters, 2009; Blanchet-Cohen, & Elliot, 2011; Kernan & Devine, 2010); increased time for play (Ridgers, Knowles, & Sayers, 2012); advocacy for child-friendly urban design (Herrington, 2008; Mårtensson, Bolderman, Söderström, Blennow, Englund, & Grahn, 2009); and “position[ing] children as strong [...] individuals who [are] capable of looking after themselves and of directing their

own learning” (Maynard, 2007, p. 388). The possibilities for programs that honour the otherness of childhood “demands giving children space in a number of senses: physically (literally), morally, and in terms of power/autonomy and also, importantly, in emotional and affective terms” (Jones, 2013, p. 4). Such considerations honour that children’s lived experiences may happen differently than what adults assume is being experienced.

A strong motivation for developing outdoor preschools in North America is to support children’s physical and mental health, and operates from a modern, humanist paradigm, where “nature” is separate from humans and exists as a resource for human benefit. While studies in this area are important to support children’s well-being and the promotion of green restoration and urban planning; the lack of critically nuanced research that also includes the well-being of ecology, is problematic. In response to increasing diagnoses of Attention Deficit Disorder (ADD), research reveals outdoor play in green spaces may help alleviate the symptoms of ADD (Faber Taylor, & Kuo, 2009; Faber Taylor, Kuo, & Sullivan, 2001; Kuo, & Faber Taylor, 2004; and Mårtensson, et al., 2009). In a collaborative study between public health professionals and land management agencies, Kruger, Nelson, Klein, McCurdy, Pride, and Ady (2010) identified ways to promote physical activity in nature as a way to increase awareness of the health benefits for children. Maller (2009) offered a more holistic consideration of the mental, emotional and social health benefits that may emerge from children’s contact with nature, such as “a sense of achievement; self-confidence; self esteem; options to cater to different learning styles; sensory engagement; engagement with school, care and nurturing skills; connectedness to others; freedom; creativity; and stress relief” (p. 534). Flom, Johnson, Hubbard, and Reidt’s (2011) study in the uses of nature to support children’s mental health, challenge the neoliberal paradigm, by noting how “quantifiable academic outcomes currently drive local school decisions and policies [...] healthy development goes beyond standardized test scores” (p. 125). Further, the interdisciplinary Centre for Environment and Society (iCES) at the University of Essex, identified 10 priorities to improve the well-being of both children and adults:

1. Encourage a better understanding of the long-term outcomes of parental and social connections during ages 0-5.
2. Encourage more outdoor free play for children aged 6-11.
3. Develop better provisions for teenage children aged 12-18 to congregate in their own communities.
4. Encourage General Practitioners and other medical professionals to accept that nature and the outdoors deliver important immediate and long-term health benefits.
5. Encourage planners to incorporate access to green space as a fundamental right for all people.
6. Encourage schools to incorporate use of gardens, allotments and woodlands as a regular part of the curriculum.
7. Evaluate the outcomes of outdoor play and green education on the cognitive capacities of children and their long-term health.
8. Assess the full economic benefits (personal and public) of a shift in life pathways from unhealthy to healthy for all age groups.
9. Assess how policies and institutions can best encourage widespread behaviour change that becomes a matter of preference and choice rather than enforcement.
10. Establish a national priority in all areas of public policy for all modes of physical activity in all types of green space. (Pretty, Angus, Bain, Barton, Gladwell, Hine, Pilgrim, Sandercock, and Sellens, 2009, p. 7)

Research in Leisure Studies identified possibilities for an ecological model of health promotion that includes sustainability and global ecological health. Dustin, Bricker, & Schwab (2010) identify that urbanization is often pathologized for being the reason why humans are disconnected from nature. However, Children's Geographer Jones (2002) encourages us "to shake off the notion of the urban as a somehow inferior (but necessary) space (for childhood) and reconfigure it as a landscape rich in possibilities for the otherness of childhood" (p. 28). An urban setting that is also inclusive of urban ecology supports places for "otherworldly conversations" (Haraway, 1992). Further to research that describes important health benefits for children, another thread in the fabric of connecting children to nature considers children's intrinsic affiliation with "nature" and the outdoors.

According to research in early childhood studies, environmental psychology, environmental education, and children's geographies, children tend to show an interest and intrinsic connection with ecology and life. However, it is important to keep in mind that such studies are typically carried out with an adult-centric lens and the phenomenological experiences of children are difficult to access. Sobel (1996) describes how "[w]e can cure the malaise of ecophobia with ecophilia – supporting children's biological tendency to bond with the natural world" (p. 6). Stemming from work in

ecopsychology, Phenice and Griffore (2003), acknowledge that “[c]hildren should be socially encouraged to see themselves as part of nature” (p. 170) and that early childhood is the beginnings of human relation with the natural world. Psychologist, Sebba (1991), discusses how the stimulation of the outdoors combined with the receptivity of children’s senses, create in children a unique affinity for the environment. Kahn (1997) explores the biophilia hypothesis in connection to children’s affiliation with nature and determines that “human contact with animals [and landscape] promotes physiological health and emotional well-being (p. 8). Speaking to children’s curiosity in engaging with the world, Hyun (2005) recommends that

young children’s naturalistic ways of knowing nature and constructing knowledge should be recognized, validated and responded to in a congruent way. It is important to understand differences between young children’s and adults’ ways of knowing nature and gender characteristics influenced by adults’ gender-doing. Children’s learning about nature should be based on their curiosity-centered intellectual processing, and this should be reflected in exploratory pedagogical practices in early childhood education settings. (Hyun, 2005, p. 212)

Similar to how children are socialized into cultural constructions of gender and other forms of identity, educators may need to consider how their responses to children experiences with ecology are influenced by cultural constructions of childhood and nature.

Pedagogies of naturecultures and place

Moving away from a hierarchical and humanist motivation for social and ecological change may require changing perceptions of the natural world “as a network of relationships [and] not a thing at all, but a constant flux of interweaving processes, lacking any permanence for ultimate solidity” (Fisher, 2013, p. 97). When relationships among all matter and materials of the earth are recognized for how they are inextricably linked in all experiences, Bennett (2010) claims:

[t]he ethical aim becomes to distribute more value generously, to bodies as such. Such newfound attentiveness to matter and its powers will not solve the problem of human exploitation or oppression, but it can inspire a greater sense of the extent to which all bodies are kin in the sense of inextricably enmeshed in a dense network of relations. (p. 13)

How we engage in pedagogy that “is both savagely critical and creatively post human – producing new political narratives emerging from seemingly uninhabitable terrains (Lewis & Kahn, 2010, p. 11) may open up alternative and transformative places of play and meaning-making that allow “naturecultures” (Haraway, 2003) to emerge and unfold. Early childhood theorist, Duhn (2012), follows that “[t]he emphasis on the vitality of all matter provides possibilities for a radical shift away from the desire to define human exceptionalism by embedding childhood in a complex network of relations between human and more-than-human” (p. 100). Everyday encounters in outdoor early childhood education experiences invite “[t]elling a story of co-habitation, co-evolution, and embodied cross species sociality [that] might more fruitfully inform livable politics and ontologies in current life worlds” (Haraway, 2003, p. 4). Thus, the emergence of outdoor early childhood programs offer possibilities for “reconfiguring conversations with those who are not ‘us’ “ (Haraway, 2008, p. 174.)

How we consider our co-relations with the world are linked with our relationship to place. A component of critical place-based education examines how our perceptual and embodied entanglements with place can be explored. Gruenewald (2003) identifies how schools

need to acknowledge how the patterns of spatial organization in schooling, the fundamental structures and processes, (a) limit the diversity of experience and perception; (b) cut children, youth and their teachers off from cultural and ecological life; (c) reproduce an unquestioning attitude about the legitimacy of problematic spatial forms; (d) deny and create marginality through regimes of standardization and control; and (e) through their allegiance to the global economy, function to exacerbate the very ecological problems that they deny. (p. 636)

Livingston (1994) explores how a Western, neoliberal cultural emphasis on individualism, market competition, and hierarchy denies possibilities for our “awareness of ‘being-at-place’”(p. 99). Further, Evernden (1985) invites us to consider that if we “regard ourselves as ‘fields of care’ rather than as discrete objects in a neutral environment, our understanding of our relationship to the world maybe fundamentally transformed”(p. 47) towards life-sustaining practice and flourishing. The legacy of

human distinction from nature, and how this is linked to how children's socialization with the world, invites an

environmentalism [that] is not simply about what one knows [...] rather, a way of forming and situating oneself in the world – in relation to nature, to the planet, to science, to other human beings, and to other living and non-living forms (Choy, 2011, p. 94).

In recognizing that “bodies are an intimate location of effects and agencies” (Ibid., p. 157) and that “‘making sense’ involves processes of dialogue and critical reflection, drawing on ‘concrete human experience’ rather than abstracting, categorizing, and mapping” (Dahlberg, Moss, & Pence, 2007, p. 107), ecological encounters in outdoor early childhood programs may honour children's ways of knowing and intersubjective relations with the world.

Including indigenous people, indigenous land, indigenous knowledge

The Quallunaat (European-Canadians) have a strange concept of their environment. For instance, the term “wildlife” is used to separate themselves from their home and separate their community from the natural environment. They do not realize that they are a part of the wildlife. They were wild once and will be part of the wild forever, but they like to exclude themselves from anything the natural world provides. Inuit do not have such a word in their language, we are a part of nature and cannot be excluded from it. (Tommy Akulukjuk in Rasmussen & Akulukjuk, 2009, p. 287)

Canada's historical legacy of colonizing Indigenous people out of their culture, language and reciprocal knowledge of the land, cannot be ignored when engaging in outdoor, nature-based education. The growing child and nature movement in Canada needs to ally with Indigenous people to help liberate the land from ongoing industrial extraction and exploitation. It is sadly ironic that children of primarily white, privileged settlers are being encouraged to leave the walls of classrooms to experience reciprocal relations with ravines, rivers and forests, while Indigenous people struggle with intergenerational trauma that stems from being assimilated *inside* residential schools. Threads of environmentally located racism and classism are also evident in that Canadian outdoor education programs, outdoor preschools and Forests Schools are being accessed only by those privileged enough to afford them, and

emerge against the historical backdrop of indigenous children being violently severed from their families, culture, and land.

How can outdoor and environmental educators embody a greater political presence to join Indigenous people in liberating the land and fighting for the forests, ponds, bugs and slugs that children exude so much affection for? Also, how can outdoor educators be inclusive of indigenous ways of knowing and relating to the land while also supporting issues around sovereignty? Many nature-based programs take up philosophies that are learned from indigenous relations with the land, yet fail to see or acknowledge appropriation of Indigenous knowledge. It is deeply unfair that it is mostly indigenous people at the frontlines of protests, passionately protecting the forests, water and air that we all enjoy. In defending the land against ongoing violence from fracking, pipelines, and deforestation, indigenous people are saying “We’re going to stand up for *everybody*, protecting all the land and resources for *everybody*, which includes current and future generations of children (Dr. Pam Palmater, personal communication, October 7, 2013).

CODA

The complexities of actors and factors that shape human and nature relations converge in educational settings where cultural values are “reproduced and re-worked through sociospatial practices underpinning the delivery and consumption of the curriculum” (Holloway, Hubbard, Jöns, & Pilmot-Wilson, 2010, p. 588). The thematic issues surrounding modernity’s influence on children, nature and education highlights the need for education to reconsider its own relationship with, and understanding of, childhood and nature. The emergence of outdoor early learning programs reveals hope around how educational institutions can *learn* “how to demonstrate[e] an orientation of care and consciousness toward the places that they [typically] manipulate, neglect, and destroy” (Gruenewald, 2003, p. 624). With thematic issues of commodification, technocracy, and anthropocentrism in mind, I am interested in how outdoor early childhood education programs navigate the intersecting worlds of childhood, nature, and education in ways that honour children and are inclusive of nature. As part of a larger

socioecological project, I am also interested in how these outdoor programs present a “reconstruction of education [that] historicize[s] and critically challenge[s] current trends in education towards using the tools at hand to create further openings for transformative praxis on behalf of planetary emancipation” (Kahn, 2010, p. 83). The following chapter explores my methodological approach to learning about three Canadian outdoor early childhood programs and how they may offer openings to transformative praxis.

Chapter III: Methodology

Just as people look to alternative education programs to provide progressive educational experiences for children with hopes for social transformation, the emergence of outdoor preschools and nature kindergartens in Canada means there is an interest in extending alternative ways of learning to the outdoors and extending hope for social and ecological transformation. When I consider the range of themes that influence human relations with nature, I am intrigued with possibilities that outdoor early learning programs can support healthy and embodied relationships with self and nature. I am also curious about the possibilities for outdoor early education programs to incorporate the value of including local ecology as part of the fabric of early childhood communities. For this research, I was interested in examining some Canadian outdoor early learning programs and how children's embodied experiences with "nature" are influenced by relationships with other children, educators, and our sociopolitical climate of education. Some of the questions I wanted to explore based on the thematic issues related to modernity include: how do educators conceptually engage with "nature"; how do educators notice, observe and respond to children's affectivity of curiosity and wonder; how do educators negotiate pressures around neoliberal educational frameworks while honouring children's unique ways of knowing; and what awareness do early childhood educators have with critical pedagogy, ecological literacy, and post-humanist philosophies?

This qualitative research paper emerged as a "bricolage" (Kincheloe, 2001) integrating elements of phenomenology, ethnography, critical theory and grounded theory to explore human and nature relations in three Canadian outdoor, nature-based early childhood programs. The programs that were available to participate include the *Carp Ridge Forest School* in eastern southern Ontario, the *Equinox Outdoor Kindergarten* in Toronto, Ontario, and the *Sooke Nature Kindergarten*, located near Victoria, BC. I was interested in the lived experiences of the educators and their perceptions of the children's experiences in the outdoor programs; and how they are situated in a changing social and political context of kindergarten and early learning programs in Canada; environmental and outdoor education;

and the children and nature movement. Thus, this bricolage, as a methodological approach, emerged “out of respect for the complexity of the lived world and the complications of power (Kincheloe & McLaren, 2005, p. 317).

The crafting of various methods that I undertook for this research includes adaptations from institutional ethnography (Smith, 2005) and sensory ethnography (Pink, 2009). According to Smith (2005), institutional ethnography “begin[s] in the actualities of the lives of some of those involved in the institutional process and focus on how those actualities [are] embedded in social relations” (Smith, 2005, p. 31). Further, Pink (2009) describes that sensory ethnography “entails a form of learning about other people’s emplacement and experiences through participation in specific practices and environments” (p. 85). Through interviews I wanted to learn about how educators in outdoor early childhood programs might “defin[e] and represent[...] their (past, present, or imagined) emplacement and their sensory embodied experiences” (Ibid., p. 85).

It was also important for me to integrate phenomenological approaches into my investigations, to uncover the “experiential meanings we live as we live them” (van Manen, 1991, p. 11). The growing interest and awareness of how public provision of good early childhood programs can support social transformation is being fueled by extensive research in brain and neurological research. However, this research tends to focus so much on the mind, while neglecting the contextual function of the mind within an experiential and feeling body (Prinz, 2005). The lived experience of intersubjectivity and reciprocal relations with the world that is explored in embodiment research indicates, “that the body is closely tied to the processing of social and emotional information” (Niedenthal, Barsalou, Winkielman, Krauth-Gruber, & Ric, 2005, p. 184). This extends a connection with the “Maturana and Varela’s school of enactivism in cognitive theory [and] Enactivism’s concern with the importance of *enacting* cognition in the complexity and complications of lived experiences” (Kincheloe & McLaren, 2005, p. 315). Given some of the thematic issues that were raised about modern influences on education, children, and nature; challenging the binary of body and mind through enactivism also “begins the

reparation necessitated by the Western rationalistic abstraction, reduction, and fragmentation of the world” (Ibid.).

In applying a critical lens to this research, I also wanted to explore how dynamics of “power, hegemony, economic determinism, and technical rationality” (Kincheloe & McLaren, 2005, p. 309) weave into our cultural constructions of the purpose of education, and especially early childhood education. The ways in which childhood and children’s ways of knowing are subordinated in educational settings along with human domination and exploitation of nature, means I hoped to “search[...] for new and interconnected ways of understanding power and oppression and the ways they shape everyday life and human experience” (Ibid., 306). My interest in exploring the enculturation of human and nature relations in early childhood means this research also attempts to challenge historically anthropocentric efforts of critical theory towards being more inclusive of nonhumans. As Bowers (1993) indicates “[p]roponents of critical pedagogy have yet to confront the ecological consequences of educational process that reinforces beliefs and practices formed when unlimited economic expansion and social progress seemed promised” (as cited in Bell & Russell, 2000, p. 193). Further, in a shift towards the possibilities for post-humanist methodologies, I am curious how these outdoor early childhood programs invoke notions that

nature cannot be cast as merely a finite set of resources and threatened ecologies existing outside the political common but rather is an active force that structures sensation and in turn impacts the development of imaginative worlds both directly and indirectly. (Lewis & Kahn, 2010, p. 35)

Thus, interview questions were developed with hopes to learn about how educators reflect or communicate their embodied and experiential practice with children and ecology, and how this may reveal that “social well-being among humans depends upon understanding that we are dependent on, and participants in a larger communicating and living system” (Martusewicz, 2009, p. 256).

Programs

The outdoor early childhood education programs were operationalized as programs that emphasized experiences in the outdoors, “nearby nature”, contact with “nature”, and ecological experiences, such as encounters with plants, animals, insects, and outdoor seasonal climates. Early childhood is operationalized for children ages two and half to six years old. Preschool aged children are generally between two and a half to four years old, and kindergarten aged children are typically four to six years old. Purposeful sampling was used to recruit educators for this research, since “they know the phenomenon of interest, have the time and are willing to participate” (Spradley, 1979 as cited in Maller, 2009, p. 525).

The participating programs were contacted via groups and organizations emerging from the child and nature movement, such as the *Child and Nature Alliance*, *World Forum on Children and Nature*, the *Child and Nature Network* (CNN), the *Back to Nature Network* (B2N), *Evergreen, Forest School Canada*, and the *Council of Outdoor Educators in Ontario* (COEO). Through contact with these organizations, I learned about a number of early childhood programs that already identify the outdoors and nature as part of their program philosophy or curriculum. Initially, I hoped to visit outdoor forest preschools in Europe for this research, but I was excited to learn about local programs emerging in Canada and had the opportunity to visit some of them as a more feasible alternative. While there is a growing emergence of nature education programs for the early years, ranging from family and school drop-in programs to outdoor nature kindergartens, I contacted programs that children attend for full or half-days, and that identify as early childhood nature or environmental education programs. Of the five programs that I contacted (four in Ontario and one in British Columbia), three programs were available to participate.



Figure 2 Kindergarten walled-tent at Carp Ridge Forest School

Carp Ridge Forest School. *The Carp Ridge*

Forest School was founded as the first outdoor preschool in Canada, in 2008 (Carp Ridge Learning Centre, 2012, p. 6) and is located West of Ottawa in Ontario. The Carp Ridge Forest School began with the Carp Eco-Wellness Centre and utilizes 190 of acres of woodland that is privately owned by the centre. The outdoor preschool was able to operate as a charity from a large funding donation. When it first started, the forest school was based in a small schoolhouse, but over the course of the past few years the forest school moved out of the cabin, taking on a primarily

outdoor focus. Two walled-tents (Figure 1) with compostable toilets and wood-burning stoves were installed, and provide shelter for lunch and in inclement weather. Efforts to become a licensed childcare program were thwarted as they tried to meet specific requirements from the Ontario *Day Nurseries Act* (DNA) (1990), so the forest school operates as a charitable business. A number of the program goals and philosophies that draw upon forest school philosophies were contradicted by requirements of the DNA, such as having fenced in areas for children to play and the need to rezone ecologically sensitive areas. Since the forest school's "programs are run almost exclusively outdoors each day, utilizing natural resources for exploratory play, no matter if the sun is shining or rain is falling" (Carp Ridge Learning Centre, 2012, p. 4), meeting expectations for fences, meant they had to be creative and claim the fence surrounding the vegetable garden as their program "fence". The forest school facilitates a preschool and a kindergarten program out of each of the walled tents and maintains a low ratio of one teacher to five children for both programs. Educators have backgrounds in early childhood education, and teaching, combined with "train[ing] in non-violent communication [...] and environmental sustainability" (Ibid., p. 6).

My interview with the educator from the kindergarten program involved a walking interview and tour of the places children often visit in the forest school program. The interview unfolded as a combination of sharing stories that emerged from particular places and addressing the specific questions from my interview framework. Acknowledging my own embodied experience of moving through the landscape, I noted how my body shifted, balanced and sensed the rocks, slopes, roots, and mud beneath my feet. Some moments included the shriek of a hawk flying by, or a prickly entanglement with burr bushes. I had the option to crouch through the cedars of the “Teeny-Tiny Forest” and listen to the babble of the creek. Although I invited the kindergarten teacher to share photos of places that seem to be significant or meaningful for her and the children she works with, we agreed that I could take photos of the places she shared stories about as we walked along. She indicated that it would be difficult to try and capture what was meaningful from a particular site with a photo without the children present.

Equinox Holistic School Outdoor Kindergarten. The Equinox Holistic Public School is an alternative school program in the Toronto District School Board (TDSB) and is located on the third floor of the Roden Public School in the east end of downtown Toronto. Equinox emerged from a parent group who were interested in holistic education options for their children and worked “to develop a holistic curriculum that integrates the best practices from holistic pedagogies like Waldorf, Montessori, Reggio Emilio and the Outdoor Education Movement” (Equinox Holistic Public School, 2012, p. 5). One of the key elements of integrated into their holistic educational program is the fostering of a connection to the natural world. To this aim, the values and goals of the Toronto-based PINE Project and core routines from the *Coyote’s Guide to Connecting to Nature* (Young, Hass, & McGown, 2010) are integrated throughout the Equinox curriculum. The kindergarten program takes place outdoors in playground space adjacent to the school, nearby ravines, and community gardens. In this program, an Ontario Certified Teacher (OCT) works with a group of eighteen four and five year olds. Currently, the educator works with different groups of children in the morning and in the

afternoon, but after the final roll out of full-day kindergarten (FDK) in Ontario schools in 2014, the Equinox program will also carry out FDK. With FDK, the kindergarten teacher will also be working with an Early Childhood Educator.

The Equinox kindergarten teacher and I arranged to meet at the Outdoor Kindergarten classroom. As she was setting up the morning kindergarten session, she invited me to participate and see what they get up too. Wearing a bird mask, and placing some books about birds on the logs, the educator greeted the children as they arrived with a “Chirp-Cheerily! Chirp-Cheerily!” She mentioned earlier in the morning that she was really interested in all the emerging springtime bird energy. I resonated with her excitement because I also found myself responding to the sounds of robins, grackles, and mourning doves that surrounded me as I cycled or walked from place to place. During the morning session, she invited us (the children and I) to share stories, follow the robin sounds around the playground, and pretend to fly around as birds. The children also explored the playground space using magnifying glasses to search for worms, potato bugs, and other “mini-beasts”, particularly under the log stumps. Our interview took place at the end of the kindergarten session in the classroom space designated for their program.

Sooke District Nature Kindergarten. The Sooke District School Board’s Nature Kindergarten in Victoria, British Columbia is a pilot project initiated through collaboration between Royal Roads University, the University of Victoria’s Centre for Early Childhood Research and Policy, Camosun College’s Early Learning and Care Program, and the Sooke District School Board, specifically within Sangster Public School, which is adjacent to Royal Roads University. While BC implements all-day kindergarten, the Nature Kindergarten program’s outdoor component is carried out every morning in the forest grounds of Royal Roads University, with access to the Esquimalt Lagoon, and the Strait of Juan de Fuca. An early childhood educator was hired to work with the kindergarten teacher specifically for the outdoor morning component, since ECEs are not currently integrated with the education system in BC. Funding for this project was supported by a number of grants from a

range of groups, including the *Rural Innovations Fund*, from the University of British Columbia; the *Royal Bank of Canada* (RBC); the *Success by 6* program through *United Way*; the *Vancouver Foundation*; the Ministry of Education's *Growing Innovation Project* and *Collaborative Action Research*; and *TD Friends of the Environment* (Krusekopf, 2011). The Sooke Nature Kindergarten is comprised of 20 four and five year olds, "with two spaces available for Aboriginal student's to reflect the district's demographic" (Nature Kindergarten, 2013), and strives for a balance between male and female students. Highlights of the Nature Kindergarten identified in an information sheet include skill development in "environmental stewardship, gross motor development and fitness, [and] an appreciation and understanding of Aboriginal Ways of Knowing" (Krusekopf & Elliott, 2012). The kindergarten teacher and the early childhood educator professionally collaborate to provide an integrated program that combines the BC provincial curriculum framework and emergent curriculum in the outdoors. The early childhood educator was available to meet for a video interview using *Skype*.

Interviews

The interview questions focused on three main components related to theoretical orientations that contribute to modernity's influence on young children and human and nature relations. Open-ended questions broadly fell within three components of an outdoor early childhood education program, such as probing the experience of the educator in the program, the educator's perceptions of children's experiences within the program, and the outdoor program praxis (i.e., philosophy, approach and practice) (Appendix A). The interview questions emerged from a combination of my situated experience of being an early childhood educator with an interest in critical pedagogy and outdoor and environmental education; past experiences of exploring urban ecology with children in an early childhood program; and the theoretical and thematic issues I explored during my MES coursework related to human, nature, and education. The interviews flowed as informal conversations, which allowed unanticipated questions to emerge from our discussions, while other previously conceived questions were omitted. Interviews were conducted either in-person at the program site, or through

video conferencing with *Skype*, and were recorded using the Voice Memos app on my iPhone4.

Interviews varied between 1.5-2 hours in length and the educators were compensated for their time.

Interviews were then transcribed using *ExpressScribe*. Once the interviews were transcribed and coding of the interviews were carried out, I invited the participants to review the transcriptions and coding to check that I was suitably capturing and reflecting their responses from our interviews.

Documents gathered to supplement the interviews included program and parent handbooks, blog posts, and various media, such as news articles.

Coding and themes

After transcribing each of the interviews, I applied a grounded theory approach by reading and rereading the interviews and grouping participant responses into codes. Grounded theory methods consist of simultaneous data collection and analysis, with each informing and focusing the other throughout the research process (Charmaz, 2005, p. 508). Since coding draws upon the hermeneutics of my reading the transcribed interviews, what I coded “depends upon [the researcher’s] prior interpretive frames, biographies, and interests as well as the research context, their relationship with research participants, concrete field experiences, and modes of generating and recording empirical materials” (Ibid., p. 509). For example, my interests in embodiment in experiential education lead me to code for such actions as “emotion”, “affectivity”, “movement” and “interaction/intersubjectivity”. Other codes included identifying interactions with animals, plants, and minerals to account for specific encounters with ecology. Further, codes for “hierarchy” and “dynamics of power” were included to capture aspects of critical theory and pedagogy. Thus, codes were identified based on “emerging information collected from the participants [and] larger theoretical perspective[s] in the research” (Creswell, 2009, p. 187). Initially, 23 codes were identified (Appendix B), and reflect an assemblage of themes that came from the educators and my theoretical orientations from developing the interview questions. Following a review of the codes, three themes were constructed to describe a pedagogy of relationships that occur in these outdoor, nature-based early childhood programs. The three themes are:

the child-body relationship (embodiment); the child-program relationship (critical pedagogy and ecological literacy); and the child-place relationship (the outdoors) (Appendix C). These themes will be analyzed and discussed in relation to how they meet the thematic issue of modernity's influence on children, nature, and education in the following chapter.

Chapter IV: Analysis and Discussion

[I]f one wishes to understand rather than simply isolate the object of attention, one cannot ignore the relationships entailed. Indeed, one might say the relationships are the main event, and that we deceive ourselves by concentrating on the beings rather than on the relationship between them (Evernden, 1985, p. 133).

The following is an analysis of the outdoor early childhood praxis shared by educators from the *Carp Ridge Forest School*, *Equinox Outdoor Kindergarten* and the *Sooke Nature Kindergarten*. My findings confirm how alternatives to modernist forms of education are possible, and help to support sustainable childhoods and more critical forms of sustainable education. In particular, these programs offer a glimpse of participatory and relational pedagogies where “taking place seriously means the attention shifts from the individual child, to the child’s entanglement with forces and forms of all sorts of both human and more-than-human” (Duhn, 2012, p. 104). A key finding that emerged from the interviews were the educator’s descriptions of the diversity of movement and experiential interactions children had with their surroundings that are unique to these early childhood programs. Compared to indoor early childhood programs, the assemblage of tree roots, rocks, sticks, ponds, slugs, worms, wind, rain, ice, birds, other children and educators, combined with pedagogical approaches that are democratic, emergent, and child-centric, reveal a myriad of relationships, beings and becomings. Children were encouraged to tune into their own bodies, senses, and experiences to self-determine their own meanings, movement, and risk in the outdoors. These alternative educational environments support a different type of attunement to the world inviting “simultaneous co-existences or co-expressions of that place, and extensions of themselves” (Livingston, 1994, p. 113). Challenging modernity’s emphasis on individualization, the educators revealed a range of interactions among beings, whether plant, animal, or mineral, inviting contemplation of interdependency and that “[m]atter plays an active – indeed, agential – role in its iterative materialization” (Barad, 2008, p. 143).

These outdoor early childhood programs offer a glimpse of what it could mean for education to

move beyond just-human manifestations of culture, towards encountering the worlds and cultures of all the others with which we share our local communities and planet. Further, the possibilities for children to engage with their whole bodies and their senses while playing outdoors invites a “capacity for interocept[ive] access to our own somatic selves” (Elisha, 2010, p. 172). With bodies as the nexus of experience and relationship with the world and place, the stories shared by the outdoor early childhood educators invite a pedagogical consideration of how interaction and encounter in the outdoors may support deeper, more embodied ways of learning in early childhood. The following three sections explore themes that emerged from the educators within a framework that describes the child in relationship to their own bodies; the child in relationship to the outdoor curriculum; and the child in relationship to nature and place. The way in which the educators perceived the children’s relationship with themselves in the outdoor programs is consistent with the thematic issues that suggest alternatives to modern education’s tendency to fragment human capacity for being in tune with ourselves and the contextual nature of our being-in-the-world.

Part I: Child – Body: Senses in motion

Movement and affectivity. A consistent finding from the educators that connects to the thematic issues framing this study involves the possibilities children have to tune into their bodies and senses as they navigate the land and the outdoors by climbing trees, balancing on rocks, and search for sheltered areas on windy days.

One’s lived body is a developmental being thick with its own history and sedimented ways of feeling, perceiving, acting, and imagining. These sedimented patterns are not limited to the space enclosed by the body’s membrane; they span and interweave the lived body and its environment, thereby forming a unitary circuit of the lived-body-environment (Gallagher, as cited in Thompson, 2010, p. 33).

Since man’s [sic] first natural movements are, therefore, to measure himself against everything surrounding him and to experience in each object he perceives all the qualities which can be sensed and relate to him, his first study is a sort of experimental physics relative to his own preservation, from which he is diverted

by speculative studies before he has recognized his place here on earth (Rousseau, 1979/1762, p. 125).

Gallagher and Rousseau highlight the myriad and embodied ways in which we exist in relation to the world by blurring the boundaries between body and mind, human and nature, and body and environment. As several of the thematic issues of this study suggests, challenging these cultural and philosophical distinctions are important to help education move towards a better understanding of the contextual nature of learning and the interdependency and interconnectedness of nature. Educators from the outdoor early childhood programs share their perceptions of how children move with their bodies in the outdoors, suggesting richer and more dynamic ways children intersubjectively learn.

As the classroom walls disappear and surfaces slope and bulge, and the white noise of ventilation gives way to the rustling of leaves and birdsong, children's movement, senses, and play mix with the "multi-specied landscape" (Tsing, 2012, p. 141). Some of the verbs educators used to describe the children's outdoor experiences reflect bodies constantly in motion: digging, poking, lifting, peeling, dancing, bashing, building, rolling, sliding, climbing, throwing, running, racing, balancing, jumping, bringing, bending, crawling, chasing, swinging, scooping, catching, carrying, and turning. While children always seem to be in perpetual movement, the outdoor programs that are located in woodlands and forests offer educational settings that do not colonize movement and do not orient perception towards human-manufactured schedules, structures, and environments. In the outdoor programs children are climbing *real* trees, and balancing on *real* rocks and roots that are designed by evolution and earth's ecological processes. Children respond to nuanced, living landscapes, rather than "collections of swings, seesaws, jungle gyms, and merry-go-rounds—with little thought for materials and spaces to accommodate symbolic or imaginative play" (Frost, 2010, p. 190); inviting more embodied and affective relationships with the earth. Through the nooks and crannies of boulders, tree branches, sticks, ponds, hills, and uneven terrain, children's bodies are engaged in intricate and diverse ways of moving their bodies in space. This alternative educational setting encourages children's sense

of themselves in relation to their surroundings, inviting a deeper connection to ecologies of place.

While I do not want to pathologize human-built environments, I do want to rouse inquiry regarding the hegemony of anthropocentric and homogenized educational settings that are primarily composed of concrete, plastic, and metal. Unfortunately, the legacies of colonization, industry, and urbanization that “weeded” out wild spaces appear to have also weeded out our relationships and contact with everything other-than-human. The following section shares some possibilities and limitations that these outdoor programs offer for re-sowing the wild into early childhood experiences.

Although the Equinox program struggles with limitations of school grounds that are primarily concrete and fenced in, they still find ways to explore nearby ravines that allow children to interact with trees and uneven terrain. This speaks to broader issues in modern educational settings located in urban centres that fail to acknowledge how the hegemony of concrete, plastic, and the linearity of built environments influences children towards becoming “docile bodies” (Foucault, 1977). Bennett (2010) introduces the concept of “vibrant matter” to reconfigure our conceptualization of human and nature relations, and shares that “there was never a time when human agency was anything other than an interfolding network of humanity and nonhumanity; today this intermingling has become harder to ignore” (p. 31). Challenging modern themes of anthropocentrism, hierarchy, and individualism, through the affective interaction of children’s bodies with bodies of other matter, such as trees, rocks, and puddles, these programs illustrate how “bodies are also associative or (one could even say) social bodies, in the sense that each is, by its very nature as a body, continuously affecting and being affected by other bodies” (Ibid., p. 21). The following quote describes how one educator creates space for children to negotiate their own bodily movement and kinesthetic attunement to climbing (and risk), and comments on the lack of varied terrain in the school grounds to engage children’s bodies.

...when we go to the ravine, it's full of fallen trees and logs and we're always [...] climbing the trees. And I say to them, "As long as you can get up and do it yourself, then you're ready. If you're not, then maybe next time, you still need to grow". But our space [...] has drainage problems. The circulation isn't really conducive to kids interacting optimally.

There just needs to be more topography, like different levels for kids to explore. I would love for there to be, like, a rock bed out there.

(Sandee, Teacher, Equinox Outdoor Kindergarten)

The above quote also illustrates a common problem for urban schools and early childhood programs, where children and educators have to venture off-site to explore more diverse, wild, and body-sense-provoking places. Broader questions around “who” has access to ravines, woodlands, and oceans in which to play in urban settings are also important considerations in the movement to connect children with “nature”. The educators concern for outdoor play on school grounds confirms one of the issues raised about naturalizing school grounds and connects to that way urban demographics are often racialized and segregated based on socioeconomic status. Further, “[t]here are concerns that [decreasing play provision in urban spaces], coupled with the restriction of children’s opportunities to use urban public space, opens up markets for the private provision of play” (Jones, 2002, p. 26). This illustrates how the children and nature movement becomes entangled in a market-driven approach to naturalizing playgrounds and extends a modern, neoliberal approach to children’s play and the commodification of childhood. What emerges from the assemblage of concrete playgrounds, interactions with fenced-in spaces, urban demographics, and market-driven “greening” incentives, confirms how modernity influences children’s bodies in educational settings.

Children and trees. Among the programs that are situated in woodland and forest settings, trees were a common element to children’s experiences, weaving an embodied and reciprocal interaction with another growing, living being. The proximity to trees at the Carp Ridge and Sooke programs made tree interactions accessible and they occurred on a daily basis. Part of the on-going interactions and exposure to *familiar* trees also invites children to learn about tree bodies and indicators of a tree’s state of being. In doing so, children build an awareness of various risk or safety factors that may arise from climbing a particular tree. The following quote highlights how children learn to engage in careful tree observation to determine if the tree is safe for climbing:



Figure 3 The red maple climbing tree at Carp Ridge Forest School

So, they sorta plan out their route for climbing and where they want put their feet and where they want to put their hands, and they really try to wiggle, and waggle, and move everything and make sure it's really solid and will hold their weight[...] And they also check to see if branches are dead or alive. [This] climbing tree here (Figure 1) [...] is a particularly special place for most, if not all, of the children. It's a red maple and it is absolutely perfect for the size of these children and their growth and development. With the low branches and with how they're curved and shaped,[...] they spend time crawling- climbing around it, one way or another. And discover where

which way is easier and which way is more difficult and why. They spend time swinging on branches, hanging upside down. And eventually someone will climb up higher and that leads to the rest of them wanting [to make] kind of a long term project of "how do we do that? How did that person do that?"

(Heather, Teacher, Carp Ridge Forest School)

Rather than the predetermined, spatially uniform, and linear designs of playgrounds and play structures, children's regular interaction with trees seemed to invite an embodiment of

[t]he size, nature and form of trees [that] engage [...] senses; sights, sounds; smells and touch [...] in myriad ways. The variety of tree types, their flowers and fruit, form, colour, leaf shape, canopy, density all react to and "capture" shifting weather and light conditions. The complexity and richness of differing forest compositions create differing examples of local 'distinctiveness.' (Jones, 2011, p. 163)

Just as Jones highlights the variation of sense-provoking possibilities of different types of trees, the children in the outdoor early childhood programs then respond to the myriad ways trees may invite climbing, creativity, and social engagement. Children, thus, respond to their own bodies and negotiate their own risk in relation to the trees and other varying topographies and surfaces. Abram (1996) shares that "[t]o define another being as an inert or passive object is to deny its ability to actively engage us and provoke our senses; we thus block our perceptual reciprocity with that being" (p. 56). Abram follows that "[b]y the term 'perception' we mean the concerted activity of all the body's senses as they function and flourish together" (p. 59). The co-mingling of children's sensorimotor perception

(body) with the nooks and crannies of branches and folds of bark [world] invites a phenomenological consideration that “if we diminish and restrict the quality of the other side of the flesh, its world-weaving, both body and psyche will atrophy” (Simms, 2008, p. 24). Thus, the possibilities for enhancing creativity, problem-solving, and imaginary play through the children’s experiences with trees and their unique forms of leaves, trunks, branches, and seeds, move early childhood pedagogical practice away from neoliberal interests in experiences of standardizing, commodifying, and universalizing how young children learn.

Research into a therapeutic ethos for childhood acknowledges “the ‘what if and as if’ dimensions of play are informed and enriched by children’s knowledge and experiences in their everyday social and cultural worlds” (Wood, 2009, p. 199). When a child’s everyday social and cultural world includes trees, boulders, puddles, and mud, the inclusion of the environment as “teacher” takes on new meaning. The therapeutic elements of holistic outdoor early learning programs include how children are supported in their own kinesthetic, proprioceptive, and tactile awareness. As children gain a sense of themselves in relation to the nuanced and living landscape, children’s self-esteem blossoms. The following quotes from the Sooke and Carp Ridge programs reveal how elements of emotional expression, sociality, physicality, cognition, communication skills, educator philosophy, tree branches, and temporalities of day and season intermingle with experiences of learning how to climb a tree:

Sometimes you'll have to ask, "Oh, how comfortable do you feel right now?" And they go, "I don't really feel very comfortable". And I'll go, "Oh... Well, what could you do about that?"

(Erin, Early Childhood Educator, Sooke Nature Kindergarten)

[S]ay one child who you know chooses a really difficult place to climb sees someone else have success at maybe an easier place. That process of either them being frustrated with their own unsuccessful attempts, or be encouraged by someone else, "hey you did it!" and "how did you do it?!" is really neat to see. And [...] how they come to their own success [...] sometimes, they ask for help, sometimes they ask for suggestions, and sometimes they'll just quietly muscle it out. And ... it really depends on the child, and the day, I think.

(Heather, Teacher, Carp Ridge Forest School)

It was interesting to hear how educators supported the child's attunement to their kinesthetic, proprioceptive, tactile awareness and negotiation of risk while learning how to climb the tree. This suggests "the notion that the self is not necessarily defined by the body surface [and] that there is some kind of involvement with the realm beyond the skin" (Evernden, 1985, p. 43).

The possibilities for engaging children's sensorimotor and perceptual capacities in outdoor programs go beyond the Western conception of the five senses and mingle with vestibular function, proprioception, thermoception, nociception (pain), and chronoception (time). While these senses are present in any given setting, typical indoor educational settings present sensory stimulation that include flat, linear surfaces; walls covered with commodified teacher materials, such as alphabet or apple print borders; and a plethora of plastic toys and learning materials. Further, modern playground "structures [are] fixed, concrete formations, abstract, resistant to change, movement or action by children [and are] frequently more appealing to adults than to children (Frost & Worthman, 1988; Frost, 1992; as cited in Frost, 2010, p. 181). A modern, neoliberal climate that designs structures and learning environments for a predetermined form of play and learning, combined with a litigious society, reveals aspects of how children's play is colonized in modern society. For example, there exists a "growing pattern of overprotecting children from 'risky' play such as dodgeball, chase, and rough and tumble play [towards] "dumbing-down" children's play [by] standardizing play equipment, restricting play and constructing artificial shade structures" (Ibid., p. 212). The actual *ridge* in the Carp Ridge Forest School offers children a natural playscape that emerged from the unfolding of the earth's geological processes. From a phenomenological perspective, it is fascinating to consider how children embody geological deep-time, by clambering and climbing over large rocks. The following quote reveals how children's negotiation of rocky surfaces interacts with the educator's and a child's own perception of risk:



Figure 4. Steep rock at Carp Ridge Forest School

In the winter there were some days when we had really, really thick, fluffy snow and we slid down it, but when it's bare rock or when it was slippery with wet, or when it was icy[...]I'm not comfortable sliding down a really steep, really long rock like that. [...] as an educator [...]it gets your heart going! [T]hey all are fantastic at [...]com[ing] to the edge [and] they tend to sit down right away, or get their centre of gravity quite low because they know there is always an option of slipping.

(Heather, Teacher, Carp Ridge Forest School)

When we consider how “perception is continually transformed by movement”

(Simms, 2008, p. 38), and that “the body is a site of intersection of inside and outside, self and world: it belongs to both realms and mediates their relations” (Fisher, 2013, p. 64), then perhaps children’s experiences of play and learning in the outdoors invites a deeper connection to themselves and world. The intricacies, multiplicities, and vibrant matter of the outdoor early childhood programs raise complex considerations about what it means for children to be educated more closely with the materiality of their beings.

Children’s bodily interactions with place are not relegated strictly to physical learning and health, but are intricately entwined with all aspects of cognition, emotion, sociality, and communication. The extent of *dis*-ease with emotional and social relating in traditional school settings, combined with confined movement and creative expression, sets up children to tune out of an embodied relationship with the world. The outdoor, embodied and experiential engagement with living landscapes that unfold in these outdoor programs open up possibilities for reconfiguring modern assumptions about what sort of learning environments are conducive to creative and imaginary play; how children engage in their own embodied negotiation of risk; and provides access to movement that stirs the materiality of children’s bodies and minds. The ongoing experiences with nature in these

outdoor early learning programs highlight the pivotal role educational settings can play to help foster “children’s mental, emotional, and social health; sense of achievement, self-confidence and self-esteem; creativity and stress relief” (Maller, 2009, p. 534). Further, these outdoor body-mind engagements

remind us that we humans have bodies that respond to light, sweat, and heat; we too know the world through our bodies in a way that is not entirely dependent upon language; in this bodily knowledge plays an important role in defining a world and giving meaning to it. (Bell & Russell, 2000, p. 197)

The following section expands beyond considerations of the child in relations to their own bodies in the outdoors, to the educator’s perceptions of how children respond to the outdoor program philosophies and pedagogical approaches.

Part II: Child – Program: Children’s responses to program curriculum and philosophy

The power of the space is in its *not* being ‘known’ or ‘owned’ by a group or ideology. The space can be used by any, but claimed by none. It is the space where difference is valued, for difference alone is generative, and what is generated can change and transform over time as interaction and dialogue with children, parents, other staff and the broader community bring various thoughts and ideas into the flux of learning. (Dahlberg, Moss & Pence, 2007, p. 174)

The pedagogical approaches in the outdoor early learning programs engage democratic, emergent, and play-based learning, which confirms possibilities for supporting children’s agency in their learning and play. In contrast to “the banking model of education [where] the teacher’s task is to [...] ‘fill’ the students by making deposits of information which he or she considers to constitute true knowledge” (Friere, 1970, p. 76), children are encouraged to learn from each other, and educators respond to children’s emerging interests. The following quote describes how an educator adapts her pre-service teacher training towards a child-centred and emergent practice. This reveals a form of “letting go” and “unpacking the backpack” of traditional teaching methods:

I think as educators, we need to – at least in this context – remind ourselves that this is the children’s space and their learning environment. I try my best to not push my own agenda, that I let them lead their learning, and what they want to learn about, and what they’re interested in. Then I can build on that... Sometimes I will bring something that I think they’ll be interested in, and if it doesn’t work, then I need to remember to just let go of that

and be comfortable with it....That's that unpacking as educators, unpacking our own background and agendas [...] that [...] is really integral to really having a child-directed program. My teaching approach here is a 180 from what I learned in teacher's college... And so, that was a real learning experience for me as an educator and say, 'Okay, we don't have to do that. I just spent hours prepping that, but no problem'. And, unlearning how to do that was a big part of my education as a teacher.

(Heather, Teacher, Carp Ridge Forest School)

By de-centering the child *and* educator in pedagogical practice, an assemblage of other-than-human actors emerge to reveal “lessons” that naturally arise from experiential engagement with the local flora, fauna, and ecology of the outdoor programs.

Unpacking traditional teacher training. Dynamics of power and hierarchy were also identified in relation to the form of curriculum that is emphasized in educational settings. The following two excerpts offer the educators’ responses to questions about their curriculum approach and how their experience in the outdoor early childhood program compares with more traditional kindergarten programs.

[My co-teacher] and I come from very different backgrounds. I come from an Early Childhood Education background, very child-led, interest-based learning. I come from a very strong play-based program. Whereas she comes from a very curriculum-driven place. She had never taught in a kindergarten before, and [how we figured out] what we wanted from the program was a dance, because we're both really self-reflective and we talk about everything and we're really open.

(Erin, Early Childhood Educator, Sooke Nature Kindergarten)

I just feel like so many programs are trying to push the academics [, but] you just let them naturally blossom. Like my one little reader...she reads mostly everything, she's writing her own stories, she came in this week - she had a story we've been acting out as the story of the week. This is the way kids should learn. All I've done is worked in traditional [kindergarten settings], but I've never worked in anything like this before. I don't really want to work in anything different than this. I think this is the way that young children should be taught. They need to be running around, there'd be less behaviours, they would be so engaged, they'd be interested.

(Sande, Teacher, Equinox Outdoor Kindergarten)

The educator from Sooke revealed the lack of pedagogical preparation kindergarten teachers receive to support young children’s intrinsic exploration of the world through play. Creativity, movement, and play are often stifled in school settings, despite a recent statement from the Council of Ministers of Education, Canada (CMEC) that “believes that purposeful play-based early learning sets the stage for

future learning, health, and well-being” (Council of Ministers of Education, Canada, 2012). The hierarchy of valuing provincial curriculum standards of numeracy and literacy over play and children’s intrinsic interests was evident from the Sooke and Equinox educators. In all three programs, there is an active effort to be more inclusive of children’s interests and allow space for children’s active participation in shaping their play-based learning experiences. Currently, the field of early childhood education is unraveling the boundaries of the play-learning distinction, as school teachers and early childhood educators integrate their pedagogical approaches. [Educators] are not arguing for perceiving play as learning or vice versa, but there are play dimensions in learning and learning dimensions in play that are important to work with in young children’s learning and development (Samuelsson & Carlsson, 2008, p. 635).

Integrating curriculum and outdoor play. Since the Equinox and Sooke kindergartens exist within district school boards and are required to meet provincial curriculum expectations, the educators revealed how they were able to meet the curriculum goals in subtle ways rather than, for example, explicitly delivering a lesson about measurement. The following excerpt from the Sooke educator describes some of the struggles and anxieties she observed from the teacher she works with around integrating the provincial curriculum with play:

And [the Teacher] was worried [about how to do play-based, emergent curriculum]. And then I said, "Well, let's just try this". And that's just how I kept approaching it. "Let's just try....Let's just try...". And she would read blogs [...] about play-based learning because[...] she just needed to feel comfortable with it. And then one day she came in and she said, "I read a blog last night[...] about a forest kindergarten [...] She just lets her kids play *all* day! [...] *Play*... All day. No formal learning". And I [asked], "And how did you feel about that?" And she [said], "Yeah! Why can't we just let them play?! The most valuable learning comes out when we're on our walks down [to the forest] and while they're playing. You know what I mean? [...] So why are we making them sit down and do this?" [...] I think that was a big moment for her. I think she just needed for it to feel okay. I think she needed for someone to validate it for her, to say, it's okay to just let them experience the learning on their own, and lending support. And not force them to do shapes when they're not interested in shapes, I guess". And so, I think once [...] our kids validated it, because they were coming up with these absolutely amazing learning experiences and she had professional validation as well. And since then [...] everything is emergent now.

(Erin, Early Childhood Educator, Sooke Nature Kindergarten)

The response of the teacher with no previous experience working in kindergarten or with young children speaks to a broader issue in pre-service education where play is pathologized and subordinated to more formal, didactic teaching methods. However, through collaboration with an early childhood educator whose pre-service training included interpersonal communication, play-based learning, and child development, the teacher gained a deeper awareness about how to engage young children's learning in more meaningful ways. The teacher was also encouraged to trust her observations of the children's meaningful interactions with the world. The way in which the educators challenge themselves towards more reciprocal learning with children, illustrates how alternative educational approaches may topple assumptions that children lack the capacity to co-construct their learning. As Shaull describes in the preface to *Pedagogy of the Oppressed*,

Education either functions as an instrument which is used to facilitate integration of the younger generation into the logic of the present system and bring about conformity or it becomes the practice of freedom, the means by which [humans] deal critically and creatively with reality and discover how to participate in the transformation of their world. (as cited in Friere, 1970, p. 34)

Fostering self-esteem. The integration of standardized curriculum with democratic, emergent, and play-based approaches described by the educators in the outdoor programs offers “an alternative view of play pedagogy [that is valued] as negotiated ‘space’, both physical and conceptual, for children and teachers to explore identities and desires, and evaluate questions of voice and power” (Rogers, 2010, p. 163). Emergent curriculum, as a pedagogical approach in the Carp and Sooke programs, stems from a philosophical approach that developed out of Reggio Emilia in Italy after World War II. Educator Loris Malaguzzi, along with the Reggio community, decided to create early learning environments based on “a ‘pedagogy of relationships’ in which children are understood to be actively engaged in co-constructing their own and others’ knowledge and identities” (Dahlberg, Moss & Pence, 2007, p. 58). Guiding aspects of the Reggio approach include an understanding that,

[c]onstructing identity not in essentialistic, but pluralistic terms implies that a child is connected to many different groups of shifting ethnic, religious, cultural

and social character. For this reason, as well as the importance attached to the ethics of an encounter, pedagogy for postmodern conditions is based on relationships, encounters and dialogue, with other co-constructors, both adults and children. (Ibid.)

In these outdoor early childhood programs, co-construction extends beyond the walls of a classroom and other humans, towards relationships and intersubjective encounters with the other-than-human, which challenges assumptions about with whom and with what we can co-construct knowledge.

The emergent and participatory approaches described by the educators also reveal an impact on children's self-confidence and self-esteem, and call attention to alternative ways to respond to children's worldly perceptions and develop their well-being. According to Fattore, Mason, and Watson's (2007) research into children's conceptualization(s) of their well-being indicate that

children enjoy activities where there is a lack of pressure to achieve according to adult and /or peer expectations and norms. This was described as a sense of freedom from responsibility of routine that allowed children in some degree to do what they want with people they enjoy spending time with (p. 22).

The following quote exemplifies how educators can attune themselves towards children's unique ways of exploring the environment, reflecting a transformative shift in child-educator relations:

my pedagogy, is about [...] ensuring that it's child directed. But also about building self-confidence within each of the children. [...] I'm not the boss of the kids, and they're the boss of themselves. And I really like to let them know that. But when they need help, and when they need support, I can recognize that or they can [...] address it for me. When they're having a difficult time [climbing a rock face] and they want some help, I don't want to just lift them up to the top, because then they don't gain that experience of learning about how their bodies work and how to maneuver themselves to climb. [...] And then when they get to the top, you can see it all over their bodies, and all over their faces, and you can hear it, and they feel so proud and they know they can do it again and again and again... Just that encouragement of their own self... belief in themselves, but also confidence in their own abilities and capabilities.

(Heather, Teacher, Carp Ridge Forest School)

Burgeoning self-confidence was also perceived by the Sooke educator:

Their confidence levels are through the roof! It's so amazing - the confidence in what they know; confidence in who they are; confidence in being part of a group; confidence in being a holder of knowledge is so incredible for them.

(Erin, Early Childhood Educator, Sooke Nature Kindergarten)

How these educators perceive children's responses to alternative pedagogical approaches are also mirrored in other research that explores the outdoors as sites for children's democratic learning. For example,

[p]ractioners who allow children to take risks and tolerate scratches, wet shoes, muddy clothes and pockets full of sand, stones and whatever the children find and collect in the outdoor environment are enabling children to participate fully in their learning to make meaning and experience negotiation within a community. (Aasen, et al., 2009, p. 11)

These educators integrate alternative approaches to early learning that resist the technocratic and universalizing tendencies of modern education that "can readily become normative, [since] they focus our attention on the map, rather than the actual terrain" (Dahlberg, Moss & Pence, 2007, p. 115).

Play and learning. Although many early childhood education pre-service programs promote child-centred, holistic, play-based pedagogies to support children's social and emotional well-being, the current market-driven climate of neoliberal education may only view play, "as a supposedly pedagogical tool for promoting 'learning'" (Rogers, 2010, p. 163). Valuing children's play as simply a means for school readiness diminishes the agency and the multiplicity of meanings that children bring to the world. The Sooke educator raised concern about the actual implementation of child-centred approaches and their philosophies in the large number of early childhood programs that espouse them. As Canadian early childhood education programs are becoming more integrated into education systems, there is concern that early learning programs will become *schoolified*. The hegemony of systems that restrict children's experiences-senses-movement towards sitting for long periods of time, lining up in straight lines, and restricting movement to recess and gym time deny ways for children to fully tune into their own growth, development, and learning. Combined with modern and neoliberal interests in numeracy and literacy, which is performed while *sitting* to read and write, ensures that children's lived experiences will be colonized by modern assumptions of how and what children should learn, and what types of learning is valued.

Numeracy and literacy. The outdoor programs located within district school boards locate, document, and emphasize literacy and numeracy in their programs to meet provincial curriculum expectations. The following quotes from the Sooke and Equinox programs share how they “catch the curriculum” as they observe it happening in children’s play:

We spent a lot of time memorizing the curriculum, so that instead of making the curriculum happen, you can catch it when it did happen. So, when a child started making letter sounds, we could [say] "Oh! That's part of the curriculum. Check!" We realized that so much of what was happening covered the curriculum. [We] didn't even have to try anymore because it was just happening constantly. So [...] for the literacy piece [we noticed,] "Oh! You just made three 's' sounds!" Or, "You just found a snail, a slug, and a sun". And for the counting, it's just so easy, "Oh, I see you have four sticks! Which one's the longest stick?" So [we] learn how to ask the right types of questions and expand on it to meet the curriculum.

(Erin, Early Childhood Educator, Sooke Nature Kindergarten)

I look at the Ministry guidelines and try to match and fit in the math and the science with what's happening in our immediate environment. I try to have the arts integrated as well. Everything is kind of integrated so that they never really... it's invisible, they don't really know when they're learning and what they're learning. [...] It's not like, "Today we're gonna learn about symmetry". Instead we started making mandalas and I started talking to them about symmetry through [...] the artwork.

(Sande, Teacher, Equinox Outdoor Kindergarten)

In both cases, the children’s exploration of literacy and numeracy were more experiential and embodied than what may occur in traditional, indoor kindergarten programs. Further, the materials used to encourage counting, phonological awareness, and letter recognition, was found naturally in the outdoors and challenged the need for market-driven, commodified classroom materials, such as alphabet display strips. When children were interested and engaged with outdoor play, various forms of literacy and numeracy seemed to “naturally” emerge.

The emphasis of school readiness that plays out in Canadian kindergarten programs is revealed in policy initiatives, such as the establishment of Ontario’s Numeracy and Literacy Secretariat. What a shame Ministries of Education do not also establish secretariats for all the other forms of “ literacy” that humans may need in order to meet academic goals! By narrowly focusing educational goals on learning to read and write, schools miss possibilities for social transformation through learning various

forms of emotional, social, health and ecological literacies. Imagine the possibilities for fostering children's intrinsic interests and passions by establishing a Secretariat for "Multiple Intelligences" (Gardner, 1983)! While *alphabetic* literacy is integrated in these outdoor programs, there are also experiences that explore forms of ecological literacy that go beyond reading, writing, and counting *about* nature.

Ecological literacy. Each of the educators shared their own conception of the term ecological literacy and, in their own ways, described how ecological literacy involves an awareness of humans in relation to place and our surroundings. The Sooke educator referred to a talk she recently attended by early childhood educator, Ann Pelo (2013) about fostering ecological identity in young children. She (Erin) struggled with defining the term as she acknowledged the variations of meanings the term carries. She expressed that her co-educator, with a background in teacher education, seemed to prefer "know[ing] the names of stuff and to understand them. Whereas [she preferred] understand[ing] the connectedness between them". Along with "knowing place", the Sooke educator believed that a combination of "knowing the terminology" and having an actual *connection* to ecology best described what ecological literacy means to her. The Equinox educator thought of ecological literacy as "integrating the concepts of the environment and awareness of things that are going on in their environment, within a framework that kids can understand, but use their imagination". Referring to a book called *The Great Kapok Tree* (Cherry, 2000), the educator shared stories that make learning about the interconnectedness of the environment accessible to young children. The educator from Carp Ridge also drew upon a scientific lens to describe ecological literacy as "our understanding of the world around us, or the natural functions and features and complexities and natural systems, but also our place in them. And [...] how we support and perhaps, knowingly or unknowingly, detract from natural systems."

A *connection* to nature, mingled with *knowing* nature, and forming an *understanding* of nature, all play out in the educator's conceptual exploration of ecological literacy. From a phenomenological perspective, defining ecological literacy is also embedded in the children's emerging grasp of the English alphabet and numbers, combined with regular experiences with outdoor play. This invites contemplation of "two related issues of language: the 'forgetting' of nonverbal, somatic experience and the misplaced presumption of human superiority based on linguistic capabilities" (Bell & Russell, 2000, p. 189). A more radical way of de-colonizing the literacy piece in children's outdoor play requires consideration that "at the most primordial level of sensuousness, bodily experience, we find ourselves in an expressive gesturing landscape that speaks" (Abram, 1996, p. 81). Through an affective, embodied, and perceptual relation to place, the children in these outdoor programs appear to demonstrate an emotional bond to the ecology they play and learn with. Hopefully, outdoor early childhood programs may further open up spaces to knowing the wild in sensual, creative and embodied capacities and trust the literacy pieces will naturally emerge through the children's unique experiences in the world.

Biophilia. As children became familiar with the outdoor places they engaged with, the educators recalled moments where children were concerned with and emotionally responsive to the well-being of the forest and animals who lived there, suggesting that if "we appreciate the aliveness[,] we are emotionally affected by their presence" (Bai, et al., 2010, p. 138). One example from the Carp Ridge educator exemplifies a child's attachment to "their" forest:

There were a couple of children exploring and somebody was kicking a fungus because he didn't know what it was. And someone else picked a fern. Then one of the children turned around to me and said, "Everyone's destroying all the living parts of the forest!" And [she] had this distressed look on her face. And that allows her voice to be heard, what that meant to her, and why that was upsetting.

In another example, a child learns about seasonal cycles that impact the forest vegetation in an embodied and affective way after expressing her despair about a forest that appears "destroyed":

This winter we had quite a bit of snow - heavy snow - and quite a few icy days, but now all the snow has melted. A couple of weeks ago one of the children just stood on the porch of the tent and looked out and said, ‘What happened to our forest? It's all destroyed!’ And she was really just seeing last years plants and grasses that had either died or survived, but are old; more woody; and aren't full of life yet in the spring. So, she was really upset about it, and we talked about that. About [how] there was snow on the ground that covered everything and what that meant for the plant life. [That] the forest wasn't destroyed at all, but just part of the natural cycle in the forest and this is what it looks like in the [early] spring.

(Heather, Teacher, Carp Ridge Forest School)

In the descriptions above—the children’s strong emotional responses to the destruction of plants—suggests a presence of biophilia and an extension of self that includes the plants as part of their field of care. This also connects to indigenous ways of knowing the land as “All our relations” (King, 1990; LaDuke, 1999). Discourse in environmental education and place-based education raises hopes for a shift in our modern cultural lens so that “when we look at the world through a biophilic view, trees, animals, streams, mountains, and all that exist in Nature, elicits in us deep feelings of love, gratitude, compassion, care, and respect” (Bai et al., 2010, p. 138). As Evernden (1985) wonders, “[i]f we were to regard ourselves as ‘fields of care’ rather than as discrete objects in a neutral environment, our understanding of our relationship to the world maybe fundamentally transformed” (p. 47).

In his discussion about possibilities for a biophilia revolution, Orr (2004), requests that we consider how “[t]he ecological crisis [...] is about what it means to be human” (p. 140), which includes our capacities for love, destruction, and interconnection. If humans are biologically inclined to “affiliate to living things”, as in what sociobiologist, Wilson, coined *biophilia* (Orr, 2004, p. 136), then what is happening in educational settings to nurture this affiliation? Sobel (1996) recommends “young children have an opportunity to bond with the natural world, to learn to love it and feel comfortable in it, before being asked to heal its wounds” (p. 10). The experiences described by educators in the outdoor early childhood programs reflect an awareness that “[y]oung children tend to develop an emotional attachment to what is familiar and comfortable to them. If they are to develop a

sense of connectedness with the natural world, they need frequent positive experiences with the outdoors” (Wilson, 1996, para. 16).

None of the educators specifically identified connections to Indigenous ways of knowing – perhaps because it “raises questions about the vulnerability of others’ histories to appropriation and misinterpretation” (Reid, Teamey, & Dillon, 2004, p. 252). However, the descriptions of the children’s embodied and emotional connection to *their* forest and *their* trees, speaks to a relationship with “[p]rinciples governing indigenous social life and economic exchange [that is] centered on reciprocity: among humans, with nonhuman animals, and with a responsive landscape” (Cruikshank, 2005, p. 18). The educators’ and children’s capacity to form loving and responsive relations with the land is echoed in how Salmón (2012) describes such relations as kin:

[we] share awareness that life in any environment is viable only when humans view the life surrounding them as kin. The kin, or relatives, include humans as well as all the natural elements of the ecosystem. We are affected by and, in turn, affect the life around us. (p. 21)

In these early explorations of bonding and emotional attachment with the land, possibilities emerge to form “closeness to the specialness of life” (Lewis & Kahn, 2010, p. 146). It is also through our deepest affections that reveal the sensations of loss. With modern mechanics in place that generate a discomfort with bodily life processes and death processes, these outdoor programs may serve our culture and education systems well to learn how we may integrate experiences of death, loss, and separation which are inherent elements of life and the natural world.

Literacies in life, death and mortality. Through encounters with the seasons and the emerging life and death processes that occur among plant and animal life, children are engaged in conversations about life that are typically avoided in modern culture and educational settings. Encounters with dead animals lends itself to learning about the various “life stories and death stories” (Phillips, 2000) of ecology, “making mortality [...] integral to our sense of ourselves” (p. 118). The

following quote highlights how children may engage in responding to death by sharing stories and wonderings about how an owl or a bird died:

We found an owl that had died and [the children] all came up with different theories. And we found a pile of feathers one day and they all [thought,] "Maybe the branch broke and the bird fell. Maybe it couldn't fly fast enough and a cougar got it. Maybe it didn't get enough food and died. Maybe it flew into the tree. Or maybe it had a broken wing and a fox [got it.]" We don't even have foxes!

(Erin, Early Childhood Educator, Sooke Nature Kindergarten)

Through ongoing contact with the outdoors and by including conversations about death and dying, outdoor early learning programs may challenge modern humanist endeavors that strive for immortality and hierarchy. Myers (2007) noted that “the meanings of animals to the children [were] related to specific psychological and developmental issues, such as loss and bereavement, coping with physical harm, or concern for a baby animal’s need for room to grow” (Myers, 2007, p. 59). Canadian poet McKay (2001) highlights the disconnect modern society creates between children and death when he writes, “When we were kids, dead birds were a fine opportunity for funerals: we’d bury them in shoeboxes and get in on this *death* business, fool around with the magic of ritual – candles, solemnity, shredded pansies” (p. 32, original emphasis). The encounters with death in these outdoor programs counter the morbid fear and denial modern society indirectly teaches children when a “misguided yearning for transcendence from earth into the heavens engenders mystifications and authoritarian fantasies of absolute control that alienate and interfere with organic relationships and ecological respect” (Darder & Yiamouyannis, 2009, p. 6).

The children’s emotional connections described by the educators also reveal how love and loss mingles with our loving attachments to place. Cycles of life and death are inherent in ecological, natural processes, yet we exist in a world where violence towards humans, animals, and ecosystems are normalized and sanctioned through the media and consumerism. In fostering children’s relationships with ecology and place, how do we genuinely engage “with keen loving attention, not naïvely, but with senses that smell, hear, taste, and touch environmental narratives in all their

imagination, pain and grace” (Fawcett, 2000, p. 143)? Conversations about the realities of ecological degradation from human destruction and ignorance are largely missing from educators outside of environmental education circles. Further, how do we engender these qualities in education, when educators are not typically equipped – or expected – to engage in emotional and social relating? In the following quote, the Sooke educator describes the children’s reaction to a construction crew paving concrete over a living landscape, highlighting a need for educators to think critically about children’s relationships with place:

Recently[...] we walked down to the beach and there was this blackberry area that had been cleared. I guess they were gonna put condos in or something in there. The kids were just heart-broken. They were devastated. And to see such a young kid so impacted by that? It broke my heart. And they started just yelling at this paving company saying, ‘You’re killing nature!’ And one little girl goes, ‘A bear is going to have to eat garbage now!’

(Erin, Early Childhood Educator, Sooke Nature Kindergarten)

An emerging sense of interconnectedness and ecological justice appears as the children link the loss of habitat with the needs of bears and the bears that live in their community. The educator’s emotional response to the child’s reaction mingles with the subordinate position children hold as citizens of the world. Although the educator planned to include this experience in the Sooke Nature Kindergarten blog, she was advised against the idea. Sadly, if we dismiss the economic, sociological and political layers of the places we live, learn, and work, then we indirectly contribute to the ways “bioregions are being transformed pathologically from natural ecologies of scale that support life to capitalist ecologies that function beyond limit and threaten death” (Kahn, 2011, pp. 135-136).

The children’s response to the paving company and its encompassing relationship to concern for animals and their habitats reveal the children’s capacity for what Haraway (2003) describes as “all ethical relating, within or between species, [that] is knit from the silk-strong thread of on-going alertness to other-in-relation” (p. 50). The final section explores how the educator’s perceptions of children’s experiences of wonder and specific moments of ecological encounter in the outdoors relate to possibilities for critical place-based ecological literacy.

Part III: Child – Place: Ethical encounters

A deviation from anthropocentric notions maybe to acknowledge that place is a mystery. For example, when the frame of analysis shifts from human-centeredness towards human/nonhuman entanglements, completely new and unexpected co-habitations of places become visible. (Duhn, 2012, p. 102)

Prominent entanglements that emerged from the outdoor early childhood programs included how educators responded to children's wonder and curiosity and the question of ethics in these encounters. The descriptions of children's interactions with other species in the outdoor programs indicate that worms, wood bugs, ants, banana slugs, snails, frogs, rocks, sticks, and plants all piqued the children's interest and curiosity. Since children spend most of every day outside, children get to encounter and experience ecology in all sorts of manifestations. As an alternative to learning about animals and ecosystems in books, videos, and animal entertainment centres, such as zoos and marine parks, children are immersed in daily inquiry and dialogue with the educators and other children about all those they share space with. Perhaps when educational settings become reconfigured to be inclusive of the local flora and fauna, children may help "disconnect the senses from representational figuration of the imagination and become immersed in the multidimensional sensuality of the multitude as a natureculture network or assemblage struggling against destruction and domination of Western industrialization" (Lewis & Kahn, 2010, p. 109). The educator from Carp Ridge raised the point that when they are in the woods or by the pond, "the children are not in an aquarium and nor is anything in the forest. We're learning by doing or learning by sensing and feeling and touching and fully immersing ourselves in what we're learning." The ways in which the educators respond to wonder and ethics in ecological encounters reveal important pedagogical possibilities for supporting empathy for the other-than-human worlds we live with on earth, and "reconceptualizing inclusion in early childhood communities" (Taylor & Giugni, 2012).

Tuning into wonder and reciprocity. Educators responded to how they notice moments when children are experiencing wonder, and all three revealed that wonder is described differently depending

on the child. The following quote highlights how the Equinox educator located wonder in the children's excitement in sharing stories of their discoveries, but also in the child's sense of the educator's interests.

When they come in with stories. And [...] that's why I always try to create room for stories. They're coming and they're sharing stories about what they've seen. They get excited [and] it just comes out in their body and their voices. And then sometimes, you know, they'll bring me a little something that they found in nature or they'll draw me a picture or, you know, their parents will give me their descriptions. [The] kids always think of me in nature [when they say,] 'Oh, Sandee would like that or [...] she's about nature'. I think it's pretty easy at this level to see. It's in their body language and the words that they say.
(Sandee, Teacher, Equinox Outdoor Kindergarten)

The ways the educator from Sooke shared her sense of locating wonder in children revealed her awareness of the multiple ways of being and diversity of personalities among the children. The following quote highlights the unique way a particular child responded to a rock:

It's really different for each child. We have so many different personalities. [O]ne child [is] really quiet [and] he will explore it on his own. [I] see him touching it and feeling it and wondering. [I] can see his brain moving about it and he'll usually carry [whatever it is] with him for [...] the whole day. If it's a different kind of a leaf, or a different kind of stick, or – he found this rock, which [looked] like four different rocks [...] molded together somehow. It was so weird and so cool. Instead of asking about it, he just carried it with him, *all day long*. [H]e was looking at a rock book the next day [and we] can see him process it.
(Erin, Early Childhood Educator, Sooke Nature Kindergarten)

The ways the educators respond to children's wonder and curiosity reflect an awareness of the embodied nature of experiential play and learning. All three educators observed how the children's wonder is expressed "all over their bodies", while also inviting further inquiry to the children's own perception of wonder. For example, when children encounter something that intrigues them, they may respond in the same way they observed it in their educators – who carry their own interest, curiosity, and wonder with the natural world. As the quote below reveals, the Carp Ridge educator shared that, she often responded to the children's excitement and curiosity by tuning into the children's own perceptual capacities:

"What caught your eye about it? How did you even notice it?" Those are frequently the questions that I'll ask the kids, because often they notice things that three other people have walked by, and somehow, something special sparked for them. So, their own sense of

wonder sparks each other's too. There is [...] a common thread throughout, like you can hear it in someone's voice when they're excited and when it's something that is unique and special, or when they're curious about something, they'll ask questions and it sparks a lot of other questions. And often with this kind of curiosity, they don't necessarily need hard and fast answers; it sparks more curiosity and allows for a deeper discovery where we don't have a lot of fast hard answers.

(Heather, Teacher, Carp Ridge Forest School)

Further, in the Sooke program, children were often described as carrying what they were interested in.

For example,

[W]e've given that vocabulary right from the beginning [as] one of their ways...tools to wonder about something. Or notice something. They say, 'I notice that this leaf is half brown on one side and half green on the other side. I wonder why?' And they always do wonder why. Constantly. They'll say it out loud and they'll share it with a friend. But a lot of kids, they just hold it in their hands. They'll carry it with them. If it's something they're interested in, they'll carry it with them all day long. [W]e have kids who carry wood bugs with them for the whole time we're outside. Or caterpillars, or snails, or [...] this one child had a slug [and] everyday he would find a new slug (because we leave everything in nature). And he could not start the trail until he found a slug (which was really hard, actually). But all of his friends would help him find a slug. And he carried that slug with him for [over] a week.

(Erin, Early Childhood Educator, Sooke Nature Kindergarten)

The ways the educators tune into the perceptual ways children explore the world echoes the work of Sebba (1991) who described that children's "unique affinity to the environment [is served by their] receptive senses" (p. 405). The agency of the other-than-human that surrounds the children and educators in the outdoor programs also reflects how elements of the world *grabs* children's attention. Thomson (2007) describes how the environment can be located in the body as "[a]ffective allure or *grabiness* implies a dynamic gestalt of figure-ground structure: something becomes noticeable, at whatever level, owing to the strength of its allure or grabiness, emerging into affective prominence, salience, or relief" (pp. 263-264, original emphasis). A recent compilation of essays called, *Companions of Wonder: Children and adults exploring nature together* (Dunlap & Kellert, 2012), shares experiences from a range of educators, philosophers, naturalists, anthropologists, and writers about poignant moments of being with an adult who fostered a genuine connection to "nature". As the children and nature movement encourages personal – and mostly nostalgic – reflections about

childhood, there seems to be a common thread of the importance of sharing experiences in the outdoors with a meaningful and trusted adult. Thus, the ways educators embrace the emotional and social relating with the natural world reveals a pedagogy of place that acknowledges the mingling of body and mind and environment that influences the unique ways children respond to the world, while honouring the reciprocal nature of the child-educator experience.

Ethics and empathy in ecological encounters. How the educators weaved ethics and empathy into the children's ecological experiences reveals an important part of supporting environmental education in early childhood programs. Further, studies into the sociality of children's relationships with animals will be helpful for how educators respond to children's interactions with other species in the outdoors. Supporting educators with how to respond to ethical encounters in the outdoors may invite that, "animals are not lesser humans; they are other worlds, whose other worldliness must not be disenchanted and cut to our size, but must be respected for what it is" (Noske, as cited in Haraway, 2008, p. 177). Myers' (2007) work in social psychology explores children's relationships with animals and that "embodied interaction is at the root of the self, moral feeling, and other mental phenomenon [and that a]nimals are evidently vital in the child's sense of the important things in the world" (pp. 5-7). Because children are so responsive to "direct and tactile experiences [and nature's] subjective agency" (Myers, 2007, p. 9), educators grapple with how to fostered wonder, but also raised the children's awareness of the possibilities for harm, violence, and trauma to other species. The following three quotes poignantly reveal how the educator from Carp Ridge invited children to empathically consider the influence and impact they may have by handling frogs, wildflowers, and trees:

Frogs

[W]e learned from some of the older children about how to hold the frog and somebody described it as, 'It's like picking up a tomato that you don't want to squish. Like a perfectly ripe tomato and you don't want to squish it'. And that resonated with some of the children. They're always delicate and gentle enough with frogs, but firm enough that [they] won't jump away on them. And we have a time limit with [frogs] once we take something out of the pond and put it into a bucket of water – in particular, the mega fauna, [such as] the frogs and tadpoles. Like, under 10 minutes. They start to learn about just taking care of other things beyond themselves.

(Heather, Teacher, Carp Ridge Forest Kindergarten)

Wildflowers

We came [to the pond] yesterday [...] where they noticed the first spring wild flowers. They were so excited. ‘Heather, Heather! Can we pick one for our moms?’ And so, then we talked [about it] we learned that bees need flowers, and that's their only food right now, so we shouldn't pick them. We should leave them until there's a lot more. [So,] if picking flowers is something that's really important to the children, then they need to be a little more conscious of what they're doing, and then being a little more observant.

(Heather, Teacher, Carp Ridge Forest Kindergarten)

Trees

[This comes up with] something as simple as peeling bark off a birch tree ... They knew that birch bark is great for starting fires, [and] they saw that it was all peeling, and [...] they wanted to collect some for the next time we have a fire. [B]ut then we had a talk about bark [and how] it protects the tree and what it's there for and so, [I asked,] ‘If you want to collect birch bark for our fires, how can we do that in a way that does not hurt this live tree?’ [T]hen they found some dead logs or some branches on the ground that they could [...] peel. [This offered] a gentler way to be [and gain a] sense that, ‘Right, this bark is here to protect a tree, just like our skin is here to protect us. And it probably hurts in the same way.’

(Heather, Teacher, Carp Ridge Forest Kindergarten)

In the above examples, the educator's personal ecological literacy becomes intertwined with her conversations with children to support emerging social justice and ecological ethics.

Part of the movement to connect children to nature includes hopes for a sustainable future, that is, if children form loving relations with the natural world, then they may be more inclined to pursue lifestyles that strive for an ecological ethics. While the impact of the children on the local ecology of the forest was noted for the Sooke Nature Kindergarten, it was expressed that “the greater impact will be the positive influence on the children and families who participate in the program”. The following quote describes how students in the environmental studies program at Royal Roads University shared their interests with the children about the ecology of the university campus:

[The Royal Roads] students will come [and] check out the places we're going to and make sure that there are not plants that need to be protected. They taught the kids about trilliums because that's a protected species, so the kids don't go near them anymore to make sure they're safe. They taught [the children that], ‘You can't hurt this plant because it takes six whole years for it to grow!’ [And now] the kids [are] passionate about [it]. We've had an outdoor school come and teach the kids about preservation and that kind of stuff. And then the kids came up with a rule that they don't take anything. So they don't pick anything

living [and] that cuts down on [their impact] a little bit. But, if you go for a walk in the forest, you *can* often see where we've been.

(Erin, Early Childhood Educator, Sooke Nature Kindergarten)

Reflections on how to support ethics in ecological encounters highlight the need for awareness on the part of educators to have their own sense of ecological literacy that helps nurture children's relation to place.

In all programs, the educators described how the children demonstrate more care and concern for other animals and insects than they have observed in more traditional early childhood settings. The educator from Equinox, for example, shared her observations of how the children interact with other animals in the outdoors:

When I see my kids interact with nature, they're just so much more aware and care about it. They don't run up and destroy it, as I often see other children. Or chase it or kill it. They're not afraid of it. They treat it with curiosity and with love and awe [...] I have parents also tell me that the way their kids interact with nature is so much more complex or at a higher level than other children.

(Sandee, Teacher, Equinox Outdoor Kindergarten)

The educator from Sooke also revealed that the more interactions the children had in the outdoors the more care, concern, and protection they demonstrate for those they encountered. For example,

we do a lot of care-taking with nature and I guess it really resonated [with] me about the care taking piece, [such as] their role to take care of nature and their role [in] destructing nature and being part of it because [...] they were so angry that these people were cutting down trees.

(Erin, Early Childhood Educator, Sooke Nature Kindergarten)

Myers' (2007) research in children's social relations with animals indicates that "[e]xamples of children expressing concern for an animal's autonomy hit at one of the core features of animate beings that are most obvious and important in children's perception" (Myers, 2007, p. 50). Further, how the educator responds to children's perceptions about animals meets Fawcett's (2002) suggestion that children "stand on the boundary of knowing themselves as animals, as alive, and then facing life-long instruction into the cultural norms of being human, complete with particular animal relationships and

behaviours specified by each and every culture” (p. 127). In the following excerpt, a child negotiates this boundary in her wonderings about worms as friends:

A little girl the other day [said], ‘Ahhh, worms don't make very good friends.’ [T]his girl *always* had worms [with her]. All winter long. She [always had] at least one worm in her hand *constantly*. Never without a worm. ‘Why don't worms make good friends?’ She said, ‘Cause you put them down and you never see them again.’ ‘Ohhh, so they're like short-term friends.’ And she said, ‘Yeah. Short-term.’ It was just so sweet. That all year she carried these worms, then all of a sudden she's just come to this realization, that worms don't make very good friends.

(Erin, Early Childhood Educator, Sooke Nature Kindergarten)

If children are more drawn to real-life, in-the-flesh, and embodied experiences with animals, insects, flowers, and trees and “stimulated by awareness of the *presence* of those species” [then] the child is nourished thereby through the ontogenetic process toward mature belonging and thus participation in the world” (Livingston, 1994, pp. 130-131), then it seems critical for education to actively foster ethical multi-species relations in the world. For too long – amid increasing ecological and social oppression – “[c]oncerns about the nonhumans are relegated to environmental education. And since environmental education, in turn, remains peripheral to the core curriculum (Gough, 1997; Russell, Bell, and Fawcett, 2000), anthropocentrism passes unchallenged” (as cited in Bell & Russell, 2000, p. 192). How may educators open up spaces for children and animal relations that will allow us “to look beyond our own frames of reference” (Fudge, 2002, p. 138)?

The threads of oppression that exist in the modern world among humans extend to human relations with animals. As mentioned in the thematic review for this paper, the plethora of vicarious experiences children have with animals means that children spend more time with representations of animals than they do with “real life” flora and fauna. The bombardment of fake experiences with animals begins in infancy and extends throughout early childhood with nursery rhymes about farm animals, jungle-themed baby rooms, and cartoons such as *Animal Mechanicals* where anthropomorphized animal robots use their superpower to save the day. Given the affinity children have with animals, it is a pretty deceptive role that adults and our culture plays when we hide how

humans capture, torture, and slaughter animals for products, clothing, and food. Further, bringing children to marine parks and zoos, indirectly teaches them that animals living in captivity is “natural” and good, “reduc[ing] the animal to a spectacle and render[ing] it passive and marginal to our existence” (Myers, 2005, p. 2). It seems like a dishonest gesture to encourage children to cuddle with plush stuffed toys like pigs, cows, and lambs, then serve them pork, beef, and lamb stew for dinner. In these outdoor programs, children have an opportunity to learn from and interact with living animals in their natural habitats, gaining a deeper, more embodied awareness and understanding of how other animals are integrated with the land.

Just as it is important for educators to be aware of how systemic oppression and discrimination play out among humans, there needs to be deeper awareness of how oppression extends beyond humans to the land, animals, and nature. Myers explains that

just as with gender, race, and other categories, children are also learning what it means to be human. Based on what we have learned so far, we know that young children, both in immediate interaction and in self-reflection, experience continuity between human self and animal other. (Ibid., p. 16)

Kahn (2011) shares Butt’s interpretation of *paideia* “as the West’s ongoing attempt to articulate what it means to be socially *civilized* and *human*” (as cited on p. 37), problematizing human distinction from animals that contributes to dynamics of oppression in western culture. In descriptions of the encounters children have in these outdoor programs, both children and educators explore possible “realization[s] of humanity as a *species* being” (Kahn, 2011, p. 139). If modern socialization with other species are predominantly experienced with an understory of human domination, anthropocentrism, and universalizing concepts of children and nature, the findings in this research paper indicate it is possible to open education up towards a “recrafting of the human relationship” (C. Sandilands, personal communication, September 17, 2012) and different kinds of human and nature relations.

Chapter V: Conclusion

Possibilities for life-sustaining pedagogies and pedagogies of relation

[We need to] open up the possibility for a new understanding of democracy in postmodern times, which seeks to avoid the oppression of reducing our density to one single and constant position – be it class, race, gender or whatever. This new understanding of democracy calls for new forms of collective action in the proliferation of public spaces or forms in which collective action can take place. (Dahlberg, Moss, & Pence, 2007, p. 72)

This study explored how three Canadian outdoor early childhood education programs take up human, nature and place relations. The findings reveal many possibilities for interrupting the modernist machine that limits children's ways of knowing the world. The reality of ecological and sociological oppression, and the underpinnings of modernity's influence on lived experiences in early childhood education settings, shape how humans respond to other human, and other-than-human beings. Early childhood education programs may challenge dynamics of oppression, but it requires educators to be aware of modernity's crafty ways of shaping cultural constructions of childhood, nature, and education. Alternative education, social justice education, environmental education, and outdoor education offer possibilities for shifting education – and western culture – towards more sustainable ways of being in the world. Because early childhood is a period when attachments to the world are being formed, and socialization into cultural dynamics are being learned, children may be particularly susceptible to being weaned out of their "wild" and embodied ways of knowing the world. Environmental education is important for increasing an understanding of human impact on ecosystems, however, when it is carried out within neoliberal frameworks that emphasize the very characteristics that exploit, subordinate, and marginalize nature, then efforts for sustainable education are missing viable possibilities for change. Through reductive evaluation methods, siloing disciplines (and valuing some subjects over others), reward and incentive reinforcement, children are indirectly taught that hierarchy, competition, and individualization are valued in society. Further, educational settings fail to recognize the contextual, experiential, and embodied aspects of life that are inherent in learning.

Critical and embodied educators

Our reflective intellects inhabit a global field of information, pondering the latest scenario for the origin of the universe as we absently fork food into our mouths, composing presentations for the next board meeting while we sip our coffee or cappuccino, clicking on the computer and slipping into cyberspace in order to network with other bodiless minds, exchanging information about gene sequences and military coups, "conferencing" to solve global environmental problems while oblivious to the moon rising above the rooftops. Our nervous system synapsed to the terminal, we do not notice that the chorus of frogs by the nearby stream has dwindled, this year, to a solitary voice, and that the song sparrows no longer return to the trees. (Abram, 1996, pp. 265-266)

Educators are sometimes the interface of children's socializations with culture. How educators respond and recognize when children are engaged and interested in the world is an important quality that sometimes requires a trained eye and other times emerges from intuition. After reflecting on the stories and experiences shared by the educators, I wondered about all the other educators out there who work with young children and their own embodied relationships with the natural world. How does an educator nurture children's wonder and reciprocity with the world if the educator does not feel comfortable with the outdoors or experience delight with the first frost of the season? As an educator is quoted in a recent article about taking children outdoors,

If we have a generation that is disconnected from the outdoor experience then that means the next generation has no memory of it," [Hinksman] points out. Like any cultural norm, if it skips one generation, parents and educators won't know how to teach it – and they won't much care about it either (Wayman, 2013, para. 19).

It is concerning how closed off educators are from the entangled relationships between consumption, commodification and capitalism and the impact it has on marginalized groups and ecosystems. It is the underlying values of these life-sucking processes that are reproduced in educational settings and perpetuate oppressive human and nature relations. Life on earth is desperate for change. Change will only happen when more of us start to wake up to the world around us, and when more of us start to care enough to be active citizens in the world.

The need for pre-service education in *critical* ecological literacy

The word activities were all about animals. One of the questions was ‘Lions live in the J _ _ _ _.’

I raised my hand and Mrs. Wardman came over. I asked her if this was a trick question since there was no J word for savannah. She said, ‘Phin, the answer is jungle. Just write jungle down.’ Then she walked back to her desk.

I thought about not telling her that lions don’t live in the jungle because I could tell she was irritated with me. I knew this mainly because when she told me to write *jungle*, her eyelids fluttered and she took a deep breath.

I thought about it for a few seconds. I remembered what my mother had told me about how maybe I shouldn’t point out to Mrs. Wardman that she’s wrong when she’s wrong. But then I decided that she should know the right answer. She was the teacher and it wouldn’t be good if she was teaching everybody the wrong thing for years and years and years. So I raised my hand again [...]

I [decided to leave] the jungle answer out. I should have known it was going to be a stupid exercise. On the first page there was a picture of a polar bear and a penguin sitting on the same ice flow. On the same ice floe! They live on opposite ends of the world, for pity’s sake. Whatever that means.
(Gunn, 2009, pp. 29-31)

Through the fictional character 9-year-old Phin in the novel *Amphibian*, Gunn (2009) highlights a hidden curriculum that confuse human and nature relations, hierarchical dynamics of power between children and educators, and disembodied ways of “teaching” about ecology and literacy. Hopefully, the experiences shared by the educators in this paper will inspire educators and pre-service educators to examine connections between their pedagogical approaches and environments with which they work; and ask whether they help or hurt possibilities for sociological change. The educators in these programs all have backgrounds in environmental education and they reveal their concerns about the fears they observe in other educators and adults about the possibilities for learning outdoors. While philosophies embedded in early childhood programs advocate children’s well-being and opportunities for play, there seems to be little awareness of the importance of outdoor play experiences and environmental education in early learning and care (Davis, 1998; Davis, 2009). Outdoor programming

is often compartmentalized and is seen as something that is either optional [with] a general focus on playground safety and design, [rather than] diversity of experiences that can be nurtured outdoors (Crossley & Dietze, 2003, pp. 16-17). This may be influenced by a number of factors, including a lack of post-secondary training in outdoor play and environmental education for early childhood education (Flogaitis, Daskolia, & Agelidou, 2005; Yuen, 2008), and the prevailing modernist, commodified, indoorsy and *technophilic* culture in North America.

Since greed, discrimination, exploitation, and violence have become so normalized within our culture, it was inspiring to learn that these outdoor early childhood programs may effectively obscure modernist views of childhood and nature. I am hopeful that the lived experiences of the children and educators inspire other to become more inclusive and loving in relations with children, nature and life. If educators themselves are trapped in the grip of neoliberal consent, then it becomes imperative that courses in social and ecological justice are embedded in educator pre-service programs. Perhaps, by integrating critical ecological pedagogy in post-secondary training for Early Childhood Educators, early childhood education and

[e]nvironmental education could [...] move beyond its discursive marginality by joining solidarity with critical educators, and a real hope for an ecological and planetary society could be better sustained through the widespread deployment of transformative socioeconomic critiques and the sort of emancipatory life practices that could move beyond those programmatically offered by the culture industries and the state. (Kahn, R. 2011, p.7)

The experiences that were shared by the educators in the outdoor early childhood programs raise my hope that play in the outdoors with critically attuned and responsive educators offers alternative and transformative praxis that will support loving and “kin-centric” (Salmón, 2012) relations; and possibilities for children and ecology to flourish.

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Appendix A

Interview Questions

Thank you for sharing your time with me to help me learn more about your experiences in this outdoor early childhood program. This interview process will be semi-structured, with several preconceived questions, but in anticipation of this interview evolving as an informal conversation, some other questions may emerge as we go along:

1. What are some specific moments in this program that resonate with you and/or with your role as an educator? What are the most meaningful experiences of this program for you?
2. How have your experiences in the program influenced or not influenced your feelings towards the outdoors?
3. What brought you to this work?
4. What do you find most challenging?
5. If you have worked in more traditional early childhood settings, what are some qualitative differences between previous experiences and current experiences?
6. What do you think is important for a “good” childhood?
7. What hopes and dreams do you have for this form of pedagogy and practice? And/or early childhood education, in general?
8. How would you describe your curriculum approach?
9. What does ecological literacy mean for you?
10. How are environmental ethics explored in outdoor play?
11. How does this program meet the broader cultural goals for learning and education?
12. How does this program explore issues related to social justice or dynamics of oppression (i.e. sexism, classism, ableism, heteronormativity, racism, speciesism)?
13. How does this program explore indigenous knowledge and historical relationships to the land?
14. How does this program explore issues related to climate change and anthropocentrism?
15. What are some examples of how children connect with nature? How would you describe a connection to nature? How may this appear to you?

16. How would you describe moments when a child may be experiencing curiosity? What about moments of wonder? Any specific examples? What are some behavioral indicators of wonder or curiosity?
17. How do you see the children socialize with “nature”?
18. How do children relate to nature? What stories have emerged from children’s encounters in the outdoors? How do children relate with different flora, fauna, and climate?
19. How does children’s relation with their senses and perceptual awareness appear to you? Are there any moments that children’s experiences seem to be particularly embodied or located in their bodies and their senses?
20. How do children respond to “bad” weather?
21. What are stressful aspects of the program, for you and for children?
22. How would you describe the children’s approach to risk-taking?
23. What are some ways that children engage with emotional skills, such as expressing emotions and coping?
24. What are some ways that children engage with social skills, such as play entry, and problem-solving?
25. How does “nature” engage with emotional and social learning?
26. What is the distance range that families live from this program?
27. Do children spend more time in some particular areas than other, why do you think this may be?
28. What are the families’ reasons for choosing this type of program? What do they seem to value about these programs?

Appendix B

Nature and Place in Outdoor Early Childhood Education

Codes

1. Dynamics of power and hierarchy among actors
2. Emotional expression
3. Behaviour dynamics
4. Experiences of empowerment and self-health
5. Experiences that reveal relationship, interaction, and intersubjective
6. Space in the outdoors
7. Movement
8. Ethics in encounters
9. Children's expression of multiple intelligences, ways of knowing, and individual personalities
10. Perception and sensory experiences
11. Integrated curriculum experiences
12. Provincial curriculum and school standards
13. Expressions of creativity, learning, meaning making, and knowledge
14. Perceptions and negotiation of risk
15. Literacy and numeracy experiences
16. Machine, tool and technology encounters:
17. Animal encounters: worms, snails, slugs, banana slugs, water strider, snails, frogs, wood bug, wasps, owl, raven, woodpecker, swan, porcupine, deer, grouse, cougar, goose, fox, bear, black bears, and beaver
18. Mineral and element encounters: rocks, sea, water, ice, rain, wind, water, fire

19. Plant, tree, and vegetation encounters: Daphne, red maple, logs, bark, Douglas Fir, sticks, wild flowers, pinecones, and Hemlock.
20. Climate encounters: rain, sun, and wind
21. Social experiences
22. Named places: The forest, the Teeny-tiny forest, the Beach, the Pond, Mother Rock, 300-year-old Douglas fir
23. Pedagogy

Appendix C

Themes: Pedagogies of Relationships: Body, Program, Place

Child – Body: Senses in motion

- Movement and affectivity
- Children and trees

Child – Program: Children’s responses to program curriculum and philosophy

- Integrating curriculum and outdoor play
- Unpacking traditional teacher training
- Fostering self-esteem
- Play and learning
- Numeracy and literacy
- Ecological literacy
- Biophilia
- Literacies in life, death and mortality

Child – Place: Ethical encounters between child and place

- Tuning into wonder and reciprocity
- Ethics and empathy in ecological encounters