"Rain, Rain, Go Away!" Engaging Rain Pedagogies in Practices With Children: From Water Politics to Environmental Education

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Inspired by the popular children's song "Rain, Rain, Go Away," this paper explores what it would look like to consider inviting rain to stay in our practices with children. This invitation acts as a provocation for pedagogical practice that has the potential to engage thinking differently about the ways we work with children and youth. Framed from the vantage point of current curricular practices in environmental education, this paper fuses discussions about water (including racialized and gendered politics) with a consideration of the histories of environmental educational practices as they are currently situated within childhood teaching. In pushing ourselves to think about our bodies as watered/weathered, especially in the context of educational practices, we are able to explore new territory that moves us toward a critique of the taken-for-granted ways in which children and nature are continuously conceptualized, and we open up room for dialogue that moves beyond developmental psychology frameworks. Through considering rain and inviting water to stay in our practices with children, it is suggested that these moments provide critical insight into the more-than-human relationship between children and nature that goes far beyond the romanticized understandings that exist today to consider children's common worlds.

Key words: water; rain; pedagogy; common worlds; children

I woke up one morning listening to the rain beating off the window. The cool breeze was a nice break from the hot and humid temperatures we had been getting; however, it was the third day of rain. Another day of rain meant the likelihood of the school in the favela (slum) closing down was greater. I called one of the other volunteers to confirm if the classes had been cancelled. They had. Another day to lie in bed. I started to wonder what the kids got up to when classes were cancelled and our programs were not running. In Brazil, children go to school for half a day either in the morning or afternoon. When they are not at school, children in the favela end up back at home, roaming the streets of the community. Our programs were offered twice daily to ensure that children studying in the morning could attend classes in the afternoon, while children in the afternoon could attend the morning programs. With school and programs cancelled, I wondered what they might be up to. Classes were often cancelled due to rain. Rain is a concern in this specific favela due to the geographical space it consumes. With the community centre located at the side of a hill and the school at the bottom, torrential downpours make the space especially vulnerable to landslides. I had spent a couple days at the community centre when torrential downpours had swept by, trying to tiptoe in Havaianas (Brazilian sandals) through the murky water as it gushed past, which was nearly impossible. It was dangerous at times trying to battle the downstream force of the water while attempting to manoeuvre my way around the favela. For this reason, when it rained hard, it poured, and classes were cancelled.

The above is an example of a time when rain affected the liveliness of the children, the volunteers, and me as we attempted to manoeuvre our bodies through the daily living conditions of the favela. The power of the rain affected our bodies by limiting and constricting our movements and encounters in the world around us (Ingold, 2007). I use this experience to provoke inquiry in early childhood practices toward exploring possibilities for thinking with, alongside, and as rain. In attempting to wrap my head around what possibilities thinking with rain could offer for pedagogical practices with children and youth, I engaged in a dialogue with my two-year-old daughter.

Me: "Oh, Jada, how can Mummy start thinking with rain?"

Jada: "Ohhh, it's raining Mummy."

Me: "Yes, honey, it is raining! So how can Mummy think *with* rain?" [my voice sounds desperate]

Jada: [sings] "Rain, rain, go away. Come again another day..."

I laugh. And then pause to reflect on what she had said.

Instead of looking to rain as something that needs to go away and come again another day, how can we encourage the rain to stay? In thinking back to my experiences while working in the slums of Brazil and the ways in which the rain limited my body's ability to manoeuvre within the spaces the water surged through, how might it look to instead think alongside the slippery, chaotic flow of rain? What would it look like to invite rain into our practices instead of wishing rain away? How could thinking with rain provide alternative possibilities for engaging with children and youth, specifically in the face of 21st-century climate change?

Context

In considering the questions above in relation to the opening vignette, this paper explores what it might look like to think beyond the popular children's nursery song "Rain, Rain, Go Away" to engage thinking that invites rain to stay. In light of climate change and the romanticized viewpoint of childhood practices that considers the child/nature relationship to be natural, innocent, and normal (Taylor, 2013), this exploration is important for queering the essence of child/nature relations and for thinking differently about our engagements with children in early childhood spaces. This exploration is done in the context of thinking through environmental education's curricular practices with children that fall short when it comes to considering children's understandings of the more-than-human entanglements² they have with the environment.

This paper is broken into two sections and is presented as a conceptual piece that is exploratory in nature and poses more questions than it intends to answer. Questions are placed throughout the paper to provoke reconsideration of how we understand water/rain pedagogies, and also to challenge the reader to thinking differently about how these engagements can shift the ways we understand and practice with children. Water/rain pedagogies are defined as the various ways and experiences of how we learn, practice, engage, and come to understand water and rain as intrinsically intertwined. Because rain is the weathered manifestation of water that falls from the sky, rain and water are used simultaneously and interchangeably throughout the paper.

The first section, "Rain, Rain, Go Away ..." uses the language from the popular children's song to explore current water/rain literature that situates water/rain understandings within the 21st century and the importance of ecological action for children and young people. Situating these concerns in the face of climate change is important as current moves toward sustainability in environmental educational practices continue to center the human through privileging a social justice agenda (Kopnina, 2012, as cited in Taylor, 2017). These concerns are critical to understand in current scholarship because they reference the importance of children's ecological action, which often has been framed within anthropocentric frameworks. As Taylor (2017) notes,

Environmental education reverts to what the teachers (as agentic human students) need to do and the children (also as agentic human subjects) need to learn in order to better care for and protect the environment (simultaneously and ambiguously positioned as holding integral value and as the passive object of human knowledge/needing human care and protection). (p. 1452)

Considering the anthropocentric nature of such practices poses a critical insight into how we understand and see ourselves in relation to the environment, or, in this case, to water. This section, in considering water, then moves toward an understanding of our bodies as "watered bodies" (Neimanis, 2013), which is explored in relation to the literature on politics, race, and gender. A consideration of water politics, race, and gender is important because it helps to situate how water *is* (what it is, what it does, etc.) and how it lives in the world. The ways that water is present in our lives and how water understandings are currently taken up around the globe help to better focus the importance of thinking with/as/alongside water in 21st-century childhood practices. These understandings of water become further entangled in the consideration of our *common worlds* encounters (concerns about our collective relationships with/in the more-than-human world; Pacini-Ketchabaw, 2017; Pacini-Ketchabaw & Taylor, 2015; Taylor, 2013) and also in our pedagogical practices with children.

The second section, "Come Again Another Day," leverages common worlds pedagogies to consider further water/rain engagements in the classroom to think about alternative pedagogical practices. It very briefly explores environmental education engagements with water and explores the ways in which water is currently present in the classroom. Concluding thoughts are given about how thinking through this gap in current environmental education practices will advance knowledge in the field of childhood studies, particularly focusing on common worlds encounters and looking specifically to rain/water pedagogies. The section wraps up with a practical application of rain/weather pedagogies as proposed by Tonya Rooney (2018) that demonstrates a full-circle consideration of the provocations brought forth in this paper and how thinking through some of them in the light of environmental education can provide new possibilities for working with children and youth in the 21st century.

Rain, rain, go away...

Consideration of climate in the 21st century

In the 21st century, climate change is a growing concern (Alaimo, 2010; Shiva, 2002; Somerville, 2013). With large-scale weather events wreaking havoc in certain parts of the globe, there has never been a more crucial time to consider the ways in which we as humans are entangled and implicated locally and globally (Rooney, 2018; Shiva, 2002). It is no longer fair to say that humans are not implicated in the catastrophic events that are happening around the world—research has already demonstrated the intricacies of the smallest actions and their impact on places and things on different continents (Neimanis, 2009, 2012). For example, the plastics we consume in North America have travelled and made their way to affect the lives of whales and birds off the coast of Australia (Earle & Glover, 2009). As climate change intensifies, items like plastics are being swept away and are able to travel farther as tsunamis and hurricanes become larger and their effects greater (Earle & Glover, 2009). Climate-related issues require an engagement with the world that goes far beyond humancentric tendencies to repair the past or salvage the future (Neimanis & Walker, 2014) and instead focus on our collective relations to the world (Haraway, 2002; Neimanis, 2009; Pacini-Ketchabaw & Clark, 2016; Rooney, 2018). But in order to think alongside water, and alongside weather, we need to explore the ways in which water (as it relates to rain) has been conceptualized and worked with in childhood practices.

For the purposes of this paper, I borrow Rooney's (2018) definitions of climate change as long-term changes in temperatures reflected through an average, and weather as the expression of those long-term changes at a given

point in time. Therefore, in this paper, rain is considered as a specific weather expression of climate change.

Climate change and ecological action

In responding to current times marked by drastic climate change, pollution, and dwindling water resources that sit within heavily bounded networks of historical, social, and political contexts (Food, Water, Energy Nexus, 2016; Mudavanhu et al., 2015; Pacini-Ketchabaw, 2017; Shiva, 2002), ecological action of young people is a concern. How young people think about, understand, and engage in these ecological matters can offer a great deal in understanding how to become ethical beings that engage responsibly in dealing with 21st-century concerns as they relate to climate change (Blaise, Hamm, & Iorio, 2017; Pacini-Ketchabaw & Clark, 2016). Children's responses to ecological matters help us to think differently about our daily practices in the more-than-human world, in ways that move beyond human-centered logics and supremacy. Water, as one of the most threatened resources of our time (Barlow, Dyer, Sinclair, & Quiggin, 2008), is a material substance worth exploring with children (Kocher, Pacini-Ketchabaw, & Kind, 2014). As water becomes less tangible, creative ways to understand its uses and prevent its depletion become paramount.

However, in addition to attending to water shortages, understanding the "hows" of water use now becomes the emphasis of current water engagements (Chen, MacLeod, & Neimanis, 2013; Somerville, 2013). As educators realize that we are *watered bodies* and we realize water's potential to transform us, thinking *with* water becomes an important framework to guide our practices. It is in this thinking that we can better attend to water crises that entangle with our daily lives, and work toward a future that sustains watery relations among humans, nonhumans, and living and nonliving materials (Chen et al., 2013; Pacini-Ketchabaw & Clark, 2016). Our bodies' connection and intra-relations with water as manifested through rain is an additional piece as we consider becoming *weathered bodies* (Rooney, 2018). As we move beyond developmental frameworks for thinking *about* water in the classroom toward thinking *with* rain in environmental education and outdoor education frameworks, this paper invites rain into our practices to provoke new possibilities for pedagogical practice with children and youth that considers climate change in the 21st century.

Water subjectivities

Water, as a substance that makes up nearly 70% of our human bodies, occupies nearly 71% of the earth's surface and is something nearly all organisms need for survival. It is crucial to life on earth (Somerville, 2013). As water becomes a scarce resource (e.g., Cape Town, South Africa, recently became the first city in the world to nearly run out of water [Welch, 2018]), humans are forced to unpack their relations with water and rethink their understandings of water.

Astrida Neimanis (2013) asks us to explore our water subjectivities and unpack the ways in which we become entangled within watery relations and watery transformations (Chen et al., 2013). It is through acknowledging these relations that we understand that we are all watered bodies, and we are able to think more responsibly about our ecological relationships with water (Mies & Shiva, 1993). Such engagement allows us to think more about our relationships with and to other watered bodies as we consider ourselves "part of a global hydrocommons" (Neimanis, 2013, p. 28). This kind of thinking allows us to notice where and how we are situated, calling on a politics of location that not only makes us accountable to specific waters, but requires us to notice our subjectivities alongside water.

Neimanis (2013) looks to research by Gayatri Chakravorty Spivak (1994, as cited in Neimanis, 2013), who offers an important point in engaging feminist water subjectivities. In discussing a development project looking to reroute watercourses in Bangladesh, Spivak entangles human and more-than-human worlds when she notices humans'

error in thinking that they "know better" (p. 37, as cited in Neimanis, 2013), alluding that they (as humans) can be in complete control of water. Spivak claims that feminist subjects need to understand that they will never fully know water in a colonial mastery type of way. Instead, she suggests an engagement in "knowing-with" and "knowing-alongside" water (p. 37, as cited in Neimanis, 2013). To practice in such a way calls us to think differently about who we are as watered bodies and to realize how water comes into the political realm as gendered and as racialized (Alaimo, 2010). Doing so, however, requires an exploration of the global politics of water and a look at the ways in which water has been understood in relation to human rights that are bound within gendered politics.

Water as political: Toward gendered politics

In locating water as an entity that is vital for our survival, and in recognizing its precarity in relation to access, cleanliness, and use, water becomes political (Chen et al., 2013; Somerville, 2013). One way of examining the complexity of water as a political entity is looking to water's use in relation to energy. In noticing how water becomes entangled in the politics of energy production and consumption (Chen et al., 2013), we are able to think of questions that surround its uses in the market: How much will water cost? Who will pay? How will energy use be monitored? Water thus becomes an "othered" entity, manufactured and sold within capitalist systems of logic. This othering of water becomes further entangled in political practices as humans continue to see themselves as separate and superior beings in the material world, resulting in the further privatization of water (Chen et al., 2013). Water is therefore brought into capitalist relations as it becomes commodified, at a cost to some humans and nonhumans, including species and ecosystems (Strang, 2013). This commodification of water becomes even more problematic as gendered bodies come into play as watered subjects are regulated (Alaimo, 2010; Bondi, 2002).

Farhana Sultana (2009) explores the complexity of gender and water practices in rural areas in Bangladesh, arguing that water subjectivities are influenced by physical location and spaces in relation to the negotiation and regulation of bodies and gendered identities. Sultana claims that "embodied subjectivities are simultaneously material, social, spatial and ecological in any given context, where the source of water, water quality and water technology interact with the ways that gendered subjectivities are re/produced, reconfigured, lived and experienced" (p. 435). She discusses the implications that arise in rural Bangladesh, where traditionally women are the ones who fetch clean water. Sultana nuances power in its relation to gender and domestic water practices, stating that power differences are specifically noticeable in the household, when considering other factors that influence the reality of accessible, safe, clean drinking water, such as location, time of day, caste systems, and hierarchy within families. While acknowledging the possibility for men to contribute to water-fetching practices, many women find that their feelings are bound within greater systemic limitations. Sultana claims that "struggles over water end up being struggles over gendered identities" (p. 437). Envisioning her work as an additional resource that nuances gendered water politics, Sultana hopes that her engagement with gender in relation to water subjectivities will enrich future gender-nature discussions in feminist-ecological literature.

When we are able to see water as something not everyone has equal access to, we are also able to make connections between rain (as water) and the gendered ways that rain is manifested. When you think, as an example, of the story that opens this paper, the rain negatively affected the lives of children in the favela, who were socially and geographically more vulnerable (compared to children not living in the favela) to the negative possibilities that rainfall could bring (e.g., their school closing down due to risk of landslides). How can we use this example to think about the politics of water as they relate to rain and other weather manifestations?

Seeing water as political allows us to ask questions about who has access to water: Who benefits from certain services, or access, and who is left out? Who is at risk? How is water being used and why? How is rain (or lack

of rain) seen as a threat to some but not to others? From here, we are able to see how water becomes racialized, gendered, and queered (Chen et al., 2013), and as Sultana (2009) points out, how rain/water becomes a struggle over gendered identities. Water is political—its notions and engagements are drowned by social meanings, contaminated by colonial histories, and bound by geography—water is lost at sea. Its discourses flow and change shape as they come into contact with other ways of knowing or of being (in contact with) water (Alaimo, 2010; Chen et al., 2013; Sultana, 2009). Because water is an agent that births us, that brings life to this earth, and that literally connects all of us, paying attention to its flows from Indigenous perspectives is not only useful, but crucial (Chen et al., 2013; Somerville, 2013). Indigenous ways of knowing help us to better understand what being (in contact with) water means. Indigenous stories, traditions, and spirituality help us to move beyond anthropocentric ways of thinking about water and make sense of the deeply political ways in which humans have made water into a commodity, and the dangers in doing so (Christian & Wong, 2013). Looking to water through Indigenous knowledges affords other ways of knowing to engage in practices with water and rain that take into consideration the land and its role in environmental and outdoor educational practices. This is important to consider: As Styres, Haig-Brown, and Blimkie (2013) point out, the sea and waters are as much a part of the land as are people and the environment (Whitehouse, Lui, Sellwood, Barrett, & Chigeza, 2014).

Racialized understandings: Indigeneity, race, and water

Indigenous peoples have continuously been connected to water in ways that signify their deep commitment and connection to land and place. Water is not only a valuable resource that needs to be protected, it is also a life form that transmits hope, love, and meaning to those who embrace and cherish it (Strang, 2013). Water is spiritual (Christian & Wong, 2013). As it moves through the earth, is carried away by streams and rivers, and flows in and out of our bodies, water contains past, present, and future promises of what has been, what is, and what might be for human-environmental relationships (Christian & Wong, 2013; Strang, 2013).

Dorothy Christian and Rita Wong (2013) discuss the implications that come when humans continually take from the earth without giving back. Christian and Wong acknowledge the gift of water that has come from Mother Earth and talk about Indigenous kincentric relations to water as a way of honouring relationships to all living and nonliving beings. They state that all humans need to think kincentrically if they wish to move beyond anthropocentric relationships with the environment. Their view offers a movement toward thinking alongside water, noticing how it slips into our thoughts, floods our bodies, and washes over our heads. Without romanticizing Indigenous knowledge, their thinking offers new ways of being with water and being in relation to the world. As we orient ourselves, our practices, and our thoughts toward an engagement with the more-than-human world, we begin to see different possibilities of how materials and substances like water act in the world and how we can become attuned to their properties. Thus, engaging differently with water, paying attention to how it lives in the world as informed by "socialized, spatialized, ecologized and embodied subjectivities" (Sultana, 2009, p. 438), we can think about the many different possibilities water offers for us to be in the world.

Andrea Moraes and Patricia Perkins (2007) extend ideas related to living in the world with water in relation to gender and race, further exploring women of colour in Brazil and their opportunities in water engagement. In their study focused on water management, Moraes and Perkins found that women of colour were often left outside of political engagement in water practices, which was further complicated by lack of childcare, location, effects of climate change, and poor health because of polluted waters. Such understandings of how race and gender intersect with water practices lend further points of contention to how we engage with water discourses, practices, and uses globally, suggesting that attention should be paid to more-than-human possibilities for thinking *alongside* water and considering the racial and gendered politics that drown out other possibilities. For instance, when looking to

women of colour in Brazil and their inability to engage in the politics of water, we can see how gender is negotiated in relation to patriarchal discourses that are brought to light by other limitations like lack of childcare. How is childcare taken up here to reflect a woman's ability or inability to become involved in water management?

If we take a similar approach to considering rain and the potential threats put forth by rain, we can see that in many places—like Brazil, for instance, and the specific favela I worked in—rain poses a threat to some and not to others, due to geographical space and location. If we can look to race and gender and situate them within politically bounded areas of exclusion, or threat, we can then see how rain (and weather) become contextually situated, and that this situation can change over time. But common worlds pedagogies urge us to move further—to move beyond taken-for-granted understandings of water/rain engagements to consider how we live symbiotically in the world. While still acknowledging the racialized and gendered politics of rain/water, how can we think with/alongside rain/water practices with children and youth to engage new opportunities in pedagogical practice?

Come again another day...

Environmental education practices in outdoor education programs

A brief consideration of environmental education and outdoor educational practices can help to locate where and how water is situated beyond the "traditional" classroom. Becoming more popular in the 1990s, outdoor educational programs started off in places like Scandinavia, Germany, and England, where a push for "holistic" learning was the focus for child development that occurred within more natural settings (Constable, 2014; Knight, 2013). Concerned with children's abilities to obtain lifelong skills, educators created outdoor educational settings in the shape of various forest schools throughout Europe and the UK. These spaces were designed so that children would have free range to explore in "natural settings" while gaining independence, self-esteem, and confidence (Constable, 2014). Outdoor educational settings and forest schools were assessed on their capacity to encourage the children's self-promoted development, with a push for "environmental awareness" (Constable, 2014, p. 40). With many different viewpoints on the importance of outdoor education (the most impactful and continually referenced benefit situated within developmental frameworks), outdoor education was not only about one's ability to access green space but was seen for its benefits to studying (no matter what subject) in a natural environment (Knight, 2013). But what happens beyond a child's ability to simply study and access green spaces? If children's development is at the forefront of outdoor educational experiences, how do children and youth become attuned to their more-than-human entanglements with the natural world?

Environmental education (EE) on the other hand, which is more concerned with the economic, social, ecological, and political matters of urban and rural spaces and takes a human-centered approach to protecting the environment (UNESCO, 1990), considers the human/nonhuman entanglements that coexist within outdoor educational spaces. In the 1990s, EE (in contrast to outdoor education), began to more intricately consider atmosphere, location, people, animals, plants, soils, minerals, water, economics, and energy in order to engage in more ethically sound practices and initiatives about/for the environment as a collective (Palmer, 1998). With a push to consider the entanglements among all of these factors, EE was indeed more concerned about common worlds; however, it maintained a developmental focus in relation to children's learning (Palmer, 1998). With advancements in technology and pushes to live in more ecologically friendly ways in the face of 21st-century climate change, concerns regarding a sustainable future became the focus. What continues to be missing from EE practices even today is a focus on the more-than-human world and how we are enmeshed within it. As one example, an EE program in Ontario reaches toward an understanding of a shared, sustainable future, but does not consider the entanglement between humans and nonhumans; instead, it focuses on water, watersheds, water cycles, wetlands, weather, and

nature more generally (Camp Kawartha, 2018), emphasizing scientific learning about water and weather without consideration of us as *watered/weathered bodies* (Neimanis, 2009, 2013; Rooney, 2018) and what it means to live with/as water.

EE also demonstrates a disconnect from Indigenous knowledges about water/land relations and rarely considers "explicit discussions of settler colonialism, decolonization, and Indigenous conceptualizations of land" (Tuck, McKenzie, & McCoy, 2014, p. 14). This gap is even more problematic when you consider curriculum influences on EE. The anthropocentric view that is at the heart of the Ontario curriculum (specifically in relation to science education and its tie to EE) fails to consider the intra-activity between the child and the more-than-human environment. If we paid more attention to this intra-activity—that is, the entangled and enmeshed relationship between humans and nonhuman worlds that are continuously being diffracted and enfolded into each other (Barad, 2012)—we might be able to look beyond EE and outdoor education programs and see them as more than alternatives to the traditional, four-walled classroom. In these spaces, we might begin to see the intra-activity of common worlds as we better attune ourselves to ways of being with/as water and rain that move beyond the traditional practices that dominate in educational settings.

Thinking with water—Developmental engagements and watered bodies: Moving toward rain

Traditional practices with water in early childhood tend to see water as a resource that needs to be controlled and is used to promote children's development (Gross, 2012; Pacini-Ketchabaw & Clark, 2016). Water is housed in small bins or larger water tables to encourage creative play, where children can simultaneously learn about things like buoyancy, porosity and evaporation. Water is used in experiments to learn about its properties as a gas (vapour), solid (ice), and liquid (water). Colanders, funnels, sponges, and scoops are used for play within the water bins. Children are able to play creatively while also developmentally engaging their fine motor skills through hand-eye coordination, improving their language skills through engaging in dialogue at the water table, and also improving their sensory abilities through tactile engagement with the various materials available to play with (Gross, 2012).

In paying attention to the ways that water lives in the classrooms, Veronica Pacini-Ketchabaw and Vanessa Clark (2016) note the impossibility of controlling water's presence in the room. For example, removing the water bins and water tables from the room does not completely displace water. Because we are all "watered bodies" (Neimanis, 2009) and water is within each of us, water can never be fully removed from our presence (Chen et al., 2013). When we acknowledge that we are all watered bodies, we are able to take on more responsibility in our ecological relationships with water (Mies & Shiva, 1993). In practice, this might mean looking at other ways in which water is within the classroom—seeing the ways that water lives within our practices (Pacini-Ketchabaw & Clark, 2016). Therefore, an understanding and engagement with water that considers our bodies in relation to the water of the planet requires a movement past the developmental logics in specific childcare practices (Pacini-Ketchabaw & Clark, 2016 Taylor & Blaise, 2014).

It is meaningful here to consider the importance of discussing water in relation to rain. Neimanis (2009, 2012) reminds us of the ebbs and flows of water in its various forms and its ability to travel in, around, through, and among us. The continuous cycle, with no clear beginning or end, affects us all—we drink water, it mixes and mingles with toxins in our body, and it is expelled. Once expelled, it makes its way back to the rivers and streams, picking up chemicals, fertilizers, and arsenic along the way, while permeating the various plants and biological species it comes into contact with. The rivers feed into the ocean where fish, plankton, and other marine life feed on it. The same bodies of water have toxins, plastics, and other bile dumped into them. The water stirs it up. After mingling with other aqueous bodies (Chen et al., 2013) in the ocean, water evaporates as it makes its way to the clouds. It then rains. The rain not only touches our body, penetrating our skin, but also gets recycled back into the

earth. Whatever toxins it has picked up along the way are now further spread to plants, insects, and animals. Rain, as a form of water, then recreates this cycle as it travels back into the rivers and streams to the oceans, the sky, and back again to the earth (Ingold, 2007; Neimanis, 2012). This understanding of the flows of water and rain suggests that we had better attune ourselves to being watered bodies and acknowledge our watery relations to both human and nonhuman worlds (Chen et al., 2013; Neimanis, 2009; 2012). Understanding the traditional engagements with water in early childhood practices while simultaneously acknowledging our watery relations to other aqueous bodies positions us for work that moves toward thinking alongside water, more specifically, rain.

Weatherly worlding: Situating rain in environmental education

I turn now to Rooney's (2018) piece on *weatherly worlding* (an understanding of how we can better attune ourselves as humans to the world of weather and engage in learning *with* weather, as a cohabitant on earth) to encourage thinking that focuses on our collective responsibilities in the world. When considering climate change, it is impossible to deny our human influence on weather (Ingold, 2007; Neimanis & Walker, 2014; Rooney, 2018). Simultaneously, our human influence should not be considered in isolation. We are called to look at the intermingling of the human/weather relationship as we symbiotically live together as humans and nonhumans.

Neimanis and Walker (2014) propose that to think with weather, we need to become *weathered*. In becoming weathered, we are better situated, in the intra-active (Barad, 2007) process that engages human/nonhuman matter, to position ourselves as *weather bodies* (Neimanis & Walker, 2014; Rooney, 2018). In becoming weather bodies, we are better able to attend to climate change matters beyond the immediacy of crisis prevention that is caught up in linear salvage discourses that place humans at the centre of climate change solutions (Neimanis & Walker, 2014; Rooney, 2018; Somerville, 2013). Such an engagement is crucial as we work toward better understanding our becomings with climate change in our attunement to water/weather (Blaise et al., 2013).

In the realm of environmental education, Rooney (2018) proposes three ways of engaging with weather in our practices: walking in the weather, returning to places, and attending to more-than-human encounters and concerns. An engagement with walking in the rain could perhaps offer an opportunity for the reconnection of bodies—material and not. Such intermingling with rain could bring out our connectedness through contact zones that are created as the rain falls on our bodies. In returning to place, our memories become a central part in our weathering. As rain falls, we may remember the earthy smell of the air or the visibility of the worms that emerge after being swept away by the raindrops. These memories shaped by the weather allow for places to become familiar, which "provides an opportunity to notice the work of weathering over time" (Rooney, 2018, p. 9) and therefore encourages a more thoughtful connectedness to weather. Finally, attending to more-than-human encounters calls for a careful engagement with the common worlds we inhabit. Plants, animals, other organisms, and other living and nonliving matter dwell within collective spaces and places, calling our attention to the intermingling of human and nonhumans species. With children and youth, attuning to all matter is suggested as a way of exploring curiosities about the world we all collectively cohabit, paying particular attention to our connectedness with rain (Blaise et al., 2017; Haraway, 2002; Kocher et al., 2014; Rooney, 2018). This type of paying attention, which calls us to look carefully beyond what is simply visible to the naked eye (Tsing, 2015), allows us to understand and situate racialized and gendered ways of understanding water that become implicated in rain/weather practices. In EE, for example, this paying attention pushes us further to invite rain to stay in our practices so that we might consider our multiple world entanglements that move us toward thinking differently about how we work with children and youth.

Inviting rain to stay: Alternative curricular practices

Through noticing the undeniable entanglement of water and rain pedagogies, we are able to think about inviting rain to stay as we learn to think alongside rain in relation to climate in childcare practices. The ways in which water and rain slide through the earth, flow in our bodies, and fall from the sky attest to the endless possibilities of attuning ourselves to our weathered/watered bodies, both in the classroom and beyond.

In their ethnographic encounters with people on the west coast of Canada, Phillip Vannini and his colleagues (2012) found that weatherly engagement varied from person to person and at times was racially situated. Through exploring practices of weathering through somatic work, the authors present interesting experiences of "ordinary weather" in coastal regions, specifically looking to their engagements with rain. Beyond describing their cravings for sunlight and warmth and their longing to feel dry, some participants described their experiences with the weather in terms of a negotiated relationship whereby they learned to "live in relation to the weather" (p. 362), and they noted that "we don't live *in* the rain. Rather, the rain lives in us" (p. 365, emphasis in original). Through proposing that rain *is* everyday life, their reflections demonstrate an understanding of their bodies' watery relations to rain and acknowledge their bodies as being weathered and watered (Neimanis, 2009, 2012; Neimanis & Walker, 2014; Rooney, 2018). For the authors, this acknowledgement is a crucial aspect in becoming skillfully weathered (Vannini et al., 2012). Concerned by the limited amount of social science research that looks at weather and climate change, Vannini et al. (2012) encourage us to become *weathered*, as I suggest in this paper. What possibilities lie ahead for curricular practices when rain/water pedagogies are considered in the classroom?

These notions of considering rain/water pedagogies in practices with children and youth in the classroom offer an advancement in the field of environmental education by opening up spaces for young people to consider their engagements with the more-than-human world. These engagements allow for sophisticated understandings of the complexities of climate change we face in the 21st century. In addition, opening up spaces for rain/water pedagogies allows for a rethinking of pedagogical practices that has the potential to go far beyond anthropocentric, privileged, and racialized understandings of common-world encounters that are entangled within political, social, and historical contexts.

Moving beyond developmental considerations of water in the classroom to invite rain/water pedagogies into curricular practices is proposed in hopes of offering a more complex understanding of children's ecological engagement. Looking to young people's environmental awareness as it relates to thinking with/as water and rain can offer other ways for thinking about how we work with children and youth. In considering alternative curricular practices, we are able to situate past/present political contexts as we move toward a more commonworld understanding of children and their environment, in hopes of creatively addressing and attuning ourselves to 21st-century climate change concerns.

This paper therefore presents an opportunity for further engagement and thinking with/as water/rain. It presents an opportunity for those involved in curriculum planning, development, and implementation to pay more attention to how young people are in the world, how the world is in them, and how these relationships are symbiotic and continuously act on each other. These relationships offer alternative ways to conceptualize, think about, and engage in curricular practices that go beyond humanist and developmentalist practices and call us to pay special attention to young people's ecological engagement in environmental matters.

Conclusion

This paper was inspired by the vignette in the introduction, which probed my interest in looking at rain/water

pedagogies in practice with children. In attempting to think about this experience, I engaged in a dialogue with my two-year-old daughter, who began to sing "Rain, Rain, Go Away," provoking me to consider what it means for our collective relationships when we wish rain away instead of inviting it to stay in our practices. Inviting rain into our practices with children and youth will not only help us to better attune ourselves with the nonhuman world, it will help us to generate possibilities for thinking and practicing differently in our work with children and youth.

As I reflect back on the story that opens this paper, I call into question the liveliness of rain that once constricted my movements and begin to ponder what it might look like to think with the rain. How might inviting the rain to stay produce different ways of learning and knowing about climate change? What possibilities exist for pedagogical practices where engagements with weathering take place (Neimanis & Walker, 2014; Rooney, 2018) and where we move toward an understanding of our bodies as being watered/weathered? How can we call gendered and racialized politics into focus when thinking alongside rain, without forgetting the importance of common-world pedagogies? Can our thinking with/as rain provide alternative notions for practice in environmental education, while simultaneously holding the politics of water in one hand and our common-world encounters in the other?

While this paper asks more questions than it seeks to answer, it brings forth provocations that can have important impacts for our pedagogical practices. As we continue to live as coinhabitants on this earth, rain and consequently climate change will demand more questions of us than we can answer. While beyond the scope of this paper, an in-depth exploration of Indigenous ways of knowing and land practices in relation to environmental education should be considered in future research. While taken up elsewhere (see Tuck et al., 2014; Whitehouse et al., 2014), environmental education in relation to land practices needs to better account for the history of place and land in a way that moves beyond settler futurity to address settler colonialism and the appropriation of Indigenous understandings of human/land relationships. Perhaps looking to Indigenous knowledges and accounting for the history of place and land will provide other ways of being with and knowing rain. Perhaps history of place and land will also advance our understandings of the racialized and gendered politics of water that become contaminated in our rain/water futures. For now, I leave you with these provocations in hopes of inviting you to think about our common worlds and our entangled watery relationships. Instead of singing "Rain, Rain, Go Away," let's instead invite rain to stay and see what possibilities it presents for us.

References

- Alaimo, S. (2010) Bodily natures: Science, environment, and the material self. Bloomington: Indiana University Press.
- Barad, K. (2007). Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning. Durham, NC: Duke University Press.
- Barad, K. (2012). On touching: The inhuman that therefore I am. *Differences: A Journal of Feminist Cultural Studies*, 23(3), 206–223. https://doi.org/10.1215/10407391-1892943
- Barlow, M., Dyer, G., Sinclair, P., & Quiggin, J. (2008, August 30). *Parched: The politics of water.* Paper presented at the Melbourne Writers Festival; broadcast ABC Radio November 21, 2008. Retrieved from http://abc.net.au/nationalinterest/stories/2008
- Blaise, M., Hamm, C., & Iorio, J. M. (2017). Modest witness(ing) and lively stories: Paying attention to matters of concern in early childhood. *Pedagogy, Culture, & Society, 25*(1), 31–42. https://doi.org/10.1080/14681366.2016.1208265
- Bondi, L. (Ed.). (2002). Subjectivities, knowledges, and feminist geographies: The subjects and ethics of social research. Lanham, MD: Rowan & Littlefield.
- Camp Kawartha. (2018). Inspiring outdoor and environmental stewardship. Retrieved from https://campkawartha.ca/
- Chen, C., MacLeod, J., & Neimanis, A. (2013) Thinking with water. Montreal, QC: McGill-Queen's University Press.
- Christian, D., & Wong, R. (2013). Untapping watershed mind. In C. Chen, J. MacLeod, & A. Neimanis (Eds.), *Thinking with water* (pp. 232–253). Montreal, QC, Canada: McGill-Queen's University Press.
- Constable, K. (2014). Bringing the forest school approach to your early years practice. Cambridge, UK: Routledge.
- Earle, S. A., & Glover, L. K. (2009). Oceans: An illustrated atlas. Washington, DC: National Geographic Society.
- Food, Water, Energy Nexus. (2016). (Re)Connect the nexus. Retrieved from http://www.foodwaterenergynexus.com/
- Gross, C. (2012). Science concepts young children learn through water play. *Dimensions of Early Childhood*, 40(2), 3–11. Retrieved from https://www.southernearlychildhood.org/upload/pdf/Science_Concepts_Young_Children_Learn_Through_Water_Play_Carol_M_Gross.pdf
- Haraway, D. J. (2002). The promises of monsters: A regenerative politics for inappropriate/d others. In L. Grossberg, C. Nelson, & P.A. Treichler (Eds.), *Cultural studies* (pp. 295–337). New York, NY: Routledge.
- Ingold, T. (2007). Earth, sky, wind, and weather. *Journal of the Royal Anthropological Institute*, 13(s1): S19–S38. https://doi.org/10.1111/j.1467-9655.2007.00401.x
- Knight, S. (2013). Forest school and outdoor learning in the early years (2nd ed.). New York, NY: SAGE.
- Kocher, L., Pacini-Ketchabaw, V., & Kind, S. (2014). Introduction to the special issue on materiality in early childhood studies. *International Journal of Child, Youth, & Family Studies*, 5(4.2), 718–721. Retrieved from https://journals.uvic.ca/index.php/ijcyfs/issue/view/768
- Mies, M., & Shiva, V. (1993). Ecofeminism. London, UK: Zed Books.
- Moraes, A., & Perkins, P. E. (2007). Women, equity and participatory water management in Brazil. *International Feminist Journal of Politics*, 9(4), 485–493. https://doi.org/10.1080/14616740701607986
- Mudavanhu, C., Manyena, S. B., Collins, A. E., Bongo, P., Mavhura, E., & Manatsa, D. (2015). Taking children's voices in disaster risk reduction a step forward. *International Journal of Disaster Risk Science*, *6*, 267–281. https://doi.org/10.1007/s13753-015-0060-7
- Neimanis, A. (2009). Bodies of water, human rights, and the hydrocommons. *Topia*, 21, 161–182. Retrieved from https://spacestudios.org.uk/wp-content/uploads/2017/11/Bodies-of-water-copy.pdf
- Neimanis, A. (2012). Hydrofeminism: Or, on becoming a body of water. In H. Gunkel, C. Nigianni, & F. Söderbäck (Eds.), Undutiful

- daughters: Mobilizing future concepts, bodies and subjectivities in feminist thought and practice (pp. 85–99). New York, NY: Palgrave Macmillan.
- Neimanis, A. (2013). Feminist subjectivity, watered. Feminist Review, 103, 23-41. https://doi.org/10.1057/fr.2012.25
- Neimanis, A., & Walker, R. L. (2014). Weathering: Climate change and the "thick time" of transcorporeality. *Hypatia*, 29(3), 558–575. https://doi.org/10.1111/hypa.12064
- Pacini-Ketchabaw, V. (2017). Climate Action Network: Exploring climate change pedagogies with children. SSHRC PDG Grant Application.
- Pacini-Ketchabaw, V., & Clark. V. (2016). Following water relations in early childhood pedagogies, *Journal of Early Childhood Research*, 14(1), 98–111. https://doi.org/10.1177/1476718X14529281
- Pacini-Ketchabaw, V., Kind, S., & Kocher, L. L. M. (2017). Encounters with materials in early childhood education. New York, NY: Routledge.
- Pacini-Ketchabaw, V. & Taylor, A. (2015). Unsettling the colonial places and spaces of early childhood education. New York, NY: Routledge.
- Palmer, J. A. (1998). Environmental education in the 21st century: Theory, practice, progress, and promise. New York, NY: Routledge.
- Rooney, T. (2018). Weather worlding: Learning with the elements in early childhood. *Environmental Education Research*, 24(1), 1–12. https://doi.org/10.1080/13504622.2016.1217398
- Shiva, V. (2002). Water wars: Privatisation, pollution, and profit. London, UK: Pluto Press.
- Somerville, M. (2013). Water in a dry land: Place-learning through art and story. New York, NY: Routledge.
- Strang, V. (2013). Conceptual relations: Water, ideologies, and theoretical subversions. In C. Chen, J. MacLeod, & A. Neimanis (Eds.), *Thinking with water* (pp.185–211). Montreal, QC, Canada: McGill-Queen's University Press.
- Styres, S., Haig-Brown, C., & Blimkie, M. (2013). Toward a pedagogy of land: The urban context. *Canadian Journal of Education/Revue Canadienne de l'education*, 36(2), 188–221. Retrieved from http://journals.sfu.ca/cje/index.php/cje-rce/article/view/1293/1528
- Sultana, F. (2009). Fluid lives: subjectivities, gender and water in rural Bangladesh. *Gender, Place & Culture, 16*(4), 427–444. https://doi.org/10.1080/09663690903003942
- Taylor, A. (2013). Reconfiguring the natures of childhood. New York, NY: Routledge.
- Taylor, A. (2017). Beyond stewardship: Common world pedagogies for the Anthropocene. *Environmental Education Research*, *23*(10), 1448–1461. https://doi.org/10.1080/13504622.2017.1325452
- Taylor, A., & Blaise, M. (2014). Queer worlding childhood. *Discourse: Studies in the Cultural Politics of Education*, 35(3), 377–392. https://doi.org/10.1080/01596306.2014.888842
- Tsing, A. L. (2015). The mushroom at the end of the world: On the possibility of life in capitalist ruins. Princeton, NJ: Princeton University Press.
- Tuck, E., McKenzie, M., & McCoy, K. (2014). Land education: Indigenous, postcolonial, and decolonizing perspectives on place and environmental education research. *Environmental Education Research*, 20(1), 1–23. https://doi.org/10.1080/13504622.2013.8 77708
- UNESCO. (1990). Environmentally educated teachers: The priority of priorities? *Connect, UNESCO/UNEP Environmental Education Newsletter, 15*(1), 1–3. Retrieved from https://unesdoc.unesco.org/ark:/48223/pf0000153574
- Vannini, P., Waskul, D., Gottschalk, S., & Ellis-Newstead, T. (2012). Making sense of the weather: Dwelling and weathering on Canada's rain coast. *Space and Culture*, 15(4), 361–380. https://doi.org/10.1177/1206331211412269
- Welch, C. (2018). Why Cape Town is running out of water, and who's next. National Geographic, Retrieved from https://news.nationalgeographic.com/2018/02/cape-town-running-out-of-water-drought-taps-shutoff-other-cities/

Whitehouse, H., Lui, F. W., Sellwood, J., Barrett, M. J., & Chigeza, P. (2014). Sea country: navigating Indigenous and colonial ontologies in Australian environmental education. *Environmental Education Research*, 20(1), 56–69. https://doi.org/10.1080/13504622.2 013.852655

(Endnotes)

- 1 This paper draws on data from previous research.
- 2 Entanglements can be defined as all of the relationships and connections made in relation to a single event. For Karen Barad (2007), things are always in constant relation and engagement to and with other things—we are continually acting upon each other and other events in the world. An entanglement can be seen as this contact point where something happens.