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Abstract

Soil is a heterogenous mixture, an accumulation of material from a particular place generated over time. Its components, be they grains, molecules, or microorganisms, are collaborators, working together to support the emergence of something new. It is with the idea of soil in mind, of complex and productive mixtures, that material about a small charter school in New Jersey, the School for the Renewal of Soil (SRS) was collected and is presented here. The school’s mission, ‘education for a hopeful, sustainable future’ is infused in much of what they do, and was the primary reason it was chosen as the focal site for this study. The heart of this inquiry, the idea explored throughout the words that follow, is the belief that schooling has an important role to play as people look for ways to foster sustainable communities, that is, places that are socially just and ecologically sound. Accompanying this belief, and inseparable from it, is a concern: that schooling, as it is now, is part of the mechanism that transmits and reproduces a set of beliefs, or root metaphors, that underlie both the mistreatment of people and of the e/Earth.

This work begins by naming these root metaphors, exploring some of their sources and manifestations, and discussing the role of education in their dissemination and, potentially, their disruption. Soil, a metaphor for complex, messy, placed collaborations is introduced, and is used to frame both how material about SRS was collected and how it is offered here. A collection of stories about the school is then presented – a complex mixture of distinct, but collaborative pieces of writing. These stories are generative: they produce questions and ideas and offer opportunities to explore important connections between sustainability and schooling. Specifically, the
school’s curricula, explicit, implicit, and null, are imbued with Earth and various aspects, from class content to school practices and administrative structure, challenge a hierarchical, value-laden view of the world. In addition to these findings, questions are raised and ideas are explored related to a school practice that influenced curricular decisions and left students without essential social and historical context during a class fieldtrip. In conclusion, the author explores his own teaching over the past year and wonders why, despite a strong commitment to bringing these ideas into his classroom, it was so difficult to do. In the midst of this wondering, the school’s mission, ‘education for a hopeful, sustainable future,’ emerges again – this school-wide commitment provides a structure that allows teachers to create and deliver earthen curriculum that challenges root metaphors and hierarchies, and connects the students with the land.
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It seems to make sense to begin at my beginning, and with family. All of my earliest and best memories take place outdoors: scrambling through fields and bushes and trees with my lifelong friend and brother, Stephen; long walks in forests, interspersed with under-rock-and-tree-investigations with my mom and dad. This small collection of people, along with my grandparents, and aunt and uncle (Grace, Ken, Billie, Ray, Lynn and Kevin) have seen me through much in the past 40 years and their influence is infused throughout this work. Wonderfully, this small family group has grown through birth and marriage. Laura; Bharati, Aditi, and Karthik; Naina, Tara, and Puja – your care, support, and generative questions and ideas were important and welcome throughout this process. Nandini, your unstoppable support, your caring and concern and questions and love were the constant in my life as I researched, wrote, thought, and struggled. Finally, to the source(s) of my energy, the purpose(s) that gave me energy when things felt bleak, and helped me know and feel why these conversations are important, my nieces, Juliet, Natalie, and Anahi, as well as my son, Shevek: I wrote this because of each of you and the many ways you amaze and inspire me.
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Introduction: Place(s) to begin with

A human being… is a part of the whole called by us ‘Universe,’ a part limited in time and space. He experiences himself, his thoughts and feelings as something separated from the rest – a kind of optical delusion of his consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest to us. Our task must be to free ourselves from the prison by widening our circle of compassion to embrace all living creatures and the whole nature in its beauty. (Sullivan [quoting personal correspondence written by Albert Einstein to a grieving father], 1972, p. 20)

Contained within the following words is an inquiry into a school, known within these pages as the School for the Renewal of Soil (a pseudonym). A charter school located in the state of New Jersey, I became interested in exploring the school after learning of its mission: education for a hopeful, sustainable future. There is much in those few words that excited me: the idea that education could and should be for something, that education plays a role in how we humans move forward, that we might imagine a future that is hopeful, that we might hope for sustainability. I knew I wanted to explore, to learn and write about, what education for sustainability might look like, and SRS seemed like it might offer an exciting opportunity for me to do so. In this, the introduction to all that follows, my hope is to place the school – that is, to describe where the school exists physically, but also provide some small details about the school
that I believe are important to a general understanding of what it is – to position the school as something particular, somewhere particular. Following this I attempt to do the same for myself – describing the physical place where I’m from as well as some of the cognitive places from which I operate. By placing both the school, the focus of this inquiry, as well as myself, the lens through which a reader of these words will come to see the school, I hope to provide insight into what is being said and why.

The School for the Renewal of Soil (SRS) is located in a small rural, community, amidst bands of ridges that, when viewed from above, look like ripples on a sea of trees, the school is surrounded by forests and farms. The trees are plentiful and dense in places, still regrowing after nearly all the wood in the North East region of the United States was cleared from the ground to fuel the fires that built cities and led to the disastrous colonization and degradation of land that had already been occupied. All the roads except one that lead to the school are narrow and winding. In the springtime, when I visited, there was an explosion of green that was breathtaking. Grasses, shrubs, trees pushed upwards and outwards at a pace so rapid I was able to mark my time there watching grass slowly grow to cover a sign advertising hay for sale.

The idea for the school emerged from conversations that began in 1999 between parents at the nearby Inception Farm. Founded in 1980 by a group of Dominican Sisters, the farm serves as a community resource that provides educational opportunities and community meeting spaces, supports the renewal and ongoing health of adjacent wetlands and forest, operates a community supported garden (CSG) and offers food through a community supported agriculture (CSA) program. The parents and community members who were part of these early conversations were inspired by
educational models developed by Maria Montessori and Rudolf Steiner and hoped to build a school that embraced ideas around sustainability and ecological literacy.

Most of those involved in these early conversations were also inspired by the idea of Earth Literacy, which SRS’s charter describes as drawing “on a wide range of disciplines, examining them all from the point of view of how the Earth is impacted (in the past, present and future).” One person I spoke with during my initial interviews described Earth Literacy as “being open to seeing all the systems that are out there and all the organisms within those systems and see the interconnectedness between all of those systems.” In the early years of the SRS all of the guides who taught at the school took Inception Farm’s course on Earth Literacy – though the program is not currently offered. The commitment to Earth Literacy extends beyond the staff – the school’s charter notes that anyone who wants to serve on the board of trustees, the governing body of the school, will have “a strong commitment to innovative, experiential education based on Earth literacy and sustainability.”

Between 1999 and 2004 the conversations continued, documents were drawn, a charter school application was approved and various potential sites for the future school were evaluated. It was during this time that some members of the wider community first noted opposition to the school. Various letters appeared in local publications expressing frustration over the potential draw of financial resources from the local public school district and concern that the relationship with Inception Farm was an indication that the school had some hidden religious underpinnings. A public meeting about SRS’s charter status had to be moved to a school gymnasium stationed by a police officer because of the large turnout of upset residents. Despite this opposition, work on the school
continued and a site was found – though obtaining the site required one of the founders to seek out a land-owner who resided in California. The school’s buildings are all pre-fabricated structures, connected together by a raised wooden walkway. Surrounding the buildings is a large parcel of land, formerly an organic farm, now filled with gardens, pathways, an outdoor classroom, as well as a stream, meadows and mowed fields. From here forward when I discuss the land owned by and surrounding the school, I will refer to it as the school-land – an intentional choice, the hyphen is meant to suggest the words, and areas they refer to, work together, collaborate, function as a unit: the land around the school is integral to the school itself.

In 2004 SRS opened with more than 70 students in grades K-8 and has continued to grow: during 2019-2020 school year 133 students attended the school – of which 116 were white, 10 were Hispanic, and 7 were identified as two or more races (National Center for Education Statistics, n.d.). There were approximately 19 teachers and classroom assistants working at the school during my time there, though it is important to note the teachers at the school are referred to as ‘guides,’ a reflection of the school’s interest in challenging hierarchy and establishing a different dynamic between students and the adults with whom they are working. There were also six staff members between the leadership team and school administration.

The school is located about 10 minutes, by car, from the closest town, home to approximately 6,000 people. The location where a famous horror movie was filmed (as was mentioned to me several times by locals), the small town seems to have grown out from the narrow, centrally located main street that includes a health food store, a sandwich shop and a few other restaurants, a couple bars, some shops and a few
points of historical interest. Set back on a hill looking down at the street is a large, private elite boarding school. In the only town-wide partisan election in 2020, the race for township committee, two Republican and two independent candidates ran – the Republicans won both open seats (nj.com, 2020). This reflects the politics of the wider county where Donald Trump received 60% of the votes in the 2020 election (Warren County Votes, 2020).

There are some similarities between the area I’m from and the area where the school is located. I grew up in a town of similar size, Geneseo, New York, in a county, Livingston, that voted similarly in recent elections. Livingston County is of similar demographic makeup as well – which is to say mostly white. The roads on which I rode my bike, and eventually learned to drive were also narrow, and made more so as the green encroached on them in springtime. Unlike the mixture of forest and field around SRS I grew up in the midst of rolling hills almost entirely converted to fields for cattle or corn to feed the cattle with bands of trees demarking properties and creating refuge for an ever-increasing population of deer. The decimation of coyote and wolf in my area left the deer without predators (other than human hunters), and the mixture of forest and field was ideal for them, and so their population exploded. Rarely was I in a car at night where I didn’t see deer’s eyes reflecting back at us from the margins of the road and often it was necessary to slam on the brakes in an attempt to avoid hitting them. I only ever hit one deer, a juvenile who I watched die as I stood by the side of the road, crying and feeling helpless during its last moments.

I attended school in the same large building from kindergarten to 12th grade. It was there that my mother taught and my father served as school board president for
much of my student life. I recall two elementary school teachers who I loved and a high school chemistry teacher who I looked up to but was largely dismissive towards me despite my best efforts to ingratiate myself. In high school only my French teacher was truly kind and supportive; spending time in his classroom was the only time I felt comfortable and safe in school. My overwhelming sense, the lasting impression I have of my schooling was the desperate desire to leave – the town, the people, the teachers. It was through experiences out of school, and through the adult teachers I met who were friends and coworkers of my mother, that I was able to see the value and importance of education. I listened as these teachers of children I didn’t know talked, laughed, relieved the strain of the day and I heard about the deep care and concern that they had for their students interspersed with bursts of laughter, as they described the sometimes hilarious and sometimes horrific stories emerging from the lives of those with whom they shared the classroom.

My first opportunity to teach and guide was as an assistant summer camp counselor at an environmental education summer camp. We taught forest and stream ecology alongside fly fishing and tying; we immersed ourselves and the campers neck-deep in mud and then guided these 4th, 5th, and 6th graders through hunter safety courses (as I recollect this now I’m shocked at how casually I stood alongside the state trooper as he talked to 12 or more youths holding loaded shotguns about how to be safe with the weapons). We taught them how to build fires, took them deep into forests in the darkness, paddled down rivers and swam under waterfalls. I had immense respect for the older counselors and worked for many years until I attained status as a full educator. This was how I first came to know teaching.
These experiences also solidified a relationship with e/Earth\(^1\) that had been formed over most of my early life. All my memories of childhood take place out-of-doors. I was outdoors on the warmest day of the year and the coldest. I grew up on a lake and around a few patches of forest that had been preserved amidst the fields of corn and cattle. My closest friend and I had castles of many rooms formed amidst twisting curtains of vine and shrub behind both our homes – these elaborate imagined spaces included designated restrooms, ‘TV’ rooms, dining rooms and so forth and were places where we spent much of our time. I can remember exploring every accessible outdoor place to its limit, often a road or a barbed wire fence with a neighbor’s house visible in the distance. A few of these boundaries included what we imagined were truly vicious attack dogs who, with their first bark, often sent us (mostly me – my friend was bolder) sprinting back through brambles and vines until we arrived breathlessly at either his back door or mine, my adrenaline surging as I finally dared to look back, half-expecting the beasts to still be in pursuit. Before these adventures I spent many weekends with my parents and grandparents wandering through other patches of woodland. I picked up everything possible, including animals who demonstrated their dislike of my less than gentle embrace by biting – a favorite family story involves my grandfather encouraging me to pick up a painted turtle, not known for their bite, and almost immediately screaming out in pain and flailing my hand as the poor creature held onto the skin of my palm with its toothless mouth.

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\(^1\) Earth can refer to both the planet on which we live, and the ground on which we walk. There are times when I use only the uncapitalized word, in which case I’m using the word in much the same way I might use land or soil. There are other times when I am referring specifically to the planet, in which case I use only the capitalized version. But often, as I was writing, I found that I was referring to both that which is directly beneath our feet, and the massive sphere on which the lives of countless organisms play out. To make this apparent I often chose to use the hybridized spelling seen here: e/Earth.
The influence of my aloof yet inspiring high school chemistry teacher and my passion for the outdoors collided in my first year of college when I took an environmental chemistry class. The professor, an analytical chemist as well as a kind person, a caring advisor and an excellent teacher gave me opportunities to work with him as a teaching assistant, lab assistant, field-research assistant and advisee. These experiences and his advice and guidance have had a significant impact on many of the decisions I’ve made as an adult. He was passionate about the environment and saw real value in the knowledge science could provide as he tried to contribute to bodies of knowledge he believed would help ameliorate the harmful impacts of humans on the Earth. He was rigorous and thorough and precise. It was during this time that I became passionate about science – about inquiry and investigation – and particularly the power of rigorous, thoughtful research. This is when I fell in love with science, with the process of digging in and extracting information, and the wonders that can come as those data are digested, analyzed and shared.

While I know he wanted me to go on to a graduate program in chemistry, I arrived at a different conclusion. I loved science and I knew that it was important, but I also felt the importance of teaching, of being a teacher. This decision has always made sense to me, it seemed inevitable in some ways that I should teach. That learning about our environment – about Earth – nearly always takes place in science classrooms was another significant nudge that led me to spend the next 15 years teaching in various capacities about science and about Earth. Over the course of my time as a teacher much happened – Trayvon Martin was murdered by George Zimmerman, who was later acquitted; Occupy Wall Street and the Arab Spring influenced people around the world;
a global recession descended; thousands died in unnecessary wars; many more to gun violence and mass shootings. As a person, a human and a citizen these were issues of concern, sources of anger and frustration, but as a science teacher I felt they were outside my purview. Perhaps I would mention them in my class, if time allowed, or discuss them with students during breaks if there was interest, but my job, as I saw it, was to dwell in the science. The political arena into which I could dip my toes was during class explorations around the ever-increasing concentration of carbon dioxide in the atmosphere, the rapidly growing gyres of plastic waste accumulating in the oceans, the terrifying rates of species extinction. As I had fallen in love with the environment, as I had decided what to teach and how, as I chose what issues to learn about, discuss, advocate for, I had made a decision to focus on what seemed most important to me – what felt most urgent, most pressing: the impending collapse of ecosystems, the harm being brought upon e/Earth by human activity.

These decisions, the ability and opportunity to choose what felt most pressing, is a clear result of my privilege and are a reflection of ways of thinking emerge from the experience of a cis, white, male who grew up in a rural and conservative place; they are statements that are/were easy for me to make because in my life, the times when I’ve been pulled over for speeding, the congenial conversations that have ensued with each officer, the forgiveness of citations, were what I understood. When I walked down the street or through a store with my baggy pants and hood pulled tight over my head nothing happened – not even once. I’ve never been leered at, jeered at, made to feel uncomfortable just walking down the street. And so, of course, what felt most pressing to me was some abstract concept, a story of impending doom whose climax I was
unlikely to be alive for (events that occur during the time I’m alive might not even make it past the introduction to that particular story). I had the privilege, one of many, to choose what causes I would get most upset about, would learn about and talk about, would implore my family and friends to consider, and, particularly important here: what would feel critical to impart to my students, what felt essential in a science classroom, what ideas were my responsibility to teach.

This isn’t to say that I ignored social issues. I believed that students needed equitable access to high quality, rigorous science instruction – I saw scientific knowledge as an opportunity for ‘disadvantaged’ students to pull themselves up by the bootstraps, a golden ticket stashed in a hands-on chocolate bar that would permit the bearer onto the American Steam Train Dream Train. I was frustrated by the extreme inequity that I saw as I travelled between schools in different areas of California. I can recall the confused shock that I felt visiting two nearby schools, one of which had a standalone library that had won some type of architectural award proudly displayed on a plaque at its entrance while the other had only one permanent physical structure, the gymnasium/cafeteria/auditorium – on a treeless landscape, all the classrooms were in portable buildings which would turn into giant solar ovens in the unrelenting heat of Sacramento summers. And so, it was with a love of science, of data and inquiry, of rigor in research; a belief in the power of science (as a way out of our climate crisis and social inequity); with caring and concern for all students; with a deep love of e/Earth, of soil and agriculture, of compost, that I enrolled in a doctoral program in education.

**Sustainability education or education for sustainability?**
Now that I’ve provided some small but important particulars of subject and lens, my hope is that space for a portrait begins to emerge. Polaroid-like, an image of SRS will materialize in time as the letters, to words, to sentences to ideas are consumed in the reading of what follows. Placing, the process of providing particulars in an effort to move from the abstract to the specific, is important throughout this work. Also important here, at the beginning, is a brief description of what I hope this work accomplishes. For a long time, when I explained what I was doing to other people, I would say that I was interested in sustainability education. This led to many questions and much misunderstanding. The term ‘sustainability’ has been used, and misused, in many ways. Often, it seems, when people think about sustainability they think of it as a set of practices that will protect Earth. At best people understand thinking about sustainability as encompassing ‘the three e’s’ – environment, economy and equity (Caradonna, 2014). It’s much more though, and it’s complex, because sustainability isn’t just one thing, there isn’t a single challenge or solution, and it can’t be addressed solely with a set of government policies or an international accord. Most importantly, justice and equity are as central to sustainability as any discussion of environmental practices, though this is often overlooked when discussions about sustainability take place.

While there may be some generalizable principles, such as a commitment to place and equity, in practice sustainability is an emergent way of living, something that arises through interactions with all the stuff, both living and other-than, that exists in a particular location. It is about hospitality, caring and concern both for those closest to us, and those further away, in both time and space, and understanding the ways in which we are connected to all that we’re surrounded by. It’s about striving to answer the
question: “If we want to live healthy lives and pass on healthy and just communities to future generations, to whom and to what are we justly responsible” (Martusewicz et al., 2015, p. 43)?

Because of the confusion around the term sustainability, and particularly because issues of justice and equity don’t often appear to be forefront in people’s mind when discussing it, I avoid, except when necessary, using the term in the writing that follows. If we extricate the term from the cultural context in which it is immersed, if we can imagine sustainability without being steeped in the corporate appropriation of the term, without the many claims of ‘sustainable development’ or the myriad other misuses of the word – if we could do those things, I would then feel comfortable saying that yes, this is a dissertation about how and what education might contribute as we imagine the ways in which we might foster ecologically sound and socially just communities. It is with the complications of the term in mind, and with the broad and complex understanding of sustainability embraced, that I feel comfortable stating that my primary focus in all of what I present here is to explore education for sustainable communities. There is an important distinction that must be made, alluded to in the title of this section, and expanded upon later in this document: this is not education about sustainability, what I might call sustainability education. Rather, I’m interested in education for sustainability, which I see as an approach that acknowledges the important role of education in enculturation, socialization and community development, and believes that education can, and should, be for something.

The role of place in all that follows
As noted previously, places are essential to any discussion of sustainability. For all of the stuff of Earth, place is also inescapable. We humans have the immediate experience of a place through our senses (Casey, 1996), and have a longer-term experience with a place that includes stories, memories, feelings, meanings (hooks, 2009; Kahn, 1996; Tuck & McKenzie, 2015). I imagine place in much the same way Tuck et al. (2014) describe it: as a mixture of the material parts of the land (the actual ground, i.e. rocks, soil etc. as well as all living organisms) as well as “spiritual, emotional, and intellectual aspects” (p. 9, quoting Styres, Haig-Brown, and Blimkie, 2013 p. 37). Each person (or other organism) experiences a place in a unique way, further complicating any discussion of place – different stories are relevant, different emotions may be present, and sensory organs function differently. There are many different ways of knowing and thinking about the world. Limiting this discussion, for a moment, to a human experience of place, clearly our personal histories as well as the culture(s) from which we come also play a role in this experience. Further, our sensory organs may interact differently with the various chemicals and electromagnetic waves enveloping us, and as that information moves through our bodies and into our brains the electrochemical pathways grow increasingly different and complex. We may detect the same chemical compounds as they move through the air and into our nostrils, but what we smell, what we notice and what that means may be vastly different. Electrons give objects the appearance color as they absorb some wavelengths of light and reflect others. Some materials absorb heat while others reflect it. All of the material in a particular place does something, it conspires and collaborates and showers our bodies
with information. While much of this is filtered out unconsciously, our bodies must still interact with the entirety of a place.

Place is important for sustainability. It is also important to attend to in all that I’ve written here. I started this chapter by attempting to place SRS, while at the same time being mindful of the assurances I made to the people I spoke with that I would change the names of both the school and those who participated in the research. Because of this, I’ve given the school a pseudonym and have changed some other identifying information, including the names of the people with whom I spoke. I also attempted, in the first few pages, to place myself, to explain a bit about who I am. My indulgence has purpose: by placing myself in time, place and of a particular mindset I hope to provide information necessary to understanding what I say, what I see, what I think, what questions I ask and what conclusions I may make. I will speak later about soil, about how it informs my thinking about Earth and reality and research – it is the wild and wonderful mess of material that everything emerges from and eventually returns to – but for now I will just note that I am a part of the complex mixture that I’ve written about here. What I choose to say, what I choose not to say and what I do not know and cannot say, are things that have emerged from the mess but come through me – I could not extract myself. I am the mediator, the memory, the story teller and a participant. It is with this in mind that I feel I must say something about myself if I hope to say something about anything else. This is the reason I dwell here in placing myself.

**Mapping this dissertation’s landscape**
This work is about a particular school in a particular place, a school that has positioned a ‘hopeful, sustainable future’ as central focus of its curriculum. Further, a particular person, me, spent time at the school, collected material, selected some of that material to present, and described that material here. All that follows is written by a particular person and written about a particular school – both of which I ‘placed’ in the preceding words. Peculiar and specific details are important here. In what follows I’ve compiled a meaningful bevy of stories and ideas, something I imagine is akin to collecting soil. Like healthy soil, this mixture is intended to be productive, an opportunity for new ideas and questions to grow. Among the things I accomplish, the soil I build with these words: I elucidate my somewhat recent understanding about the deeply rooted, culturally-based connections between social and ecological issues; I describe the school as well as some of my experiences there; I generate and include salient questions throughout – these are the first shoots emerging from the newly formed soil.

Specifically, in the first chapter I explore the sources of problematic root metaphors pervasive in many iterations of Western culture, and look at how these root metaphors have informed a value-laden, hierarchical way of viewing the world. Following this, I suggest some examples of how these beliefs have manifested in complex and troubling ways and conclude the chapter by considering the ways in which education plays a role in the continued dissemination of these beliefs. I intentionally draw on a wide array of sources from many areas of our culture in this beginning section, a choice made because of the ubiquitous nature of what is being discussed. The problem is culture-wide and I believe it is valuable and important to look at different areas within this broad field to illuminate its pervasiveness. In the next chapter I
describe how I conducted this investigation, beginning with some thoughts on how I think about science and research, as tools to help us better know our world. I follow this with a description of the particular approaches I took to gathering material for this work. In chapters three and four I present what I found in two ways – first as collection of stories: a conversation, a meandering walk around the school and through my time there, classes experienced and observed. Second as experiences coupled with my thinking, where the ‘data’ is considered within the frame established when I described the cultural roots of the crises we face. I conclude by considering some of the things that emerged that I believe are important to the discussion about how education can help grow sustainable communities: a curriculum imbued with e/Earth; the ways in which SRS challenges hierarchical thinking; the importance of addressing social issues alongside ecological ones. This is followed by some of my reflections about my own teaching while conducting this research. I end with an opening, an invitation in the form of questions that I believe are valuable to consider and have been generated through the writing, reading and reflection on what I’ve written here.
Chapter 1: Cultural beliefs as impediments to equity and a healthy Earth

As mentioned above, for much of my life, I spent time thinking about, teaching about and feeling concerned about the ongoing and impending environmental crises we all now face. Ecological issues were my entry into the line of thinking that I hope to describe here, and so it is there that I will begin. In this chapter I briefly discuss the ecological crises and the need for us humans to find a way to live sustainably though, as I note, we must consider much more than how our actions impact e/Earth – that there are a host of social issues that must also be addressed in any discussion of how things must change if we hope to continue to be occupants of this place. This idea, that we cannot address one set of problems without addressing the others, is fundamental to my thinking. In this chapter I make the argument that violence and destruction, whether directed towards the environment or other people, emerges from the same set of deeply held beliefs. Directly after this acknowledgement I introduce the concept of root metaphors by using well-known stories that may be, in part, the sources of these ideas. This is important: root metaphors help to make explicit the deep connection between injustice of all types and the ecological crises we face. To understand our ways of living, our culturally-held beliefs, we must reveal the beliefs that undergird those actions – it is through this understanding that we provide an opening to move forward differently. After a discussion of the root metaphors I examine three manifestations of them: the value hierarchy, objectification and silencing. Finally, I use the story of The Lorax as an
opportunity to identify some root metaphors, and the harmful actions to which they can lead. I conclude by noting the troubling and racist cartoons drawn by Dr. Seuss, and use that to highlight the disconnect I believe often exists between concern for the environment and concern for justice.

**The ecological crisis**

I remember the first time that I learned about climate change – in the mid 90s it had already become a significant concern. But there was time, I was told. Scientific research would fuel technological innovation; government officials would make the necessary legislative changes. The future would save us. I have a very clear memory of my undergraduate advisor, the analytical and environmental chemist, explaining (in 1998) that there was a threshold – 400ppm of carbon in the atmosphere – that would be dangerous to cross. Exceeding that value would lead to significant changes to Earth’s climate and impact all who live here. He was confident that surpassing that level could be avoided – the future would save us: the necessary knowledge was within the reach of science, we would continue to progress as we had the last few centuries, always moving forward to a solution that was just ahead, just out of reach. (This idea of ‘progress’ in science is something I’ve encountered often – the message I’ve derived from the discourse of science that I’m familiar with is that each problem, often created by a scientific or technological innovation, can be solved through more progress, more innovation, more research.) In 2013, the Mauna Loa observatory in Hawaii reported that we had surpassed that level (Blunden, 2014; NASA, 2013). Unfortunately, that number has continued to climb (Figure 1): in May, 2021 NOAA reported carbon dioxide levels at
the same observatory had reached a peak of 419ppm, a level equivalent to values scientists believe were present in the atmosphere 4.1 million years ago when the sea level was 78 feet higher than it is today (NOAA Research News, 2021).

**CARBON DIOXIDE OVER 800,000 YEARS**

![Carbon Dioxide Over 800,000 Years](https://www.climate.gov/sites/default/files/BAMS_SOTC_2019_co2_paleo_1000px.jpg)

Figure 1: Atmospheric carbon dioxide levels over the past 800,000 years (retrieved July 6, 2021 from https://www.climate.gov/sites/default/files/BAMS_SOTC_2019_co2_paleo_1000px.jpg)

Humans have had a massive impact on the physical and biological characteristics of Earth. This has led scientists to designate this period of time as a new geological epoch, the Anthropocene, to refer to an era in the life of Earth characterized by human impacts (Crutzen & Stoermer, 2002). In the same way we can see evidence of other major events in the rock strata, like the collision with the asteroid that led to the widespread extinction of the dinosaurs, our lives – the human living of the past 200 years – will be permanently written in the geologic record of the planet. A
disproportionate amount of this impact comes from just a few countries. The oceans are filled with massive collections of microscopic plastic waste that severely impacts life there; air pollution has worldwide impacts on life expectancy that rivals smoking and far exceeds all other forms of violence combined (Lelieveld et al., 2020); the effects of anthropogenic climate change are readily apparent as glaciers melt, storms intensify and fires burn more land at hotter temperatures. The evidence is clear: the human living (some much more than others) of the past two hundred years will continue to have an egregious impact on the health of e/Earth for generations to come. If we continue, if we do not significantly disrupt our current ways of living, the consequences will be devastating to all who share this place.

This is upsetting. Urgent action is needed, immediately, to mitigate the damage done and limit future harm. This is not simple. It requires deep and fundamental changes to the ways many of us humans live on e/Earth. It requires corporations, governments and others to drastically change the ways in which they operate, and in some cases cease operations entirely. The US contributes significantly to this problem: we emit more carbon dioxide per capita than any other country on Earth, and produce the second highest amount of carbon dioxide overall. There are a wide range of ways in which people live in different places, some of which are sustainable. As I have lived in the US for all of my life, and am only familiar with this context, I am going to restrict my thinking largely to the ways of living that are clearly visible here and now.

The ways of living available to most in the US is not sustainable – even our infrastructure is designed around the consumption of both fossil fuels and other materials. Communities grow continually outwards, while industry/agriculture also
spreads, both expanding into increasingly sparse and disconnected wild areas. The most imminent threat is that posed by anthropogenic climate change. The science is clear: given the current rate of carbon dioxide emissions we can expect to see changes to Earth’s climate that will likely impact life on Earth for thousands, if not millions of years into the future (Crutzen & Stoermer, 2002). There are also concerns about Earth’s capacity to support the ever-increasing human population (though I wonder, is it the number of people, or how much material some of us consume?), the loss of species diversity as the rate of extinctions worldwide continues to increase, loss of habitat and refuge spaces where other life can live and renew itself, and the loss of soils that allow foods and forests to grow.

Beyond environmental concerns there are many other things that threaten the ability of humans to keep going, to sustain ourselves so that future generations can live meaningful lives. Social inequity, the ever-increasing income gap, authoritarian governance and nuclear war are among the other issues that must be addressed if we hope to live sustainably. We as humans must move forward together if we are to move forward at all. For Earth’s many human cultures and communities to continue there are a wide range of issues that must be addressed – sustainability must concerned with addressing both the social and the environmental components of living together. To do so effectively it is important to look for connections – why do we treat each other poorly? And why do we treat the environment poorly? And most importantly, is there a connection between these two, and if so, where did it come from?

**Cultural roots**
Below I will describe the connection that I believe exists between our treatment of one another and treatment of the environment. Before I begin to explore this connection, though, it is important to once again acknowledge the place from which I write and, in this acknowledgement, understand it’s importance – it’s powerful influence – on what I can know and say: in this section I explore a set of deeply held cultural beliefs – beliefs that emerge from the culture of which I am a part, Western culture. All of my thinking, my ideas, my language, the metaphors I use (here and elsewhere in the paper), emerge from knowledge and experience derived from within that culture. Importantly, though, culture is not monolithic. My experience might well be much different from many others who live alongside me. For this reason, and to make my place clear, throughout this document I refer to the culture of which I speak as ‘my/Western.’

This culture, my culture, includes ways of thinking and feeling – ideas and beliefs – about one another, about the land, about e/Earth, that are the source of this crisis. As a massive river carves the land, shapes it in new ways, this thinking has already and will continue to shape the land, our lives, though it’s force and direction is more bulldozer than hydrodynamic. Like a river my/Western culture has also been fed by many sources – ideas that gained momentum with time and the space to grow. Some of these ideas have led to violence against others: people, places, organisms, matter. As we might examine waterways upstream to find the sources of pollution in a river there is also value in examining the sources of thinking that have led to the destruction we now face. This examination can then become part of the process of inquiring into this culture – of
understanding the beliefs underlying the choices we make, big and small, that leads to
the violence around us, and as a result of us.

**Historical sources**

As I begin to inquire into my/Western culture, as I start looking for the sources of
some of these problematic and widely held beliefs, I believe it is important and useful to
consider the impact of historical occurrences. In this section I will briefly consider a few
moments from history that I believe still hold much influence. These occurrences are
connected: different interpretations of Christian scripture fueled the work of early
scientists; advances in science supported the development of new technologies that
could meet the ever-increasing demands emerging from capitalist marketplaces; new
economic theories are embraced even though these ideas don’t account for Earth’s
finite resources. All of this is part of my/Western culture, it all feeds the flow and
generates force in particular directions.

Christianity has been a dominant cultural force in my/Western culture – Christian
ideas, values, beliefs have permeated various aspects of my social life, of my schooling
and are clearly present in the various levels of US government. While these influences
are many, and are complex, there has been much written about how a modern
interpretation of Genesis 1:26-28 may have contributed to a new way of viewing e/Earth
(Harrison, 1999; McCoy, 2014; White, 1967).

26 And God said, Let us make man in our image, after our likeness: and let them
have dominion over the fish of the sea, and over the fowl of the air, and over the
cattle, and over all the earth, and over every creeping thing that creepeth upon the earth.

27 So God created man in his own image, in the image of God created he him; male and female created he them.

28 And God blessed them, and God said unto them, Be fruitful, and multiply, and replenish the earth, and subdue it: and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth. (Genesis 1:26-28, King James Bible, 1769/2017)

Harrison (1999) argued that the Bible’s original intent, the spirit in which the above was written, was not to suggest that humans should control Earth. In the Middle Ages “Living things, it was assumed, had been designed in part to serve for the physical needs of human beings but equally to serve a spiritual function as well. In this latter role, natural objects symbolized eternal verities, or taught important moral lessons” (p. 91). Nature was seen symbolically – the faithful could learn from all that was around them. Similarly, the domination and subduing mentioned was meant to be psychological in nature – it was a call for people to control themselves, to overcome the ‘beast’ inside (Harrison, 1999). Regardless of how this was understood, it still reflects a perspective that sees humans as superior and positions nature as something that exists for humans’ spiritual ascendancy.

Corresponding with this new interpretation of the Bible, in the seventeenth century the work of scientists began to suggest that it might be possible for humans to control nature. The work of Descartes and Francis Bacon, among other scientists,
suggested Earth and its living beings be viewed as machines with interlocking parts, each functioning as part of a whole. This was important: it changed Western human’s relationship with the natural world by providing new opportunities to exert greater control over the Earth. Nature became a collection of biological apparatuses, able to be understood and controlled – a perspective that led to extreme cruelty being directed towards animals by early scientists, including Descartes (Martusewicz et al., 2015). Shiva (2010) looked at Bacon’s writings and found this mindset reflected in some particularly rapacious comments, including the idea that science and technology don’t “merely exert a gentle guidance over nature’s course; they have the power to conquer and subdue her, to shake her to her foundations” (p. 231).

This mechanistic view of Earth coincided with new and more literal interpretations of the Bible. When combined, these two emerging belief structures provided both the rationale and the means for a changed human relationship with the places where we lived. Dominating the land, Earth, positioned humans differently in our relationships with all that we live amidst – no longer collaborators, we found ourselves above, as having greater value, than all that we lived alongside. The convergence of these two sets of beliefs also contributed significantly to the development of the deeply held assumptions still found at the heart of Western culture (Harrison, 1999; McCoy, 2014; White, 1967). Earth became a resource, something that could be extracted and manipulated, bought and sold to address human wants and needs (Shiva, 2010).

Fundamental to science is the idea of widespread consistency: phenomena that occur in one place are expected to occur in much the same way elsewhere. Gravity, light, time, for example, are all consistent and predictable (as long as one avoids black
holes). When applied to humans, though, the concept of consistency had troubling outcomes. Sachs (2010) explains that during Enlightenment “the all-embracing, unifying power of Christianity had faded and given way to ‘humanity’ as the dominant collective concept… ‘humanity’ became the common denominator uniting all peoples, causing differences in skin colour, beliefs and social customs to decline in significance” (p. 113). People, and their cultures, were (and still are in many ways) assumed to be consistent – variations on a theme. Every society was on the same trajectory, having the same hopes, needs and desires. Some societies were just further along the path (Martusewicz et al. 2015). “Europe of the Enlightenment no longer felt separated from the Other spatially, but chronologically” (Sachs, 2010, p. 113).

To be most human then, was to adhere to Western ontological and teleological beliefs (reality is consistent and predictable and infinitely renewable; logic and reason are the only ways to truly know reality; our purpose is to grow and consume etc.). This universalist mindset led European colonists and settlers to view the people who were living (successfully) on the land as less advanced. Helping non-Western peoples to ‘advance’ was seen as a moral imperative. They were in need of Western culture and values – a belief that was the basis for the extreme ethnocentrism pervasive in Western culture, and which resulted in the intentional destruction of many people, languages, cultures and entire civilizations (Martusewicz et al. 2015; Sachs, 2010). A literal interpretation of Genesis, combined with the emergence of a new perspective on nature, informed by science, in the seventeenth century, set the groundwork for a way of seeing the world that suggested humans had both the right and the ability to control
nature, and that those who could exert the greatest degree of control were the most advanced along a single continuum of what it means to be human.

Also in alignment with these happenings was Adam Smith’s A Wealth of Nations, which contributed to this new type of thinking by suggesting that free-markets could grow infinitely larger – a theory that was possible because it disregarded, or was unaware of, the limitations imposed by finite space, a finite planet – resources were not considered fundamental and were labeled as ‘externalities’ in Smith’s theory (Caradonna, 2014). In addition to the ethnocentric ‘moral’ imperative to help ‘advance’ non-Western peoples, competition for money, new markets and materials drove European colonization and enslavement. People who were seen as ‘less than human’ were not afforded the same rights as those who were viewed as human (Gronemeyer, 2010; Shiva, 2010).

Infinite growth was possible, or so the story went, even as Europeans had to go further and further afield to find the means to enable this expansion – growth was decoupled from the constraints placed on it by a finite Earth. Markets would solve the problem of depleted resources by driving innovation to find replacements (Caradonna, 2014). Out of this abstracted notion of unlimited growth a narrative emerged suggesting that those who work hard, who ‘pull themselves up by the bootstraps’ could accumulate wealth and power. Jackson (2010) describes how anthropologists looking at cultures around the world have consistently found that peoples use material possessions as a language that allows us to demonstrate our social standing. This, he explains, is fundamental to the hopes of unlimited growth – by continually creating new things that
we ‘need’ (Illich, 2010), we continue to provide the energy (money) needed to fuel more growth.

Instead of being viewed as the source of, and limit on, human living, nature became a resource to be owned and used in this new economic vision. The cultural and ecological commons that had once been shared were privatized and parceled, people took ownership of these units, only allowing access to those who had been granted access to them through cultural status or financial means (Bowers, 2011). This new understanding about the management of resources, combined with the new logic of science fueled by the belief that humans could and should exert power to control nature, created a culture that was focused on domination and control of Earth, and the exploitation of the land for the benefit of humans (Alvares, 2010; McCoy, 2014; Shiva, 2010).

Temporally aligned with this, and essential for growing markets, is the development of technologies, including the steam engine and cotton gin, both of which provided means of getting work done, of production, that could outpace the abilities of human and animal workers (Caradonna, 2014). Efficiency became paramount – the quicker one could produce and sell, for as little cost as possible, the faster wealth could be accumulated. All peoples develop and use technologies, which, broadly speaking, are solutions to problems that humans face and are created using knowledge about the world. Because the ways of building that knowledge and understanding of the world are fundamental to the development of technology, but differ between different groups of people, the technology that emerges reflects a specific cultural paradigm and likely conforms to the widely held values and beliefs of that culture. Whether religion, science
and technology, economics or ideas about what it means to be human, these early moments in my/Western culture are still significant today. In the following section I introduce some of the tacit and widely held beliefs, or root metaphors, that may have emerged, at least in part, as a result of these historical practices.

Root metaphors

Considering these early moments in contemporary Western culture is important as they continue to exert influence today. Like any attempt to draw a conclusion from a historical account, putting these pieces next to one another is just one way of creating a narrative from a complex series of events – the real value of these might not be as a larger, cohesive narrative, but as a set of occurrences within the Western cultural context that can help illuminate a tacit system of beliefs. To return to the river metaphor, these are just some of the sources that feed, mix with and taint the larger flow; the pollutants flow downstream from their origins, forming troublesome eddies and toxic pools, accumulating in bodies (of water) where they become part of the flow of energy and nutrients and enter the webs of complex relationships that all organisms have with each other and with the land.

Metaphors are central to our understanding of the world: we compare things to one another in a meaning making endeavor that both hides and reveals (Martusewicz et al., 2015). Importantly, these moments, or the way we tell the stories of them, informed the development and fueled the growth of widely held root metaphors, or “taken-for-granted cultural assumptions” (Bowers, 2002, p. 22), that have been passed down through many generations. Despite being invisible unless explicitly named, these
metaphors exert significant impact on our understanding of the world, as well as how we treat one another and e/Earth (Bowers, 2003; Martusewicz et al., 2015). Indeed, the traditional ways in which we story these events is illustrative of the most important point: that ideas about who and what is important, is most valued, makes invisible those things deemed less so. For example, in 23 years as a student and teacher of science I learned and taught often about Descartes’ contributions, though was completely unaware of his beliefs concerning animals, and the violence he subjected them to as a result of these beliefs (Martusewicz et al., 2015; Miller, 2013).

Both Bowers (2001, 2006) and Martusewicz et al. (2015) identify a number of root metaphors including:

- Individualism – the individual is the primary social unit
- Progress – change is good, progress is linear, traditions are problematic
- Evolution – cultures evolve, change and improve over time
- Mechanism – all aspects of Earth function as a machine, including living organisms
- Scientism or rationalism – science and deductive reasoning are the best and only ‘true’ way to build knowledge and understanding about the world
- Commodityification/economism – turning aspects of the commons (nature, people, ideas) into objects that have economic value in marketplaces
- Consumerism – identity is something that is created and maintained primarily through the purchases you make
- Anthropocentrism – humans are the superior animal
- Androcentrism/patriarchy – men are superior to women because of their innate capacity for rational thought
- Ethnocentrism – some cultures are better, or more advanced, than others

Connections can be made between the historical occurrences described in the previous section and these root metaphors. For example, in addition to the researchers mentioned in the previous section, Bowers (2003) also makes the argument that literal interpretations of the Bible are directly connected to the root metaphors of patriarchy/androcentrism and anthropocentrism. Scientism and mechanism can both be clearly traced to the work of Descartes and Bacon. Commodification/economism and consumerism were beliefs that emerged alongside Smith’s economic theories. At the bottom of the list is ethnocentrism, the emergence of which can also be traced back to Sachs’ (2010) argument that the Enlightenment left Europeans feeling that they were temporally more advanced than other cultures. This is important: ethnocentrism has become the force, momentum and imperative that has led to the continual efforts of Western industrial culture, my/Western culture, to export our worldview (including root metaphors), disregarding, and often harming, communities that have lived in an ethical relationship with the land for generations. While each of these beliefs are troubling and harmful, taken together they provide a structure and justification for a hierarchical, value-laden, view of the world. The following section looks at this hierarchical perspective and wonders about other ways of understanding the world.
Hierarchical thinking

Emerging from these root metaphors and undergirding many behaviors and beliefs is a value hierarchy deeply embedded in my/Western culture (Martusewicz et al., 2015). This hierarchy positions those who are wealthy and white and male above other humans, and positions humans above other living beings. Importantly this hierarchy makes clear the connection between human justice issues (e.g., sexism, racism, classism) and environmental degradation: violence, abuse, mistreatment, degradation, all of this is directed to those who are perceived as being further down the hierarchy. This belief, this perspective on the world, appears to allow ways of thinking that suggests the primary role of some humans is to be in service to others, and that the primary purpose of the various other parts of e/Earth is to be a ‘resource’ to satisfy the ever-increasing list of human ‘needs’ (Illich, 2010; Shiva, 2010). A depiction (see left side of Figure 2) of this human-centered value hierarchy places humans at the top of a pyramid, particularly white males, with other humans below. Beneath homo sapiens we find the other organisms, first those that are charismatic, compelling, well-known, romanticized, followed by that which is typically perceived as lesser: dirty (including soil), dangerous, or a pest (mosquitos, cockroaches, microorganisms).
This hierarchy reflects the mindset about humans that emerged from the Enlightenment period discussed above: it positions everyone on the same continuum of what it means to be human, with some who are just more ‘developed’ or ‘advanced.’ Those positioned higher may operate under the misapprehension that it is their moral imperative to foster the development and advancement of other peoples. While many of these efforts can be clearly seen in US foreign policy and US military actions, it is also evident in activities that appear more altruistic, such as the Peace Corps. It also positions people over the land, again suggesting a relationship based on control and domination. Not only is this the source of much of the inequity in society, it is also the greatest challenge to sustainable (equitable and ecologically sound) living (Martusewicz, et al., 2015).

There are alternative perspectives, ways of thinking that decenters humans, placing them in a field of influence with each other, and with the land (right side of Figure 2). Alongside this repositioning are many exciting and complex questions,
including: how would our daily living, our diets, our interactions, change if we adopted this new perspective? And, to whom and what would we feel accountable when making decisions about what, how and where to build new housing or commercial structures? The way in which we assign value to all that we’re surrounded by is important, it can influence the actions we take and the beliefs we hold. In my/Western culture a hierarchical perspective on the world, structured around a set of troubling root metaphors, is widely held. Because the root metaphors are pervasive, because they are found reflected in the stories we tell and the lives we live, we can mistakenly believe that this is just the way that things are. This is part of the ‘optical delusion’ I believe Einstein referenced in the quote in the beginning of this document. The second part of this chapter will now explore three manifestations of these deeply held but hidden beliefs.

**Manifestations**

In the prior section I introduced root metaphors and the value hierarchy they inform. In this section I take those ideas and carry them forward by looking at how these root metaphors emerge from, influence and/or make sense of three aspects of my/Western culture: an idea – objectification; a happening – silencing; an artifact – Dr. Seuss’s *The Lorax*. In each section I consider what happens when looking at these things with an awareness of these deeply held beliefs. I draw connections, raise questions, and attempt to imagine how things might be different.

**Objectification**
Positioning Nussbaum’s (1995) description of sexual objectification next to these root metaphors helps deepen the connection between the ways some people are treated, and the ways in which e/Earth is treated. While Nussbaum was speaking only of the objectification of women her analysis provides an interesting way to consider the connections between the mistreatment of people and of the land. She identifies seven aspects of objectification:

- Instrumentality: The objectifier treats the object as a tool of his or her purposes.
- Denial of autonomy: The objectifier treats the object as lacking in autonomy and self-determination.
- Inertness: The objectifier treats the object as lacking in agency, and perhaps also in activity.
- Fungibility: The objectifier treats the object as interchangeable (a) with other objects of the same type, and/or (b) with objects of other types.
- Violability: The objectifier treats the object as lacking in boundary-integrity, as something that it is permissible to break up, smash, break into.
- Ownership: The objectifier treats the object as something that is owned by another, can be bought or sold, etc.
- Denial of subjectivity: The objectifier treats the object as something whose experience and feelings (if any) need not be taken into account. (p. 257)
It’s clear that embedded in my/Western culture there is the inclination towards, and a structure that permits, the objectification of women and other people who are not white and male and ‘Western.’ Patriarchy/androcentrism, individualism, commodification and ethnocentrism are all root metaphors that contribute to the value hierarchy and help normalize attitudes that lead to objectifying behavior. While less obvious, those same inclinations and structures also exist and support the objectification of Earth (supported by anthropocentric beliefs in addition to the metaphors listed above). Nussbaum’s work provides insight into a perspective that sees Earth as a collection of resources in service to those with greatest access to power. To illuminate the degree to which Earth is objectified, and the degree to which this is hidden (at least for me) with the ‘this is just the way things are’ way of thinking, I find it useful to imagine what it would be like to treat Earth in a way that doesn’t fall within Nussbaum’s definition. If we are not above, but rather a part of the world in which we live, if we wish to accept our place amidst this wonderful mess, then we have to extend our concerns about, and resistance to, the objectification of the other-than-human.

This endeavor is problematic: it is worrisome and difficult for me, a white, Western, cis male, to ask other people, who have experienced the violence, discrimination and misogyny associated with objectification, to consider my proposal. I can imagine this might be a source of anger and frustration for some who read these words and I believe that would be a valid, understandable response. I don’t think I can, or should, attempt to resolve this, but I believe there is real value in imagining what it might mean to challenge objectifying behavior for both humans and other-than-humans – for all of whom must endure this harm. Significantly, as I consider this I realize that I
am uncomfortable conflating mistreatment of people and of the land because I worry that this may diminish the human experiences. In turn, I recognize that my worries here are bound up in the same hierarchical thinking that I believe must be challenged. In wanting to value the experience of humans over that of others I am positioning human-experience as greater, as more significant.

With these concerns in mind, and without a clear answer, I believe it is valuable and important to attempt to imagine, to wonder: what happens when we take the points made by Nussbaum and treat both people, as well as the rest of land, in the opposite way? How might agriculture and animal husbandry change if we were to treat the land and the animals we consume as vibrant and alive, with intentions and experiences of their places and lives? How would we mine if we had to account for a mountain top’s boundary-integrity, if we considered it’s features as inviolable? How would construction and development proceed if we didn’t see the land as places in need of ownership? How would we live our lives if everything that surrounds us has value equal to that of our own? What does progress look like if we challenge the notion that we are surrounded by things that are either tools for our advancement, or challenges to our cause? Can living things and materials still be ‘resources’ if we decide that they can’t be owned? These questions are complex, and not easily answered. At points it feels almost absurd to consider these concerns for things that we don’t even consider alive – and while mountain tops themselves aren’t an individual organism, a mountain top is both covered with life, and exists in relationship with all that is downhill – downstream – of its peak. Additionally, in this case it is important to question whether my concern that a mountain top isn’t an individual organism is based off the root metaphor that suggest
the individual is the primary social unit. Of course, humans are also not ‘individual’ organisms – we are complex collections of many different organisms, all of whom contribute to well-being of the collective-person.

Silence

There is a long history in the US of silencing the voices of those further down on the value hierarchy. Initially only white male property owners had a voice and vote. Whether it was because ‘common’ people couldn’t be relied on to make good choices, couldn’t read, were too busy or otherwise uninterested in politics, only those wealthy enough to own property and be removed from day-to-day work were believed capable of making decisions in the best interest of the country (Martusewicz, et al., 2015). This slowly changed: the 15th amendment gave African American men the right to vote in 1869 (though Jim Crow laws, poll taxes and “grandfather clauses” throughout the south meant that in 1940 only 3% of eligible African Americans were registered to vote) (ACLU, n.d.); in 1920 the 19th amendment gave women the right to vote, though black women faced the same barriers that prevented most eligible black men to vote (Block, 2020); and then in 1965 the voting rights act, signed by Johnson, barred any election practice that would infringe on people’s right to vote because of their race.

Despite this, there continues to be ample evidence in this country, and elsewhere, that some voices count, and some do not; amongst the voices that count, some count more than others. One way to illuminate this is by considering the U.S. Senate: because small states, with predominantly white populations, have the same number of senators as large and diverse states, white voter’s voices are heavily over-
represented in the Senate. When compared to their white counterparts, black Americans have 75% as much representation, Asian Americans have 72% as much representation and Hispanic Americans have only 55% as much representation (Leonhardt, 2018). Other examples include: the Electoral College, which was developed in response to white slave-owner’s concerns (Codrington III, 2019) and allows a president to be elected without receiving a majority of votes; gerrymandering, which packs voters of color together into fewer districts, effectively diluting their voices in others (Soffen, 2016); and the passing of laws meant to restrict voting – as of March 2021 the Brennan Center had identified 253 bills in 43 states making various attempts to limit voter’s rights (Wines, 2021). This must change.

All voices, different voices, must have the opportunity to speak and be heard. In an interview, Homi Bhabha (Rutherford, 1990) explains how difference is distinct from diversity. Diversity comes from the humanist view discussed above that humans are all on essentially the same pathway, but at different points in their culture’s development – this is the vision of humanity that Sachs (2010) argued first emerged during the Enlightenment. As Bhabha explains “the universalism that paradoxically permits diversity masks ethnocentric norms, values and interests” (Rutherford, 1990, p. 208). Calls for diversity act as a homogenizing force because “all forms of cultural diversity may be understood on the basis of a particular universal concept” (p. 209).

To move forward, we need to seek out, listen to and value different voices. When difference interacts, whether it is different ideas, needs, organisms, cultures etc., tension develops – difference attempts to pull apart and, in the process, opens a space. It is in this space that opportunity emerges: for creativity, for new ideas to merge with
older ones, for hybrids, collaborations and collectives, for conservation and innovation, preservation and revolution. As Martusewicz et al. (2015) ask, “What other knowledge exists that may help us to solve the crises that we are facing” (p. 43). I might continue by asking from where might knowledge come? From whom and from what? Where and when might we collaborate and with whom and what? If we can, and we must, squash the ethnocentrism that is reinforced throughout my/Western culture, we can open ourselves to accepting the idea that there are many different ways of knowing and being in the world. These differences aren’t to be romanticized (and in the process diminished as ‘quaint’) – they must be positioned as dynamic, powerful, valuable and equivalent to our own way of knowing the world. Diversity places us within the same paradigm, and with the same sets of beliefs, including root metaphors. Difference opens a new door and offers a way forward that exists inside the spaces that form when we truly interact with knowledges, ideas, peoples and the other-than-human that surrounds us.

While acknowledging how essential it is to value the voices of other humans, I also believe that we must find ways to account for – to be accountable to – all the stuff, both living and other-than, that our (inter)actions might impact; we must be open to considering the ways in which we might listen for the voice of the other-than-human. Tsing (2015) talks about other-than-human histories that are available for us to read. As she explains, “I delve into the abilities of pines, across many times and places, to change the scene with their presence and transform the trajectories of others – that is, to make history” (p. 168). If we can ‘read’ the histories of the pines by knowing how to look, might we also be able to read entities, landscapes and places in other ways? What might we learn, and how might we live if we started to think of all that surrounds as
alive, intelligent, and affective – as aspects of Earth that have developed complex solutions over millions and billions of years?

All of this is to suggest that I believe there is another way forward, one that recognizes the potential of collaborating, and seeks opportunities to do so (Haraway, 2016; Morton, 2017; Sagan, 2011; Tsing, 2015). From contemporary biology to artistic endeavors, Haraway (2016) explored intentional and unintentional collaborations between humans and others and suggested the concept of sympoiesis, or “making with” (p. 5), as a way of thinking about the deeply interconnected way that we inhabit places. She is particularly concerned with the idea of “staying with the trouble” (i.e., the title of the book), which is the idea that we need to spend our energy recognizing and building on the many connections we have, here and now, and that we must stop dwelling in the past or future.

The classic concept of an organisms as an independent entities, competing with and consuming others, doesn’t accurately capture the complexity or collaborative nature of living together that recent work in biology and other fields is beginning to report. Using the Matsutake mushroom, highly prized and quite valuable in Japanese culture, Tsing (2015) showed how the mushroom collaborates with pines, as well as humans and our economic system, to live successfully in various places. Indeed, the success of the mushroom is somewhat dependent on finding landscapes that have been devastated by human activity – it, along with pines, collaborate to begin to reconstruct

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2 One fascinating example of this: researchers have found that trees and other plants in forest ecosystems communicate with one another using chemical messages, resource transfers, and even electrical signals sent through mycorrhizal networks. These communications can initiate adaptive responses in other plants. As the researchers point out “Underground ‘tree talk’ is a foundational process in the complex adaptive nature of forest ecosystems” (Gorzelak et al., 2015, p. 9).
possibilities for living on damaged ground. Tsing’s work – where mushrooms, people, and pines find ways of flourishing on devastated landscapes – clarifies Haraway’s idea of ‘staying with the trouble.’ Rather than mourning what could have been or waiting for salvation from the future, we must collaborate here and now in hopes of finding, as the subtitle of Tsing’s book explains, “the possibility of life in capitalist ruins.”

We are already collaborators with much that is not human, for example: the billions of organisms who cohabitate in our digestive system and epidermis. This sentiment, of living together, becoming together in the messy entanglements of which we are inextricably entwined, is also captured by Dorion Sagan (2011) when he discussed the importance, and inevitability, of collaboration. He described this emerging awareness within the sciences as “the return of the repressed” and explained that there is widespread recognition that nothing happens in isolation – this is “the return of the ghost of what was excluded, in this case all the systems, living and nonliving, which make our kind possible” (para. 2). One example of this: if a person’s human cells were to disappear “What would remain would be a ghostly image, the skin outlined by a shimmer of bacteria, fungi, roundworms, pinworms and various other microbial inhabitants” (para. 6, quoting Folsome, 1985). The world is filled with communities – interconnected, collaborative lives are typical. The concept of the independent organism is a fallacy invented by Western science and directly connected to the root metaphor of individualism. We are all part of communities that include multitudes of connections – more than we can possibly grasp. With whom and what are we allied in shared hopes of living well, how can we learn to ‘hear’ and ‘read’ for those voices, and how might we live
and think differently to welcome our collaborators and get down to the business of ‘making with’?

There is also an important temporal aspect to the voices that we must listen for. The idea that we must attend to those whose lives will play out on these lands in the future is common in discussions around sustainability and climate change; while important, we must also question the impact of only looking and listening forwards in time – and recognize that this way of thinking is bound up in the root metaphor of progress, the belief that change is always good and important. By extension, this belief also suggests that the past is problematic, something to be discarded (this belief is strikingly apparent in the lifecycle of our electronic goods). With this in mind, it might be useful to add a third dimension to the hierarchical pyramid to help reveal how we value differently those who have existed in the past and those who will exist in the future. In this three-dimensional model the future entity might be positioned above and in front of the present and past, suggesting the future is valued more than the other states of time.

Daniel Wildcat (2009), considered the ways in which we are connected to, and responsible for, our past, present and future, and provided a description of seven generations thinking – this is an idea that is familiar in discourses around sustainability (e.g. Caradonna 2014), though typically the idea is used to argue we must plan seven generations of humans into the future. Wildcat positions us differently and challenges the notion that we should only be looking forwards:

“Each one of us in the seventh generation – at the center of life, preceded by three generations and followed by three generations. Our decisions… should
take into account the knowledge of our ancestors – an intellectual and spiritual inheritance – and the responsibilities we have for our children and future generations, a sort of intellectual and spiritual trusteeship” (p. 91).

Keeping in mind that our lives, our collaborations, exist in particular places – that we must ‘make with’ somewhere – Bowers (2008), like Wildcat, spoke to the temporal aspect of the voices we must attend to: he suggested that a deep understanding of place involves looking carefully at the past and present conditions of that place. He explained that we miss something critical when we only consider must be changed as we move into the future; understanding how to live well in a place means that we must attend to the past. As we inevitably move forward he believed that we needed to engage in the “democratic process of deciding what needs to be resisted, fundamentally changed or conserved and intergenerationally renewed” (Bowers, 2008, p. 332).

Greenwood (2008), building on Bowers, identified a question that helps to position ourselves, as Wildcat suggested, ‘at the center of life’: he asked “What needs to be conserved, transformed, restored, or created—here?” (p. 339).

We must look forward and back: there was much that was known about living well before Western science and our modern era. Importantly, this is not an argument to discard the valuable knowledge developed in modern Western culture in much the same way that saying ‘black lives matter’ is not equivalent to saying other lives don’t matter. It is obvious that ‘blue’ lives and ‘white’ lives matter, just as it is obvious that Western knowledge matters. This, instead, is a statement about the importance of other knowledges, understandings and ways of knowing: everything must be carefully
considered. Tsing, Haraway and Sagan all position us as collaborators, making with one another in the midst of the trouble created, in large part, by the human living of the past few hundred years. Wildcat, Bowers and Greenwood add to this by challenging the notion that progress is always good, and in doing so resurrect the past and place it alongside the present and future, another collaboration of sorts. By honoring and drawing on the past while looking to the future we become the present stewards of the land, part of a collective whole inextricably linked through complex webs of collaboration.

As I alluded to previously, there is a risk of objectification in the ways that we look to difference for solutions. Kim TallBear addressed this idea in a discussion about the ways in which Western new-materialist philosophies are adopting ideas that are similar, in some ways, to indigenous thought (UK Political Ecology, 2015). Though she finds the convergence intriguing, she also cautions that using indigenous philosophies risks appropriation and objectification. If indigenous ideas are romanticized, treated as tropes, as quaint stories that are interesting but static, then those who use their ideas are engaging in a type of continued colonization. This is an important aspect of challenging silence, of recognizing and listening to others who have different understandings and ways of being in the world, and I think we must constantly ask: are we positioning other ways of knowing as equal to Western knowledges, or are they constructed as beliefs and treated as remnants of civilizations continually being erased? And the exciting counterpart to that question: what happens if we look around us and see a world filled with knowledge as powerful, dynamic and nuanced as our own?
Including the voices of all that may be affected by a decision is an example of a true democracy: “Beginning from this understanding that human communities are nested in and absolutely dependent upon the well-being of a larger living system, the decisions that we make about how we live together ought to include an understanding of that dependence” (Martusewicz et al. 2015, p. 28). We must account for all of the others who are impacted by the decisions we make; we must welcome those voices and seek them out when necessary. We need to understand our lives as being part of a continuum, one that stretches ahead and behind and out in all directions. Our bodies are made of material formed billions of years ago in ancient and long-extinct starts; for the smallest moment in the history of the universe these atoms come together in us; as we live we exchange these atoms for others in a constant state of change and becoming we are, at our must fundamental level, deeply connected.

We have the opportunity to form connections (to make kin, as Haraway suggests) with so many potential collaborators. When we stop looking at everything else as a resource for us to use and discard, or discount as unimportant, and instead see our world as filled with materials or organisms ready to collaborate we can find opportunities everywhere to imagine and create, to care for each other, to find ways to live well in the midst of the damage that’s already been done. When we recognize the ways in which our lives and actions are connected to so many others, and when we know and feel that our well-being is tied to their well-being, then we can work to make our connections additive, positive, beneficial. We must leave behind hopes of homogenizing and instead seek out and listen to many voices, and welcome difference – this is our best chance to
keep taut the webs of living, the meandering, infinitely twisted, knotted and connected fibers that form the foundation from which everything emerges.

**Dr. Seuss and The Lorax**

The children’s book The Lorax, by Dr. Seuss (1971/1999), is illustrative: a resource was identified (Truffula Trees) that could be turned into a product (Thneeds), one that supposedly addressed many needs (a shirt, sock, hat, a carpet, bicycle seat covers, etc.). There is a demand for the product, leading the Once-ler to invest in more technology (the “Super-Axe-Hacker”) so that he can harvest more of the resource and produce more of the aforementioned product. Infinite growth seems possible with continued investment:

I meant no harm. I most truly did not.
But I had to grow bigger. So bigger I got.
I biggered my factory. I biggered my roads.
I biggered my wagons. I biggered the loads…
I went right on biggering… selling more Thneeds.
And I biggered my money, which everyone needs.

His hopes for infinite growth are quashed, though, when he discovers that the final tree has been removed: “No more trees. No more Thneeds. No more work to be done.” The Once-ler had a product that served many needs, some of which continued to emerge (“it has other uses. Yes, far beyond that”). We can imagine that, through clever
marketing and rebranding, the demand for Thneeds could continue to increase, but the limitations imposed by the trees wasn’t considered. Nature was viewed as a resource and the needs of the other inhabitants of the forest weren’t considered, leaving denuded lands behind. The Once-ler took the land, and the inhabitants of the land, and turned it all into a tool, one that would allow him and his family to flourish.

The Once-ler is in the midst of some serious trouble (as are we all). Things are messy and complicated, in ways that are wonderful and awful. Haraway (2016) is significant here: she is interested in considering what it means to be in the midst of such a mess. There are two big ideas in her work that I think are important: first, she wants us to be aware of our connections, the ways in which our ‘tentacles’ of living extend outwards to the entities that surround us. We need to work to forge, examine and build upon our many connections in the midst of all this mess – doing so can help us find ways to “live and die well with each other in a thick present” (p. 1). Second, as she explains “staying with the trouble requires learning to be truly present, not as a vanishing pivot between awful or edenic pasts and apocalyptic or salvific futures, but as mortal critters entwined in myriad unfinished configuration of places, times, matters, meanings” (p. 1). Haraway is calling on us all, and presumably the Once-ler, to stop glamorizing or castigating past and the future, and focus on the present state of things (particularly important for the younger version of myself who always imagined the many ways in which the future would save us). In recognizing this present state we must explore our own connections and recognize that these bindings with our many collaborations aren’t peripheral to finding ways to live well with what we have: they are
central to living – inevitable – and a powerful tool as we look for solutions in the midst of a mess.

Despite the many examples Haraway offers, Tsing (2015) really helped me grasp what it means to ‘stay with the trouble’ through her examination of Matsutake, a type of mushroom highly valued both socially and monetarily in Japan. These mushrooms must be wild harvested – scientists have been unsuccessful at controlled cultivation, despite many attempts (including growing full-sized pine trees inside laboratories). What makes Matsutake interesting is that they grow best in landscapes that have been disrupted. Forests that have been heavily logged or otherwise damaged make good homes for the fungus. It is in this way that Matsutake are staying with the trouble, they are living on what Tsing calls “blasted landscapes,” places that have been heavily damaged by human activity. They collaborate with pine and humans (including our global economic system) and other life, forging connections and finding ways to “live well” in a disrupted world.

Both Tsing and Haraway provoke important questions for Seuss’s protagonist: what might flourish on the land decimated by the Once-ler’s short-sighted activities? What organisms might stay with, and revel in, the trouble? How will the forced migration of various species impact the ecosystems where they attempt to settle? Is this an ideal situation for fungi to take hold? What types of collaborations might occur as life trickles back to this once vibrant place? What type of fringe capitalism might emerge? What entities, from what places, might be brought to this newly decimated landscape, and how might they flourish?
The future won’t save us, or the Once-ler, and none of us can return to the past. Both worlds are filled with potential collaborators, entities of all types: other people (those of past, present, and future), organisms at all scales, technologies and the land. Each place has knowledge in so many forms, making connections, working together, valuing all voices – staying with the trouble, even on blasted landscapes, is how we move forward together. As I considered all this I started to wonder, what might happen in the Once-ler’s world after the book ended? Could it be as simple as tossing the last of the Truffula seeds in a bucket and asking some kid to plant them, or should some of the seeds go to a seed bank? I thought it would be interesting to imagine what might happen in the future of Seuss’s world and created a few additional couplets:

Then one gray autumn day, as I sat in my chair
The Lorax came back! He said “how do you dare
sit here like this in the midst of destruction
As your thneeds go through their 20th price reduction!”

He continued by saying “you went on and on, you never did stop
you pushed your thneeds to each person in every damn shop,
making claims about thneeds, ‘they’re what everyone needs’
and yet now sir you know we can make thneeds from weeds!”

It was true, and I knew it, it was the source of my sadness,
and at times it left me in a state of great madness.
Using Truffula trees to make thneeds was outdated.
Thneeds made from weeds left the whole market sated!

My niece had developed this new thneed-innovation, her weed-thneeds could be used for carbon sequestration. Every thneed that was sold in every thneed shop was marketed as a way to make climate change stop

The weed, she’d discovered, was a close ally of a widespread, but tiny, little pink and blue fly. The weed and the fly, they work closely together to bind carbon molecules in the shape of a feather!

The carbon-feathers and weeds are then harvested as one and set out to dry in the warm summer sun. Sludge from the pond where the Swomee-Swans had swum is added to the mix, along with stale spearmint gum.

Then the brown Bar-ba-loots take this mixture away to their caves for a month and a week and a day. While what they do is unknown, and never been shown The result benefits all and their community has grown!

In fact, all of the animals that my work drove away have started to come back (and I do hope they’ll stay!). The water is clearing, the air has less smog
And I’m slowly emerging from my voracious greed-fog.

As I emerge from that cloud of artificial needs
I can understand that needs such as thneeds
must be balanced, congruous, with the needs of our planet.
‘That’s right’ scoffed the Lorax, and added ‘God damnit!

As an educator, I’ve used the Lorax as an important tool to talk with students about the importance of caring for e/Earth and about the connections between capitalism (or consumerism) and the degradation of our environment. It is also exciting to think about the ways in which Seuss highlights some of the root metaphors noted above: certainly the Once-ler embodies the idea of the individual; commodification, consumerism, progress, and anthropocentrism are also present. The Once-ler’s interactions with the Lorax demonstrate a type of rationalism and likely some form of human/ethnocentrism (the Once-ler describes the Lorax as “sort of a man”). I appreciate much about this book and for many years I could recite the entirety of the story from memory. I would be unsurprised to find that many educators who share a concern for the environment have, at some point, used this book.

It is because of my strong connection to this Dr. Seuss book, as well as the importance and value of the story, that I was excited to include this section. But the decision to do so, as well as the decision to continue to use Dr. Seuss when I teach, has been a struggle for me in light of the well-deserved criticism of the racist imagery present in some of his books, as well as the very troubling cartoons he penned early in his life – even the very first cartoon he signed as Dr. Seuss was a racist depiction of
Japanese women and children (Ishizuka & Stephens, 2019). There is an opportunity in this mess: that Dr. Seuss could offer something that so thoughtfully addresses major environmental concerns in a way that is insightful and accessible, while at the same time creating very troubling and racist imagery, is significant. It reflects a very important idea from this chapter, that many people don't see the way that we treat one another and the way that we treat Earth as connected.

Ecological health and social justice are bound together, though this connection may not be obvious to all. My intention in this chapter was to make this apparent through a discussion of root metaphors and the value hierarchy that they inform. These hidden beliefs are widely held in my/Western culture, are reinforced through the stories we tell and can be found reflected in various parts of the culture. These beliefs are harmful – they suggest that some people have more value, that people have greater value than other life, and even establish greater value for some types of life than others. This disregards a fundamentally important idea: humans, organisms, all life are inextricably bound together in networks of reliance and support. To value some over others ignores this essential fact about the world – the belief that humans, or any organism, is truly solitary, truly an individual is the optical delusion of which Einstein spoke (see quote before introduction) and it must be challenged and cast aside if we are to move forwards together. In the next chapter I will explore how education propagates these hidden beliefs and what might be done to make these explicit in order to give students the ability to examine them critically.
Chapter 2: Education’s role

In this chapter I begin by exploring the ways in which schools convey root metaphors and the value hierarchy. I suggest that while these ideas are likely often taught unintentionally, students are exposed to them through various aspects of their schooling. Following this I use ideas about identity as I wonder about the degree to which our language, culture and places determine, and limit, what we can know, think and act upon. I acknowledge that while it does seem that these elements may constrain us, there is much that can be done to resist external limiting factors. Next, I take ideas about how morality and citizenship are taught and suggest that by broadening how we think about our social world, how we define our communities, could challenge a human-centered morality. Finally, I note that stand-alone courses trying to address these issues is not adequate and make the argument that the entirety of education, both formal and informal, must take up these pressing issues because, unintentionally, the opposite is often taught. I offer this chapter as an opportunity to consider how identities and positions, the ways that we think about ourselves and the actions we take, might expand in a world where we value and attend to that which we’re surrounded by differently.

The dissemination of root metaphors

Schooling is directly related to the dominant culture’s beliefs and knowledge of the world (Baldwin, 1963; Martusewicz, et al., 2015; Noddings, 2003). The structure and curriculum of schools teach more than what is intentionally taught in the classroom – students learn from all aspects of school, including, though certainly not limited to, the
system of rewards and punishments, the structure of the school, the division of subjects and the time devoted to each. These practices and priorities are a reflection of the culture in which the schooling takes place, meaning pervasive aspects of the culture, including its beliefs and stories, imbued with root metaphors and values, are also conveyed. Students also learn from what is not taught, from that about which the curriculum is silent. Eisner (1985) called these three curricula the explicit, implicit and null curricula. Bigelow (2014) provided an example of this that highlights how hierarchical thinking is disseminated when he discussed how the lack of earthen issues in any part of his schooling represented “a profound hidden ecological curriculum – one that taught neglect and even contempt for the Earth” (p. 36-7).

Making decisions about what is taught involves making decisions about how things will be taught as well as what is not taught. How something is taught, and what is excluded, is also educative. Content and structures in schools also send messages about big ideas such as which types of knowledge are valuable, what it means to be a citizen and a human and more: “Schooling is implicated in the way knowledge is organized via curriculum, texts, and testing to support this economic system, and transmitted to define humans, ‘civilized’ society, and the larger living world” (Martusewicz et al., 2015, p. 42). When the implicit and null curricula found in schools are established by a culture that values some more than others, and sees those with less value as resources or tools – means to an end – all three curricula will reflect and transmit those beliefs.

Awareness of the different ways in which schools teach is important: students spend a significant portion of their lives in schools. The experiences they have while
there inevitably play a role in their development of ideas about how they fit into their community and society as well as who they are as individuals, humans, citizens and community members. These conceptions of self are important, they will impact the positions that students take as they try to represent themselves – their identity – and the actions that they take to communicate those positions. In the following section I start by looking briefly at the complex concept of identity and then use Dewey’s ideas about morality and citizenship, aspects of one’s identity, to begin a discussion of why the entirety of schooling needs to be more attentive to what is being taught besides the explicit curriculum.

The limitations imposed by language and culture

Identities are complex and there are a wide range of ideas about what they are, how they form, how malleable they are and so forth. When we take a position we are attempting to demonstrate to others who we are and what can be expected of us; we, in turn, are also constantly positioned by others. Importantly, the ways in which we position ourselves, and the way we are positioned by others, is relational – social – positioning must be recognized by others to be influential (Gee, 2000). Darvin and Norton (2015) argued that we “are positioned in multiple ways before [we] even speak” (p. 43).

These positions, whether adopted or ascribed, suggest a range of actions we can take in particular situations (Mills, 2008). Over time the positions we take, as well as those ascribed to us, accumulate – whether through a process of thickening (Wortham, 2004), lamination (Moje & Luke, 2009) or sedimentation (Kramsch, 2009), these
positions build and become the fodder we use to tell the stories of who we are. There is intriguing symmetry between ideas about identity or self, and ideas about place – as with ourselves, as we live in a place happenings accumulate, adding layers of sediment that imbue the physical reality of a place, creating a depth of meaning that builds and changes with time.

Leander and Boldt (2013) argued that we – our identities – or at least the positions that are available for us to take, are always emerging as we interact with the place in which we are situated. Casey (1996) argued that a sense of a place is primary, that we always experience each location as somewhere particular because all of the stuff in a place, the peculiar mix of materials (including living organisms), interacts with our bodies and brains, sending signals along each person’s unique arrangement of electrochemical pathways; the sense of a place that emerges is a collaboration of sorts between the person and the stuff. It is significant that while these researchers make their point from different philosophical orientations, both identity/positions and place emerge as we, body and mind, interact with all the stuff in a particular location. Both ideas sit nicely alongside our physical reality, one that gives the impression of permanence despite the ways in which we, and all organisms, slough off our body’s cells and replace them, the ways all material weathers, shedding atoms and molecules.

While all of this happens at a pace that makes it largely imperceptible to humans, if we could look through a different lens we would see a dynamic, ever shifting, ever emerging reality, building up and breaking down, expanding and contracting, everywhere and everything in a constant state of flux. This is also true for place and identity, both things that may give a sense of permanence while actually existing in a
constant state of emergence. When we consider both place and identity in this way, attempts to imagine, to visualize these things, becomes particularly exciting – perhaps as collections of ever-erupting, free-floating volcanoes constantly consuming materials and ideas as they build their shapes, the material from their cores oozing into the mixture of material ready to be drawn in, consumed by others, as each thing, all of the stuff, builds and creates and recreates and consumes.

Regardless of the degree to which identity may be emergent, it is certainly the case that different contexts play an important role in defining the range of positions available for us to take on or assign to others (Beijaard, et al., 2004). In addition to the role of places, language and culture are also important to consider because they define the range and type of potential positions available. This is because of the relational, dialectical, nature of positioning – to position, oneself or another, requires language and is an act of communication (Kramsch, 2009). The message that is sent must be received in a language that is understandable to all involved – positions must be recognizable. In all of these communications it is possible for others to position us differently based on their beliefs and understanding about our actions (Wortham, 2004; Bucholtz, et al., 2012).

There are many ways in which we communicate positions: through the things we say; through the way(s) in which we speak; through the ways in which we move our body; through our interests and choices; through materials we purchase and display (Gee [2000] suggested that identity plays an important role in creating and ever increasing market for goods in an unregulated capitalist system – an important consideration as we try to imagine the ways in which a sustainable culture might look.
different). Collectively these ways of communicating, responding and interacting with each other and the world make up our habitus, which Kramsch (2009) explains is “the product of historical sedimentation… of attitudes, beliefs, and worldviews that have been reinforced over time. It is through the living bodies of individual speakers that history, says Bourdieu, is ‘incarnated’ in the social structure” (p. 113). Taken together these ideas give an interesting perspective, one where the various positions we take in hopes of representing our identities emerge out of the particularities of a place, though the range of potential positions is limited by our cultural context. This is troubling. If we can only know, think and act within a particular frame defined by the culture in which we live, and it is some of the deeply held beliefs of that culture that are the source of the problems we hope to change, then it would seem a difficult challenge to move forwards in a way that addresses the roots of the issues we face. It seems to open up the possibility of many members of a particular culture accepting the status quo – that this is ‘just the way things are.’

**Plotting a different course**

Lantolf and Poehner (2014) explained that Marx’s theory of historical materialism (a dialectical theory applied to society) challenges this deterministic perspective and suggested that the current state of things should not be seen as natural or inevitable, but rather a consequence of a particular set of historical events: “humans, unlike any other living species, through (goal oriented) socially organized practical activity, create and change the material conditions in which they live and in so doing change themselves” (p. 19). If we understand the conditions under which our culture emerged,
we may have some ability to bring about change (e.g. Alim, 2005). Our culture, lives, habits, the ways in which we act towards one another and Earth, isn’t completely determined and schools can play an important role by providing space, creating openings, that allows students to engage in a process of bringing about change that is meaningful to them: “By letting marginalised students in on the rules of the game… teachers can be involved in transforming the field rather than seeking to preserve the status quo” (Mills, 2008, p. 87, emphasis in original).

**Teaching sustainable citizenship**

Similar to Eisner’s discussion about the three curricula, Dewey (1909) argued that morality is taught both directly (the explicit curriculum) and indirectly (the implicit and null curricula) in schooling, though he believed that “the influence of direct moral instruction, even at its very best, is comparatively small” (p. 4) in contrast to the impact of indirect instruction, which takes place constantly. Dewey argued that moral ideas (distinct from ideas about morality – that is, ideas that might come from a morals or ethics class) are obtained through awareness of society and culture: “Ultimate moral motives and forces are nothing more or less than social intelligence – the power of observing and comprehending social situations, – and social power – trained capacities of control – at work in the service of social interest and aims” (p. 43). Schools, as part of society, teach and reinforce attitudes and behaviors that support the development of ‘good,’ or moral, citizens. Because of the connection between schools and the culture ideas such as ‘good,’ ‘moral,’ and ‘citizen’ are inevitably connected to the deeply held
beliefs and values of that culture. This presents a challenge if those beliefs are problematic.

Considering the connections between schooling, culture and politics it is important to acknowledge that, regardless of the intent, one result of schooling is the development of citizens (Houser, 2009; Kissling & Calabrese Barton, 2013). Being moral – a ‘good’ citizen – is a position, an aspect of identity, that one can take. In Dewey’s view, this is a person who is “a thoroughly efficient and serviceable member of society,” a person who helps to maintain “the continuity of society” (p. 9). Dewey’s understanding of good and moral is important here because the continuity of communities is fundamental to any discussion about education for just and sustainable communities. The framework delimiting positions such as ‘good,’ ‘moral,’ and ‘citizen’ emerges from a culture whose continuity those positions are meant to support. This becomes complicated, though, when a culture, like my/Western culture, embraces ideas that are problematic, when being a ‘good’ citizen, that is, upholding the values and priorities of that culture, could mean acting in ways that would eventually do damage, or even lead to the end of that society.

Such is the case today – the root metaphors discussed above, as well as the value hierarchy, are dangerous. While not (always) being explicitly taught, these entrenched beliefs and values are conveyed to students throughout their time in school. Root metaphors can be seen reflected in various aspects of schooling: value hierarchies are evident in the staffing structure of most schools and the ways in which students are typically disciplined; individualism is clearly evident in grading, testing and school-work; and rationalism, a particular way of knowing the world and building knowledge, takes
primacy in the curriculum. In trying to imagine a type of education that can contribute to the emergence of more sustainable communities we must bear in mind that teachers may not be able to transform the structure of the schools in which they teach or adjust the priorities of the culture and society in which their students live, but they can call out these root metaphors, make them explicit.

Also important for this discussion is Dewey’s observation about the ubiquitous nature and powerful impact of the indirect moral instruction. This argument sits meaningfully alongside Eisner’s observations about the implicit and null curricula and Bigelow’s observation that his schooling taught him contempt for e/Earth: all three of these individuals are pointing out that every aspect of schooling is educative, and that even explicit curricula teach more than the stated objectives. This is a critical observation. If one of the things education does is develop citizens, then we must be concerned that the citizens that emerge from schools understand that being ‘good’ or ‘moral’ entails taking actions and making decisions that take into account all that inhabits a particular place – that the continuity of a society, of humans, in a particular place is directly connected to the continuity of the place itself and all the inhabitants of that place. There are many opportunities to address this in schools. For example, in my work with Kissling (Kissling & Bell, 2020), we suggested that social studies classrooms, the subject traditionally tasked with the explicit development of citizens, are one place where this new conception of citizenship might emerge. We argued that the traditionally anthropocentric field must reorient itself and support an understanding of humans as members not only of a human community, but also “as members of the land-community
alongside other beings and materials… [where] all members stand in interdependent relation to each other” (p. 19).

**Imbuing education**

Unfortunately, I don’t believe that a wholehearted embrace by a single class, or even the reorientation of an entire field, is adequate. While classes that address justice, equity, e/Earth and sustainability are important stepping stones, they are not enough: these are issues that all places face, though the way they manifest is different, and they must be made intentionally present throughout a place-specific curriculum. Dewey (1909) suggested that moral character, a moral identity, could be fostered in students through repeated exposure to moral ideas that are imbued throughout a school’s curriculum. Recurring exposures to a particular way of being, set of values and understanding of the world are connected to the theories of identity discussed previously and should be seen as a way of laminating positions over time. There have been calls for all levels of schooling, including teacher education programs, to incorporate sustainability as a core component of their philosophy and a guiding concept for their curricula (e.g., Lemons, 2011; Nolet, 2009, 2013; USTESD, 2013).

Additionally, informal sources of education, such as museums, science centers, historical societies, after-school programs, out of school youth organizations – even the signs and statuary in parks and playgrounds – must attend to the messages that are sent by the presences and absences in all areas of their work. If the varied and myriad educative institutions don’t take the time to closely examine the messages, both intended and not, that they send they will continue to support an uninformed replication
of our culture. On the other hand, a careful inquiry into what is being taught can provide students, and everyone, an opportunity to do what Bowers (2008) and Greenwood (2008) suggested: to carefully examine their culture and consider what it is that should be brought forward and what must be left behind.

With all of this in mind, it becomes exciting to imagine what might change in a school that was interested in challenging the value hierarchy and exposing the root metaphors flowing under my/Western culture. To challenge the value hierarchy we must expand our notion of ‘social’ to include e/Earth (Kissling & Bell, 2020); doing so opens possibility for ecological citizenship, which “recognizes the importance and interconnectivity of all living things” (Kissling & Calabrese Barton, 2013, p. 130). This presents some intriguing questions, including to whom and what might we extend the social? And if we were to settle on including that which is alive, what and when is something ‘living’? Should material that was once alive, or that could be part of something alive in the future, be included? The boundary is vague: viruses, for example, don’t fit the criteria often taught in Western science classes, but have some important things in common with living organisms. Further, ideas about what is alive are different in other cultures and have changed over time within Western culture, all of which leaves me wondering: is it worth attempting to establish yet another line to demarcate inclusion, or should we consider what it would mean to include all material and immaterial in our web of social connections – should we include the entirety of our place(s). These are important questions: when we change the boundaries of what we mean when we say social, we change who and what is included as a member of our societies and communities, which, in turn, changes what it means to be a moral citizen.
This is one of many exciting and complicated implications of a shift in the social: patriotism becomes even more complex; democracies must consider how to account for the added sets of voices; those involved with agriculture and animal husbandry would need to reconsider how food is produced. Recalling the body of a deer I saw on the side of the road each day as I drove home from SRS, it leaves me wondering, how long would that animal be left on the roadside after it was killed by a car if we considered it a member of our community?

Considering the earlier discussion around positioning and identity adds to my excitement because it opens the possibility for everything we’re surrounded by to take an active role in positioning us. To take moral action within this broad network of connections would mean making decisions that would support the continuity of the entirety of a place, not just the current human occupants of the land. If we can begin to listen to – if we can welcome as kin – all that surrounds us we can begin to understand what it means to live in a sustainable way in that place: “Places produce and teach particular ways of thinking about and being in the world. They tell us the way things are, even when they operate pedagogically beneath a conscious level” (Bang, et al., 2014, p. 44). The knowledges and beliefs necessary to contribute to the continuity of Earth’s many places, as well as the positions that emerge from those knowledges and beliefs, are necessarily emergent and dynamic, changing, growing and adapting alongside the world from which they come.

These ideas bring us back to Leander and Boldt (2013), who argued that identity is constantly emerging from the entirety of stuff, material (objects and organisms) and immaterial (ideas, history, culture) that surrounds us, and leaves me wondering: if we –
our identities – are already always emerging, if we are always becoming in concert with all that surrounds us, what might change if we valued the other differently, equitably?

While it may be the case, as Bang et al. (2014) note, that places have the power to be affective even at a subconscious level, it is exciting to imagine what opportunities for learning might emerge as a new, actively conscious way of understanding that which surrounds us develops. All of this leaves important questions lingering: is it possible to challenge such deeply entrenched cultural beliefs, and if so, what does a school that works towards that end sound, look and feel like? Can this type of learning take place in tandem with the myriad standards imposed by external sources, or must the standards change before meaningful change can happen at the level of schools? How might schools adjust what they do as they work to address this change in mindset and orientation to the world?

Places can guide us towards ways of living that are sustainable – in ways that will support the continuation of society, of Earth. The land, the stories, the people who currently and in the past have lived there, the people who may someday live there, the traditions and technologies, all of this does something, it can be educative, affective, particularly so if we are willing to listen. In a human centered, hierarchical world the voices of some are diminished and likewise their capability to teach, to be affective, decreases. When we remove the power dynamics and place everything within a field of interactions, something different can emerge. We have the opportunity to learn from the land, from the people who live there, and who have lived there, and from all the stories, human and other-than, that lay thick on a place. Bringing in Bhabha (Rutherford, 1990) is useful: he suggested that the space that develops when difference interacts was an
opening, an opportunity for something new to emerge. It is also useful in considering the complex negotiations that might occur when decisions are being made that incorporate all that lives in a particular place. How might necessary infrastructure projects proceed when some voices aren’t steamrolled (literally in some cases) in the process? Could we ever justify the construction of another oil pipeline? Identity and positioning are exciting and different when our hierarchical view is dismantled: typically, we see our positions and identities emerge through interactions with other people – we are positioned, and we position, identities emerge and accumulate and we become in a process that goes on throughout our lives. How might the range of positions, and resulting actions, change if instead of just negotiating between ourselves and other people, we are involved in a negotiation with the entirety of our place? What might bloom in the cracks opened by a vast range of different pressures if we’re accounting for all that we’re surrounded by?

It feels important to note that when I reflect on what has been written in this section, the focus on identity and individual actions is clearly informed by thinking that sees the individual as the primary social unit – a way of thinking that is rooted in my/Western culture. It is often the case that within this cultural context the onus for addressing social and environmental issues is placed on individuals – if only we would recycle more, drive less, buy organic-sustainable-local, vote, sign this, post-share-tweet that, like (or not), cancel (or not), things will get better. Unfortunately, individual actions can only go so far because there are larger structures within our society that have institutionalized the root metaphors and value hierarchy that are the source of many issues that we face. While independent actions are important, placing this responsibility on individuals obscures the role of these large structures. What is needed then is
“broader, collective endeavors that can work to disrupt social and environmental injustices” (Schindel Dimick, 2015, p. 396).

Reflecting on the presence of individualism throughout this section while simultaneously admitting that I’m struggling to imagine how I might write this in a way that doesn’t focus on the individual is important. It is difficult for me to imagine an understanding of the world that isn’t centered around the individual, because my way of knowing the world is rooted in my/Western culture. In a sense this demonstrates much of what I’ve tried to say in this chapter – the beliefs we hold, the values we’ve been taught, cannot simply disappear. They are the lenses through which we see the world. Further, these beliefs have been codified, institutionalized – they have deep, strong roots in much of what I experience on a daily basis. All of this positions us in ways that are outside our control – even if we hoped to adopt a different way of living and interacting with the world, the way things are structured might not permit that. A true shift in our relationship with each other, and with e/Earth will take place over generations.

Education has an important role in helping this shift begin. It is essential that we educators call out root metaphors and make explicit their role in our understanding of the world. When they are visible, when we can see them and understand their impact, we can begin to question them. There is much taught in schools that is not part of the curriculum in much the same way that there is much ‘said’ that is not explicitly written. Making students, and all of us, aware of these metaphors and the value hierarchy that they inform, and acknowledging their presence when they are discovered, creates opportunities to consume and process information in a fully informed way. It lets us all in
on the rules of the game and gives us a chance to actively decide how to move forward. It tells us that this isn’t ‘just the way things are.’ It gives us a chance to imagine the possibilities of living a life in a place where we are a part of a network of relationships, not an assembly line of resources and products – where we collaborate instead of dominate, interact instead of consume.

What is happening now?

The magnitude of the curricular shift I’m suggesting is needed means any progress will happen at glacial-pace, and likely be piecemeal. Yet the need is urgent, as noted earlier our climate is in crisis and inequity is rife. There are small but important changes taking place. California recently adopted an ethnic studies curriculum for K-12 students but the curriculum is not mandatory – ethnic studies is now required for students in the California State University system (Asmelash, 2021); climate change and human impact related content can be found in the Next Generation Science Standards, now adopted by 20 states and the District of Columbia, which represents approximately 36% of U.S. students (NSTA, n.d.); universities are also increasingly offering courses of study related to sustainability, though almost always from a scientific perspective, leaving the social aspects of sustainability unaddressed (Lemons, 2011).

Unfortunately, these changes aren’t enough. As Dewey (1909) and Eisner (1985) argued, students are learning constantly from all they are surrounded by while in school, and given the amount of time typically spent there, the influence is immense. Without attention from educators, some of what is learned will reproduce aspects of my/Western culture that are at the root of many of the challenges we face. Similarly, Nolet (2009,
2013) argued that sustainability is not a topic that can, or should, be taught in detached lessons, it must be incorporated into the fiber of the educational program: “sustainability is an emergent paradigm that considers environmental, economic, social and political systems as interconnected systems rather than discrete entities; [it] involves transformation of values and belief systems” (Nolet, 2009, p. 415). Others (e.g., Lemons, 2011; USTESD, 2013) have made similar arguments.

Even changes like these will be slow, likely in large part due to the ideological divide in the US about both the degree and the cause of climate change (Ross et al., 2016; Jacquet, Dietrich & Jost, 2014). Ross et al. (2016) explained that part of the challenge comes from “the capacity of those who benefit most from the economic status quo to reward or punish legislators, media pundits, and even academic researchers” (p. 1). We can find an example of this from Penn State by looking at the $88 million in funding for a new ice hockey rink, given to the university by Terry Pegula, who made much of his money through investment in Marcellus Shale fracking. When asked by a former Penn State student about the donation, Pegula replied that “this contribution could be just the tip of the iceberg, the first of many such gifts, if the development of the Marcellus Shale is allowed to proceed” (Davis, 2010). This creates a potential conflict for the university between donors and academic researchers.

Henderson, et al., (2017) also provided some helpful thoughts, and strong justification, that talking about and supporting the teaching of climate change in schools (and informal educational environments) is crucial. They noted that schooling can be a powerful tool for change: “employing education as a social change lever, and educational settings as sites of socialization toward alternative futures, is our strongest
suit” (p. 415). Other aspects of sustainable living are relatively unimportant if we can’t
deal with the elephant in the room. Despite this, as Henderson et al. point out, there is
relatively little work (as of 2017!) on the ways in which climate change can be brought
into the classroom. There are likely ways of teaching that could help decrease the
politically polarized nature of this issue – though currently climate change is typically
only taught in the sciences, where social aspects of issues are sometimes ignored.
Henderson et al.’s argument is compelling – climate change is the preeminent issue we
as co-inhabitants of Earth face. They conclude their piece by pointing out that teaching
about climate change and other Earth issues can occur in a wide array of educational
settings, which leaves open the possibility of research within the field of education that
takes many different shapes from varied perspectives.

Even within the field of science education, where climate change is typically
taught, there is much need: in a nationwide survey of 1500 middle and high school
science teachers Plutzer et al. (2016) found the average amount of class time these
teachers devoted to climate change was 4.7 hours. They also reported that only 30% of
middle school and 45% of high school teachers understand that there is widespread
consensus amongst scientists that global climate change is caused by human activity.
This is not adequate. We cannot hope to foster the growth of citizens responsive to the
needs of Earth if so little time is devoted teaching about this issue, and earthen issues
in general. The environment is not a topic that need only be addressed by the science
teacher.

In this chapter I argued that we must infuse the curriculum with an awareness of
our interconnectedness with the environment and with each other. We also need to find
ways to give students the information and language necessary for them to understand the influence of the hidden beliefs pervasive in my/Western culture. Schools, and all educational institutions, formal or informal, teach values and morals – really an entire belief system. We must be aware of this, must consider the implications of what is taught, and, when necessary, find ways to expose underlying beliefs and provide alternative perspectives that can support healthy communities and a healthy planet. Chapters one and two have established some of the thinking that has informed my work. From here I want to move into an exploration of SRS, beginning with a discussion of how I collected material about the school. Following this I share various descriptions about the school and then spend time wondering what all of this might contribute to the conversation about how schools can help foster the growth of sustainable communities.
Chapter 3: Soiling and storying research

“[H]umans are storytelling organisms who, individually and socially, lead storied lives” (Connelly & Clandinin, 1990).

We know our world, and ourselves, through the stories that we tell. Stories are also ubiquitous and can be found throughout every human culture on Earth (Arvay, 2002). In this chapter I describe the process I went through to create stories about the school. I begin by considering the importance of stories, their connection to my/Western culture, and some of the ways they reproduce and reflect aspects of this culture. I argue that what is needed are different stories, ones that better reflect our complex and interconnected world. Then I describe how I used soil, one aspect of Earth that highlights this complexity, as a metaphor to guide both the collection of materials about the school and the way in which I configure what I collected to present here. I conclude this chapter by outlining the various tools I used to learn as much about SRS as possible.

Stories often fit into genres with certain structures and predictable elements: the prototypical hero narrative, one that valorizes the individual actor, and emphasizes how their solitary action, determination, and effort ‘saved the day’ is a common my/Western-cultural story (Le Guin, 1996). This story is repeated frequently, from books and movies, to moral values, such as the ‘pull yourself up by the bootstraps’ myth – and we find root metaphors such as individualism hidden in plain sight within this story type. Thinking about stories, challenging them, opens up the possibility of telling new stories. Haraway
(2016) captures this best: “It matters what stories we tell to tell other stories with… It matters what stories make worlds, what worlds make stories” (p. 12).

Capturing place is critical to telling stories that feel real. All stories, and all lives, occur somewhere particular; places are unique and constantly changing mixtures of particular meanings, stories, peoples, events and the land, the stage on which all of this takes place: “Place is many things and speaks in many voices – individual biography, shared history, meaningful memory, and moral lesson, as well as euphemism – is constantly shifting, emerging or receding, being accentuated or veiled” (Kahn, 1996, p. 168). As noted earlier, even before we have access to some of the details and stories of a place, Casey (1996) argued that our first experience with any space is as a place, one that is filled with a depth and complexity provided by our body and brain’s interaction with all the material there – abstraction, seeing space, takes work; we are the constant recipients of an incredibly complex stream of information from all we’re surrounded by: we are always situated somewhere.

Perception remains as constitutive as it is constituted. This is especially evident when we perceive places: our immersion in them is not subjection to them, since we may modify their influence even as we submit to it. This influence is as meaningful as it is sensuous. Not only is the sensuous senseful, it is also placeful… The dialectic of perception and place (and of both with meaning) is as intricate as it is profound, and it is never ending. (Casey, 1996, p. 19)
To tell a story that feels ‘true’ then is to tell a story that emplaces the reader. The writer must do the job of the brain, to filter out the irrelevant sensory information, to provide just enough detail to give the reader a place in which to reside, being mindful that it is impossible to represent reality accurately. This is due to many factors – one worth mentioning is that each brain, each individual, will experience and understand a place differently: a story is a description one’s experience in a place. A story, then, needs a set of eyes from which to see – the reader must be given a body to inhabit. Fiction is a useful model for creating constructed realities that feel alive (Krieger, 1984). There is a power in writing differently, in using fiction as model in order to construct stories that feel accurate. Non-representational writing and research can “animate rather than simply mimic, to rupture rather than merely account, to evoke rather than just report, and to reverberate instead of more modestly resonating” (Vannini, 2015, p. 318). I want to explore ways of depicting that captures feelings and energy.

Linear, cohesive stories feel familiar – the hero narrative, mentioned above, is reproduced frequently – it’s compelling, easy to follow, and resonates with many as it has become common in my/Western culture and feels familiar because it is imbued with root metaphors including individualism and progress; the presence of these familiar yet hidden concepts helps the story feel true. Le Guin (1996) argues this is not the only story and in the ‘real world’ is fairly uncommon: an unallied protagonist who saves the day without help doesn’t accurately represent the complexity most stories entail.

There is another narrative, a much more common story, though one told less often, that involves cooperation and coordination. Success in these stories does not rely on a single individual, a spear thrown at an imposing mammoth, but rather a collection
of collaborators, entities of all sorts, who come together in meaningful ways. For Haraway (2016) these are the collections and collaborations, sometimes unlikely, that take place in the heat and messiness of the compost pile, digesting the detritus of the Anthropocene as we stay amidst the trouble looking for collaborators. In this mess, there’s no narrative arc, no grand finale, because the work of real living goes on uninterrupted. This is story as a ‘carrier bag:’ “Full of beginnings without ends, of initiations, of losses, of transformations and translations, and far more tricks than conflicts, far fewer triumphs than snares and delusions” (Le Guin, 1996 p. 153). These stories are intricate and necessarily partial; dichotomies are replaced by gradients; they likely don’t follow a familiar narrative arc; their meanings are complex and co-created with readers.

Tsing’s (2015) *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins* demonstrates the power of telling stories differently. The stories capture entangled lives (human and other than) that emerge from places, both physical and social-psychological, that have been damaged by human activity. Following Matsutake, the world’s most costly mushroom, Tsing provides a collection of discontinuous narratives, told from various sides of an issue: it’s complex, non-linear, and resists easy conclusions. In the telling Tsing navigates varied sources, drawing upon ecological, biological, historical, and anthropological research, as well as an array of people, to tell stories of living in the midst and on the fringes of capitalism. The power of this approach is evident: often abstract concepts such as economics, colonialism, culture, migration, and citizenship are made concrete as readers see them play out in
messy, real-world contexts. This approach is a method, a means of getting at something big “through insistent, if humble, details” (p. 111):

To listen to and tell a rush of stories is a method. And why not make the strong claim and call it a science, an addition to knowledge? Its research object is contaminated diversity; its unit of analysis is the indeterminate encounter. To learn anything we must revitalize arts of noticing and include ethnography and natural history. But we have a problem with scale. A rush of stories cannot be neatly summed up. Its scales do not nest neatly; they draw attention to interrupting geographies and tempos. These interruptions elicit more stories. This is the rush of stories’ power of science. (p. 37)

**Soil as a metaphor for research**

Tsing, Le Guin, Haraway – all three discuss the importance of stories and the value of a connected but distinct amalgam. For Tsing it’s a rush of stories, for Le Guin it’s a carrier bag and for Haraway it’s compost. When I think about collections of stuff, particularly collections that are productive or generative, my mind quickly settles on soil. We are surrounded by soil, live atop it, derive much of what we need to live from it. It produces. For research, or ideas, to be generative, to do something, is important to me. Even if the doing is just the fostering of ideas, of questions, of something more that continues to generate energy. I connect this to Lather’s (1993) concept of catalytic validity, the idea that research should do something.
Soil and place are also closely intertwined: each place has mixture particular to that location – inorganic components coming from rock and other material weathered down there; organic materials coming from those organisms that have lived in that place, derived nutrients from the land and, in dying, return that which was not used to the place where they lived. And soil, if one is not aware of its productive capabilities, can be seen as messy and inconvenient, something to be swept away, washed off, paved over in search of that which gives illusion of sterility, cleanliness and convenience. This is soil as dirt. This is another reflection of the mindset of my/Western culture, an orientation to the world that has led to an exceptional degradation of soils that took millennia to accumulate.

It is with an idea of soil in mind that I collected material about SRS – I saw the entirety of the school as a complex and productive mixture from which I was to retrieve samples. These samples became the sources that allowed me to start forming my own mixture, my own peculiar collection of collaborators, pieces placed in relationship with one another, that became the basis for the productive mix I’ve created here. I see the school, the people who are involved with the school, the land on which the school exists, the community in which the school is situated, and the broader contemporary political and social context(s) as important to telling stories of SRS. I’ve drawn from all these sources in my thinking and writing. While my goal in what I’ve written here is to say something about education, about schooling, I’ve strayed far and wide in an effort to pull things together here. Scholarly works sit alongside articles and opinion columns from the local paper. During my time at the school I moved between opportunities without concern for cohesion – my goal was not to follow a particular guide, student
group, classroom or concept, but rather to act as a pollinator, traveling from happening to happening, sipping nectar and accumulating pollen. Conversations with bartenders and sandwich shop owners intermingle in my mind with the discussions I had with guides and students.

All of this is then brought back together in the telling of stories and in the analysis of my experience. In a sense, I have collected bits and pieces of soil from SRS, sifted through these samples and placed some of what I found here, on these pages, in an attempt to create a new mixture, one that provides a glimpse of the school and a fertile place for ideas to emerge. My goal is not to be prescriptive or deductive and I won’t be providing any ‘answers.’ My purpose is to generate a mixture, soil that inspires me – and hopefully others – to think and wonder. Through the writing, reading and discussion of my work I hope to generate ideas that will propel me, and others, in new directions. I want what I’ve done here to create an opportunity to think more about education, particularly the relationship between education and where we find ourselves now: communities impacted by social discord, struggling together on e/Earth – on soil – that is increasingly impacted by our daily lives.

Finding a research site

I first became aware of SRS during a conversation with one of my committee members, Chris Uhl. Chris had learned of the school because, enthusiastic about a couple of his books, some of the guides had invited him to be part of a workshop they were doing before the school-year began. When I spoke with him he sounded excited about what he had seen and heard. We sat down in his office, he told me a bit about his
experience, and we scrolled through their website. Sitting with him, talking, thinking, imagining, it became increasingly clear: this was an opportunity that I was excited to explore. Chris connected me with one member of the school’s leadership team, Rachel, the curriculum coordinator. I almost immediately reached out to Rachel to enquire about the possibility of an informal visit. I wanted to know more, I wanted to see the school. Something about this felt right, felt like what I’d been looking for. I arranged a time to visit the school in mid-Autumn.

The drive to the school was spectacular – the trees along the way had started to draw various compounds back from their leaves in hopes of preserving them for the following year. Chlorophyll, typically the first to be removed, was largely gone and the resulting color-spectrum displayed was beautiful. I was surprised as I drove along the narrow roads close to the school that the trees here seemed even more vibrant. I pulled into the parking lot and paused momentarily in my car, nervous and excited. I was welcomed warmly by the people working in the office. Moments after arriving and signing in Rachel came out to greet me – it wasn’t until later that I would understand how busy each moment of Rachel’s days is, and how challenging it must have been for her to clear her schedule to meet with me for a couple hours. We talked as we walked, freely moving into various classrooms, exploring some of the outdoor spaces. I was struck by how comfortable and welcome I felt; Rachel radiated warmth and kindness in all her interactions with guides, students and me. The more she explained to me, the more excited I felt. This sentiment only increased as I observed students, inside and outside, engaging in activities that seemed unique and intriguing. As I came to the understanding that the outdoor areas of the school were as significant to the curriculum
as the interior spaces, I was certain that this was an important research opportunity. I left thrilled, already imaging what I might do, what ideas I might explore.

After receiving the necessary university approvals I reached out to the SRS school’s board of trustees, through Rachel, to enquire about the possibility of conducting research there. After a discussion and unanimous vote during one of the regularly scheduled board meetings, my research project was approved. I sent out letters, one to parents of students at the school and one to guides describing my enthusiasm, interests, and possible research activities. In the letter to parents and guardians I both explained the research and asked for their consent for their child(ren) to participate – my intent was to both connect with the community and also begin the process of finding individuals with whom I could speak. Further, because my plan was to be moving from classroom to classroom I wanted to be sure that everyone, students, guides, parents, knew who I was, what I was thinking about and what I was hoping to do. This is the text of the letter that was sent out to parents and guardians of SRS students:

Dear parents and guardians,

My name is Jonathan Bell and I am a graduate student in the Department of Curriculum and Instruction at Penn State. I am going to be conducting research at your child’s school to better understand the ways in which the school teaches for and about sustainability. I’m passionate about education, and really excited to learn more about SRS. My research has been approved by the SRS board of trustees as well as Office for
Research Protections at Penn State. As part of this research I will be spending 3 weeks in the school, April 29th – May 17th. While there I will be attending different school events and spending time in classrooms, observing what is being taught and how it is being taught.

In addition to observing activities at the school I’m hoping to speak with students currently attending SRS to better understand their experiences in the school (audio from these conversations will be recorded). I’m also hoping to take photographs of some of the things students produce, for example, art projects, written papers etc. Quotes from these conversations, and from student work, may be used in the reporting of my research at academic conferences and in research publications. Students’ responses will be made anonymous, names will be removed or obscured from student work, and any other personally identifying information will be removed. The original audio recordings will be stored on a secure, encrypted hard drive, to which only I have access. Please note, my hope is only to better understand SRS – I am in NO way attempting to evaluate the students.

In order to have audio-recorded conversations with students, and/or collect pictures of work they have created at school I need permission from a parent/guardian of each student who wishes to participate. After obtaining permission from you, the student’s parent or guardian, I will explain the study to eligible students and ask if they wish to participate. I will only collect work from and/or interview students who express an
ongoing interest in participating. It is the right of each student participant, as well as their parent/guardian, to discontinue participation at any point. The last page, included with this letter, is the form requesting permission for your child to participate in my study – please fill out this form and return it to your child’s teacher.

Building strong, healthy communities is critical as we move towards the future. I believe that the model of education that SRS demonstrates can make an important contribution in this direction – what’s happening at your school needs to be part of the conversation about the role of education in the move towards a more sustainable future. Thank you for considering granting permission for your child to participate in my study.

Methods of research

I intentionally approached the initial stages of research without a particular question in mind. Instead, the school and its mission, ‘education for a hopeful sustainable future,’ became the center around which various my endeavors orbited. My initial research focused on gathering as much publicly available material as I could about the school – from the school’s website to social media posts (both those from the school and those about the school) to information the state in which the school resides requires be publicly available (demographics, test scores, salaries). Additionally, the school made available to me their charter school application, curriculum framework, and student behavior rubric. With Tsing’s ‘rush,’ Haraway’s ‘compost,’ Le Guin’s ‘carrier
‘bag,’ and my ‘soil’ in mind I collected all that I could, unsure what might be useful. I also wanted background – what did parents say about the school in online reviews? How much were the guides paid? While material like this didn’t come up in the conversations I had, and doesn’t appear amongst the productive mixture I share below, it was significant in that it gave me grounding (some earth, soil, on which to stand), a starting place, an opportunity to think. It was also important to ground myself, to find what had already been said about SRS, as I prepared to speak with people from the school (Jacob & Furgerson, 2012). What I imagined as I collected this stuff was that I was beginning to establish a collection of raw material, the first of the materials that I might use to build some soil of my own.

**Initial interviews**

Following this initial collection, I sent out a request, through Rachel, asking the board members and guides if they would be willing to speak with me over the phone. Conducting interviews telephonically was not my first choice – I believe there is much value in sharing a place with others when conversating, but I was living 2,763 miles from the school while conducting the initial stages of this research and it felt important to connect with and speak to people at the school before I arrived for the in-person portion of my research. Seidman (2013) points out that while conducting interviews over the phone is not ideal because the interviewer is unable to utilize things like eye contact and body language, it is still better than not interviewing at all, and that with some extra attention to aspects of the conversation like tone of voice, many of the limitations can be overcome. I received a strong initial response from board members and was able to
speak with each current member of the board while only a few guides reached out to express their interest in speaking. I was able to connect to more guides, and to past board members, by asking those I was speaking with for assistance in reaching out to others who might be interested in a conversation.

The collection of material I accumulated in advance of these interviews, combined with my curiosity about the implementation of school’s mission, informed the development of a general interview guide (Turner III, 2010) that I used as a basis for these initial conversations. My desire during these conversations was to know more and to connect with some of the people who I would later meet in person. I was curious: how influential the mission was in the decisions guides and the board made; how they thought about teaching for hope and sustainability; how the school challenged hierarchical thinking; what was going on at the school; what I could expect to experience when I arrived for my visit. These are examples of some of the questions I asked, though my phrasing varied based on the flow of the conversation:

- What is (or was) your role at the school?
- How did you come to be involved in the school?
- Why was the term ‘hopeful’ included as part of the mission statement?
- What is sustainability?
- What does a hopeful sustainable future look like?
- How is SRS’s mission enacted in various aspects of the school?
- How does SRS operate in a way that is non-hierarchical?
- What is circle process and how is it used at SRS?
These conversations varied in length but typically lasted somewhere between 45 minutes and 2 hours. In total I had the opportunity to have formal, recorded conversations with 21 current and former staff and board members, 15 current students and 5 former students. At the conclusion of each of these discussions I wrote down notes that I hoped would be useful in capturing my thinking and any other part of the experience the audio recorder would be unable to catch. At the end of each conversation I also modified the set of questions and ideas I had based on what I had learned – for example I was unaware of the non-hierarchical aspect of the school until I had my first conversation with one of the board members. The flexibility in questions allowed me to pursue ideas as they emerged in one conversation with other participants in later interviews – it also allowed me the opportunity to dig deeply with a participant in one particular area.

**On site research**

Following this initial phase of interviews I arranged to spend three weeks at the school in early spring. For the most part, my time was unscheduled and I was welcomed to join in where I wished. In the mornings I met briefly but frequently with Rachel so that we could touch base – sometimes she would tell me about events she thought I would like to see, such as the school’s May Day celebration. Other times she would let me know of a guide who had mentioned they would be interested in having me into observe and/or lend a set of hands to a particular activity. While our conversations varied, she was always careful to check in to be sure I had what I felt like I needed and knew where
I wanted to go for the day. I also tried to be present in the school office and staff room in the morning before the beginning of each day as this proved to be a great opportunity to connect with guides and hear more about what was happening that day.

This meandering flexibility allowed me to pursue happenings as they emerged. Wherever I went I carried a small notebook, a pen, and (as I learned after a muddy experience on my first day) a pair of waterproof boots. I did not carry an audio recorder and intentionally made no audio recordings while observing. I also chose not to take notes during conversations or other activities of which I was a part. In part this is because I felt that these various ways of recording took me away from the present and made it more difficult for me to connect with the people and place. Additionally, by resisting the urge to record every moment I was able to immerse myself, to stay in the moment and to experience things without exhaustively putting on my researcher guise. This was important – I wanted to feel what was happening, not just record it for later use.

**Fieldnotes**

Because of my commitment to not recording or taking frequent notes while at the school, I took extensive fieldnotes at the beginning and end of each day. It was necessary to record these, to create audio notes, as I was staying approximately 65 miles from the school – to capture thoughts as quickly as possible after the day was complete I made the recordings as I drove. Averaging 30-60 minutes in length, I tried to capture as much depth in these recordings as possible. Drawing on Bogdan & Biklen’s (2007) description of descriptive and reflective fieldnotes, there were typically two
components to each entry I recorded: first I would attempt to describe the happening in as much detail as possible – including the actual words said, when I could accurately recall them, sensory details, any relevant context, and a linear description of what I experienced; second, I would record my thoughts, both in the moment of the experience and what I was thinking as I was talking about them. This way of recording fieldnotes became a valuable tool, both in the moment, as a way to prepare for and reflect upon the day, and later in the writing of my data, as the notes contained many small details that were important but forgettable. As I spoke I felt as though my present self was conveying my past self’s experience to an unknown future self – at first the experience was odd, though it quickly became a familiar and important part of the day, something that I looked forward to as I drove along busy New Jersey highways. While at the school I only used the small notebook to capture direct quotes when possible, quickly jot down sensory details and other bits of information that seemed could be helpful when I was trying to recall details of happenings later, and occasionally to sketch or diagram a space (see Figure 12).

**Mapping:**

Maps are much more than an objective visual description of a place: “The steps in making a map - selection, omission, simplification, classification, the creation of hierarchies, and 'symbolization' - are all inherently rhetorical. In their intentions as much as in their applications they signify subjective human purposes” (Harley, 1989). Filled with decisions made by the drawer, maps can be an opportunity to glimpse how individuals understand a place. Inspired by Nespor (1997), Powell (2010) and Seyer-
Ochi (2006) I decided to ask the students I spoke with to create maps of their school (Figures 5-9; 13; 18-23).

When asked initially, nearly all the children expressed concerns about their ability to draw accurately. Drawing on Seyer-Ochi’s (2006) way of encouraging her students to think beyond the confines of typical maps I explained I was open to any type of map – I wanted it to show me something about how they understood their school. We continued to converse while they drew. The emerging maps became opportunities for them to recall and me to ask questions. Given my relatively short stay at the school I also chose to draw maps as a way to chart how my understanding of the school changed over time (Figures 15-17). Drawn at the end of each week at the school, I tried to include as much detail as possible on each map, as well as capture accurate spatial relationships between different places and objects. As I was introduced to more place-specific language I used those as labels in place of generic ones I had used initially.

**Creating the stories**

Creating stories from the mix of material I collected felt like another aspect of ‘data’ collection, though it might be more accurate to call this process ‘data generation.’ As I wrote, I drew heavily on everything I had collected: my fieldnotes, both the jottings and sketches, written hastily in my small notebook and the audio fieldnotes recorded after each day; memories, notes, and audio recordings from both formal and informal conversations with folks from the school; photographs I took of outdoor places at the school; the maps I drew, particularly the final and most complete map; and scans of news clippings, photographs, student work, and other documents collected while at the
school. All of this became material that allowed me to position myself back amidst the happenings and the land.

Also important as I tried to place myself back at SRS, to generate a feeling of the place and people: using direct quotes from those with whom I spoke, including sometimes extensive quotes. Capturing the actual words spoken feels important, the phrasing, word-choice, starts, stops, and interruptions all have something to say; there is more to be read within the quotes than the explicit content. Throughout the collecting, compiling and writing of these pieces I tried to imagine how it felt to be me, there and then – my eyes are the ones through which the telling takes place; my interests and biases are the ones that draw my eyes, my attention, to somethings and not others.

In writing these stories I imagined, in a way, that I was creating a portrait of the school, an image, held in the mind of the reader, that approximates my understanding of SRS. A portrait, as I see it, is an idea of reality, filtered through the eyes, the body and brain, of the person creating it. It hides as it reveals, purpose driven, it means to show something particular. When on paper or film, or in other physical manifestations, it exists only surface deep – its weight, depth and layers – it’s density – may be alluded to but can never be truly fleshed out. The typical relationship between viewer and portrait even prohibits physical contact with the depiction, leaving the material qualities of both subject and object as an open question. This is true with all aspects of a portrait. Depth, density, meaning all emerge as subject, creator and viewer collaborate in the moment of viewing. This is also true of the words that follow.

There are endless ways of portraying SRS, from sweeping brush strokes to detailed architectural diagrams. As creator of this portrait I had more access to the
density of my subject. I was in the position to choose, based on my intentions, what to depict and how. My hope, as noted previously, is to build fertile soil. To compile a set of stories that provoke questions and ideas, joy and frustration. This is the portrait that I present here. It asks the reader to compile or position the pieces in their mind. And this is where I want the ideas to exist. I’ve not included the many pictures I have of SRS – this is an intentional decision. I want SRS to exist as a co-constructed imaginary place. It would, out of necessity, exist in the imagination of each reader regardless of how many images I included and so I’m choosing to let it linger fully in the mind of each person who interacts with this text (and increasingly in myself as memories fade and are replaced by what I’ve written). These stories, my soil, are presented in the following two chapters.
Chapter 4: Stories of the school

You’re there when I go past the first time. Cool, still flesh warmed by sun and asphalt.

Perhaps you just arrived moments ago – you look good… well, as good as can be expected

Lie back and watch us go by. The Earth is there, it’s waiting and you have time.

And you mark time for me. I watch you grow each day as I go past.

Small changes.

Another clock, a measure of time, a way of understanding a day, a week.

I’m always watching for clocks, ways of tracking time

Warming sun on warm asphalt. Spring is here, ideal conditions for your necrobiome

Those you’ve cohabitated with now doing their work on you. Breaking you down.

Others join the fray perhaps. Fungi? But can they get to you?

you are disconnected as you lie there waiting.

Your companions will do what needs to be done

Cool, still flesh warmed on asphalt by sun

Slowly your body fills, turgid with biproducts of your collaborators’ work

Time passes, marked by ever swelling flesh, cool and still, warmed by sun, on asphalt.

Disconnected.

And then the sun and those who you’ve shared your body with have done their work

Fluids spill from you and a bridge is created to the earth and Earth
Openings, opportunities for others to consume you emerge, present themselves

They will take you home dear deer.

You were never disconnected, just further away

Each day as I drove back from SRS to the home where I was staying I drove past a deer that had been killed and was laying on the side of a busy highway. I kept expecting that it would be removed – it was not. And so I watched it change and in these daily observations I found another way to track my time, and some connections to what I was thinking. This seemed to exemplify hierarchical thinking – how little we must value the deer, the deer’s body, to leave it there; how I could not summon what I imagined was the appropriate amount of grief for the animal as it lay there. It also pushed forward concerns I had about us human’s ever-increasing disconnect from Earth. The asphalt a wall, the highway a deterrent, both blocking some of the many organisms who might normally take part in the decomposition of a body. I wrote the lines that appear at the beginning of this section as I thought and worried about the deer. Serendipitously, at the end of my last day at SRS, as I drove away, I saw multiple rivulets of fluid flowing from the deer, bridging the gap between its body and the e/Earth. In that moment I was reminded that this sense of disconnect is an illusion, a misapprehension that what is human is not of Earth, and that what is human built is as powerful, as durable, as Earth itself.

All that follows in this chapter are happenings that occurred as the deer slowly decomposed on the side of a highway. Each of the stories that follow is in orbit around the focus of my wondering – how schools, education, can help communities become
ecologically sound and socially just. This is the place where my observations, conversations, news clippings – all of the bits and pieces of soil I collected – come together as stories. In other words, this is the section where the soil is built – a decomposition of all that I collected during the time that I spent there. The pieces are distinct but connected. My writing fluctuates. As soil that accumulates on these pages, I imagine the whole that I’m creating as a portrait, a Polaroid image of SRS, collaboratively created by author and reader, slowly emerging.

This chapter begins with a conversation with a person who had been very involved in the early days of the school’s existence. I see this as both an introduction to the school and a bridge, not of fluids but of ideas, between the preceding ‘theoretical’ sections and my descriptions of the school itself. I noted exciting connections during this conversation to concepts described previously such as root metaphors and the value hierarchy. Following this is an account of a walk I took around the entire school – memories of my time at the school mingle with descriptions of my physical surroundings as I stroll. Next, I describe a lesson I participated in where the guide introduced different soil types. In the last piece of this section, I talk about a fieldtrip I took with one of SRS’s classes. A culminating activity in the student’s yearlong exploration of a town and road of historical significance to the region where the school is based, this experience impacted me significantly as a portion of the trip involved a visit to a cemetery that had been used as a resting place for enslaved persons. These are stories without overt or intentional analysis, stories that ask the reader to settle in and imagine.

A conversation
What follows is an account of a conversation I had with Rosemarie, one of the individuals who was involved in the founding of SRS. To create what follows I drew upon three sources: the transcription of the interview, the actual audio recording and my fieldnotes. The reason for this is that I not only wanted to capture the content of the conversation, but the pace and feeling. My hope is that details of what I heard, how I felt and what I was thinking as I spoke with Rosemarie helps place the reader there and then. In what follows, my voice is double indented and italicized, while Rosemarie’s voice is indented once and is not italicized.

I’m driving towards Inception Farm and I’m feeling nervous. The opportunity to speak with Rosemarie, one the farm’s founders as well as one of the individuals I had been told was instrumental in the early days of the school, had been arranged by one of the guides. While excited to know more about the farm and early days of SRS I find that I often feel some apprehension when speaking to deeply religious individuals, particularly if those people are agents of a church; it feels as though my inability and lack of desire to accept the concept of a god is marked indelibly on my face, the visibility of which is directly related to the piety of the person with whom I’m speaking. In this case I knew Rosemarie was a nun. I’d never spoken to a nun (that I knew of) but I was sure my agnosticism would radiate from the entirety of my being.

The farm is only a five-minute drive from the school and involves a single right turn, followed by a left turn into the driveway. I arrived sooner than I would’ve liked. The gravel driveway extended back into the trees – I
paused momentarily to appreciate the place. The combination of agriculture and woodland in the springtime was compelling – it felt as magnificent, magical, as summers had when I was a child. Green and lush and full of possibility. I resumed my slow progress and was soon driving amidst the newly leafed trees as I moved along the driveway. Looking ahead I saw a large house in the distance – though I knew that was not my destination. Well before the driveway ended at that large home I arrived at a small cottage where I parked. Surrounded in deep green grass and well shaded by the many trees, this was where Rosemarie lived. All of my memories of this place are tinted green in the thousands of verdant shades that always seem particularly pronounced in the height of spring.

My feet crunched down on the gravel as I walked towards the home and bird calls came from all around. A bee flew past, apparently lumbering under the weight of fresh pollen held tight by the electrostatically charged hairs that cover its body. I paused for just a moment after reaching the door, breathed deeply, knocked, waited. A few moments later the door slowly opened to reveal Rosemarie. Something about her countenance or smile or tone or words of greeting put me immediately at ease. Aided by her warmth my godlessness retreated from the spotlight, returned to its normal dim glow. I smiled and felt happy to be there and enthusiastic to learn. She suggested that we speak outside, in a shaded area ready with chairs to accommodate us. I began by asking her how the farm started,
and why. Birdsong and the occasional buzz speckled the conversation that followed.

140 acres of this land started, in its more recent history, in 1978 when this very wealthy German Baron who lived here, in that house down further down.

*Rosemarie gestures down the tree covered driveway to a larger house I’d seen when driving in from the road.*

He and his wife were making out their will, and they had disinherited their two children and wanted to leave it to some charitable organization. The Baron (he was a real German Baron) he inquired of his– one of his attorneys to see if he could find somebody to whom they would leave this.

*Rosemarie uses her hand to indicate she’s referring to all that surrounds us.*

And the attorney happened to have children who went to a school that our sisters taught in. And so he said, ‘well, do you want me to ask them?’ And that was it. And then, two years later we were told – or a year later – we were told that the Baron had died. And my Dominican congregation, I’m a Dominican sister, we had inherited this 140 acre farm out in New Jersey. And it was out of the blue, in a
way, and not something connected to our traditional way. We were mostly in schools – very traditional – and further east than here: Caldwell, Newark, that whole area. This was like the boonies. So that’s part one of how it happened.

Part two really does connect to my own story. When I entered the community of Dominican sisters, they discovered I had ability in art – I had some artistic capacities – and after teaching in elementary school for three years, and loving it, thinking that was what I was going to be doing, they asked me to get a Masters in art and sent me out to the University of Notre Dame. But in those days, women could only go in the summer because it was an all-male bastion of superiority and patriarchy.

Rosemarie laughs as she says this.

It took a number of years for me to acquire that masters— that graduate degree, because I had no undergraduate, I had to make all that up as well. Then I was asked to teach art without [the degree]. And so it was a— it was a very challenging situation, teaching art in high school and then eventually in another high school, and then eventually in our college. So when I finished [my degree], I– it was during the Vietnam War and the racial riots, and that completely changed my life, asking questions about that. And that led me to leaving almost just as I had my degree and moving into peace and justice education.
Rosemarie is speaking slowly, deliberately. She pauses frequently, seemingly to consider her words. I’m grateful for the slow pace as it gives me time to consider what she’s saying.

I became part of the peace movement in peace education, and looking at global justice issues and systemic analysis of those issues. So for about 10 years, I was doing that research and learning. It was a really steep learning curve; I had no background in any of it. But I was fortunate enough to meet and then be hired by an organization called Global Education Associates, which was founded by Patricia and Gerald Mische. I first served on their board, and then we collaborated on a lot of events, educational institutes at Seton Hall University, and then I was invited to be on their staff. It was in that capacity… we were putting on a series of conferences on dealing with world order, in other words the United Nations, and building on the infrastructure of a governed world – not world governance – but a governed world, which was emerging out of the United Nations, and how to bring the support for that into local organizing. So I was working with them and we had participated in putting on a conference on asking questions around: ‘how can World War Two happen when half the nations involved say they’re Christian, but their national identity is greater than their deeper cultural identity, and they’ll kill each other over nation states, rather than seeing the unity that they already had?’ And one of the speakers who was recommended to speak on that was Thomas Berry.
Rosemarie pauses – I know this is an important moment in her story as

Thomas Berry is very significant both at the school and to her personally

Now, I don't know how much you've heard about him in your time here.

“Quite a bit. I would welcome more.”

He was one of the speakers at this week-long dialogical conference, and his presentation was another one of those moments that just completely changed the whole—changed my whole outlook on everything. While I was working in the justice and peace decade of my life I was very focused on issues of world hunger, and global systems that were…

Rosemarie takes a long pause, thinking, as birdsong fills the space between her words.

…organizing and promoting the most dysfunctional, industrial, corporate owned agricultural system that the planet had ever been subjected to. So that was preface. And I heard Thomas speak about a different cosmology. And then the year later the people here died, left this to my congregation, and we didn't know what to do with it – it was left open to the sisters to imagine if there might be a possible way that we could continue our educational work. If you had an idea,
you could submit it and write a proposal. So with another sister and a young couple, we were – we didn’t know what we were talking about – but we wrote this proposal, that sounded great, to create what has become Inception Farm. It took us a little while to come up with the name Inception as a new beginning for this land. That is how it got started.

And so we moved here in May of 1980 and it didn’t look anything like it looks now. If you were to go down to see the library, and you know, anything down in the other side of the farm, it wasn’t there, it took 10 years to build an infrastructure, physically, where we could open our doors to anyone who wanted to come in and grapple with these questions with us.

*As Rosemarie speaks, I recall the buildings to which she is referring. The large barn with library and meeting space. The other building, farmhouse-like with offices. The solar panel arrays. I had assumed that the physical infrastructure was in place when the land was donated to the Dominican Sisters.*

In those 10 years I was studying, intensely, Thomas Berry’s work in the New Cosmology, which included the story of the universe. But also – if this [New Cosmology] is true, especially the story of Earth, if this is true – then how do we reinvent what human beings are as members of the life community of a single
planet, and why we're in the trouble we're in now, because we never knew we were this.

Rosemarie pauses, and I take a moment to think about what she’s just mentioned. If I understand correctly, when she said that ‘we never knew we were this’ what she meant is that we never thought of ourselves as a manifestation of the universe, as part of this incredible unfolding from a single perfect moment.

We always were in historic belief systems, based on our more recent past, when we started to institutionalize our thinking into religions and cultures and writing, and institutionalize that over the last 5000 years.

“Is that sort of moving from thinking about humans as being apart from, or above, the rest of the Earth?”

Right, because the old religious stories that are part of patriarchy, and they're part of the Axial Age, when the classical religions and civilizations start to come into existence. So it, it affects Hinduism, it affects Buddhism, it affects Islam, it affects Christianity, Shintoism, all of the so-called classical period, which were preceded by the Neolithic village and 20,000 years of a matrifocal civilization – highly evolved – where agriculture was created, and weaving and pottery and art
and religion… celebration, music - all happened here. It was inherited in the last couple of thousand years, but by then the sense of Mother Earth and the fertility of the planet became suppressed by the patriarchal deities that were not on the Earth plane but transcendent, and gave different qualities the emphasis that shaped the patriarchal period of the last couple of thousand years. And that certainly is the case in Judaism, and Christianity and Islam and all of the world's major religions, but we were more highly complex societies, the city-state had emerged…

A pause. *Shrill birdsong and the noise of a small plane fills the space. I think of these as summer noises.*

…the sense of empire, war, all these more recent inventions of humans. And that's what's held sway over the last couple of thousand years, from the evolution of the European mentality, and out of Europe, coming to the rest of the continents as dominators and owners of the land.

*I feel some excitement when Rosemarie says this because there’s a connection: talking about the my/Western culture’s mentality of domination and control feels familiar and important. I notice that the trills and chirps from nearby birds have increased, perhaps because the producers of those noises have become comfortable with our presence. The drone of an airplane sits behind it all, a constant presence that varies in intensity*
but continues as we talk. The avian chatter, lawnmower like drone, warm sun and immensity of green puts me back into childhood summers.

It all goes back to the pictures we had of our deities. And in our case, you know, the male God, the Father, on the Sistine Chapel… If I had a- excuse me, but if I had a paint brush long enough, I'd cover it.

Rosemarie takes a long pause, the plane flies close overhead, the bird conversations continue

…caused all kinds of problems. Not because that's God's fault – it's just how humans imagine God. And we have to deal with that and it's a tough one. The central issue is understanding the sacred and interior as well as physical story of the evolution of the universe, and solar system, and Earth, and life and then human life and human consciousness as a single process, and having the capacity to correct ourselves because we're in trouble – deep, deep trouble. And so is the whole planet. Asking those deeper questions is what [Inception] farm has stayed rooted and grounded in, and many of the offshoots of [Inception] farm have sort of lost some of that clarity about their focus.

As I'm listening I'm starting to make connections, to hear in what Rosemarie says echoes of what I've been thinking about – root metaphors like patriarchy, hierarchical thinking that positions humans as different and
above e/Earth. All this bound up in my/Western culture. I’m excited and tell Rosemarie as much, and also tell her a bit about my background, about some of the ideas that are informing my inquiry into the school and the connections that I see between what she’s saying and what I’ve been thinking about. I finish, saying: “the model of education that I’m interested in is trying to grapple with how we might teach differently, how we might try to challenge notions of hierarchy and root metaphors like patriarchy. Which, you know, you’re saying it very differently, but I’m hearing compatibility with how you’re thinking as well…” Rosemarie interjects:

my- my strongest suggestion to you is not to use human cultural terms that exist now. This is a cosmological crisis, it’s an issue in our cosmology. If we don’t identify that, we are going to switch – whether women are better than men or this…

Rosemarie pauses. Birdsong, buzzing and airplane drone fill the space.

We get into all the rage, all the differences of human beings, ordering them as some having greater value than the other, because that’s what is in the tradition as it has emerged from the biblical Roman and Greek world over the last thousand years: there was hierarchy. Unless you dispel that you’re not going to get to– you can’t solve that problem inside the, as Einstein said, ‘you can’t solve the problem of inequity inside the context that created it.’ And it’s a cosmological
problem. So you’ve got to go, and this is where Thomas’s work led him, to seeing the scientific observations, through the technical instruments we’ve created, that have given us the story of the universe. No one could have known… Some cultures, indigenous cultures, would have had these intuitive senses of that, but they couldn’t prove it.

Everyone born at this moment who has access to telescopes and microscopes and the instruments that expand our sense of observation can know, rather than believe, in the unity of the whole thing, but it has to go back the whole 13.7 billion years. If you don’t see [the universe] as a seamless sequence of constant development from within itself, as the universe, then you won’t have what you need to shed a light on the inequities that are happening here. Because they’re so based on human perceptions, human history, and we’re just a recent species, we just hatched a couple of million years ago. So, so many institutions I deal with, whether in academia, religion, wherever – and locally, because I’m very committed to local – there are few people who are willing to listen long enough to see why is critical to go back to the source in the universe and Earth. Because what we know shows the inconsistencies of our cultural beliefs – this [New Cosmology] will dispel this because this is not from inside the same paradigm that created the problem.

*I’m excited, but also a bit confused. I want to understand what Rosemarie is saying – how can an understanding of the development of our universe,
what Rosemarie and some of the people I’ve spoken to from the school call the Universe Story or a New Cosmology, challenge the cultural notions that I’ve started to understand are so problematic? I say “I'd like to understand that. I don't know - I mean, it may not be something that you can explain to me in a short period of time.”

It's– you know, we're at this for 40 years. And I think we know this much: it is clear that when we look in the Hubble telescope, and now the more advanced telescopes that go back into time and space, we can observe that the original energy moved at a rate of expansion– it expanded at a rate of speed, as Brian Swimme will often say, if it were a trillionth of a second faster, the whole universe would have exploded. If it were a trillionth of a second slower, it would've imploded. But the rate of expansion was precise, and we have the instruments to calculate that. We now know the universe is one with itself from its beginning, throughout its expansion into space – creating space – and through the sequence of transformations, creating time. You don't have to believe that, it's observable…

And there is a difference between believing and knowing.

Rosemarie takes a long pause; I take a deep breath of springtime air.
...at least in this context. 200 years from now, we may see this context as totally inadequate. Could there be parallel universes? Were there universes before this? You stay open to that. But it's all speculation. What we do know is this one and this is the way this one functions. That's a cosmological illumination. And you don’t get it in any sacred scriptures, you can sit and do yoga for 20,000 years and you will not come to that realization, it has to be empirically observable. And we have what we need for that. So why we’re not shifting to the implications of that knowledge is a dilemma. And to be perfectly honest with you, because we have--Inception Farm has made an intentional commitment for the last 10 years to stop doing what we were doing, and to go into a deep, deep, groping dark.

Rosemarie pauses, thoughtful, and says the following slowly, deliberately, pausing frequently as she speaks.

We called it a chrysalis... to ask... what is it... we should be creating, as a form, to communicate this same – exact same – core message that we used to do in our graduate programs here?

During that period of time is when we created the community supported garden. We were very, very deeply involved in the creation of the school in its earlier phase. But the deeper moving into– letting go of all that, and asking what's next has led us to a realization that the old story is actually becoming the source of the addiction crisis. That people who we say are...
Rosemarie pauses, as I move my chair slightly to catch a few rays of sun streaming through the canopy I find myself wondering what it means to let go of the school and other things the farm had previously been involved with.

…addicts, and have embraced substance abuse, substances, or alcoholism, or opioids, or whatever, whatever is exploding all over the place now… The biggest money-making venture of the West is now recovery houses that don't really provide recovery, they just make a lot of money for insurance companies. There is no cure for the crisis of meaning that is the source of the depression and hopelessness that leads to self-medicating: it’s because there’s no meaning. So the culture is the illness. Recovery has to be to transform the culture, to give meaning back. Even the 12 steps, and the sobriety process, and all of that, is it's absolutely wonderful and good, but it doesn't address the deeper questions that are rooted in the cosmology. And that's what we're trying to do now.

When humans created the cosmology that has now shaped the Western world view, it was based on the separation of humans from the other than human world. And what was meaningful was the divine transcendent and the human, that relationship, and then humans with each other. But it never included this--

Rosemarie gestures to all that we’re surrounded by
because this was not seen to have soul. There's no inner dimension, the tree was a tree, a stone was a stone, and it wasn't anybody's fault. How could they see? How could they know that process? So it's not a blame game, but it's putting on all kinds of alarms, that if we continue thinking we're going to solve this from our own old worldview... that's the end of the planet. I mean, we're just going to go down with it, and so will all of life—most of life—higher complex forms.

A bee comes in for a close investigation of us two humans, presumably in search of some nectar or a comfortable place to rest its wings, and I wonder how it fares in a world where we humans see ourselves, and everything else, differently? How would the existence of a bee, or an entire hive, change if we understood them to be integral, not an externality?

So we're in this crucial moment: is it even possible now to make this adjustment and correction? And it ought to be, because, I mean, we could hire buses and get everybody in Congress and take them into New York City and visit the Museum of Natural History and the Center for Earth and Space and show [them] in a day how this story is the only story that's really valid. It's not out of reach. What is out of reach, though, is our own addiction to the way things—how we think things are. We're addicted to our religious beliefs, our economic beliefs, our educational beliefs. So I would say to the Association of Educational Research, [or] whatever
your name is: get with the program. You’re not going to solve it unless you deal with the cosmological issue.

*I want to understand what Rosemarie is saying, and I’m trying to grapple with it, trying to figure out what it is she believes we need to recognize and so I ask “is that the recognition of the exceptional perfect-ness of the speed of expansion, that it couldn’t have been faster or slower, and out of that, you know, absolute- just the ideal moment, all of this was able to emerge?” She replies with enthusiasm

It's not finished, it's still expanding. We can't stay stuck in forms that no longer open our inner psychic capacity for life when we try to control them and crystallize them. They have got to keep moving and expanding. And we have to redefine what we mean by the definition of a human being: a human being is the being in whom the universe and Earth has awakened, into a self-realization of itself. We are the– you are the universe, sitting here today asking these questions. And that we know because of the rate of expansion. Every atom in our bodies were created in first generation stars, as a result of helium and hydrogen present at the beginning. It's a beautiful story. It's so elegant, and it's really simple. But it's complex. And we are fixated, adaptive species that has comfort zones – even if we're suffering we would rather stay in them than change. I mean, I know that I feel those pressures.
I think back to what I’ve heard, both from Rosemarie and from others, about how important these ideas were to those who started the SRS, about how all of the guides who worked at the school in its early days took a course that taught them about these ideas, and I find myself really wanting to understand how these ideas connect to what I’ve seen at the school. In hopes of connecting the dots I ask Rosemarie “so the school emerged out of this?”

So I wouldn’t – you know, this is a difficult thing for me to say – that there’s a certain shallowness to the understanding of it.

Rosemarie takes a long pause while birds sing.

It was not… there’s this… it’s…

Rosemarie seems to be carefully considering what to say next. She starts and stops a few times before continuing.

it will move into, hopefully, a greater depth that will be commensurate with what we're talking about. It's not there yet.

“What do you see as, sort of, the pieces that are there?”
Oh, yeah, you're wonderful. And the people at SRS are wonderful, the people are extraordinary. So has nothing to do with that, it's the depth of realization. It's emerging, but it's— it was not quite understood in its founding moments, because it was under the challenge of trying to apply to be a public charter school. So all that is completely understandable. So it's not like good, bad, right or wrong, none of those kinds of judgments. It's just— it was not grounded sufficiently in its founding board, and its… they did the best they could extraordinarily well.

But you know, like every other endeavor, it has to mature. The only way it's going to mature is by addressing the cosmological issues, not the ecological. The ecological are great there, that's all strategy, we can all agree with that. But if you have different sets of worldviews, they're going to diverge – at one point, they will diverge. SRS will do good things, don't misunderstand me.

_I try to clarify this a bit: “so, you know, perhaps everyone who’s working there doesn't share the same…” Rosemarie completes my thought:_

They haven't had the opportunity to be exposed to [this New Cosmology] in the same depth. And I think they— the demands on them to sustain this, and work within a dysfunctional culture and national educational philosophy – they're heroic that they've done what they've done. Heroic. But that's where it is right now. It has capacity to evolve to a much, much more… like we all do. But see,
we’re now in this crisis of climate change, and the complete disintegration of our systems. So the crisis is going to make the change even more… well, it may make it more challenging. On the other hand, it may be exactly what we need to kick us in the butt to get us going.

_We continue chatting, I ask Rosemarie for suggestions about how to learn more about the ideas we’ve been discussing – she encourages me to_

put everything else in your life on the back burner… because it asks a lot. It’s very demanding.

_Then we start talking about the SRS students and their experiences on the farm. Rosemarie explains that the students have limited experiences at the farm – the most significant of which is the three times that the youngest students visit as part of the Council of All Beings. We chat about the kindergarten and first grade students._

That age group still has such capacity for imagination. It hasn’t been killed in them yet. And so I try to come in there, with them, when we’re together. And…

_Rosemarie takes a long pause, I notice the birds have stopped singing, the silence gives the pause weight, presence_
…yeah… I don't know what happens when they go home and get into the world of their families and parents. And– and I don't even know, I don't even know that because I don't have a sense of the parents. And I don't have a sense of the parents’ grasp of anything that we're really talking about except what the school does, but I don't know what they do. You know, I don't know how they do that. So it's like, they're just down the road and all this history, but I'm not included in that process.

But I hear in those children, some more than others, definitely some more than others, this… what is it?

*Another weighty pause.*

It's the capacity of a child born into this time, when Earth knows, so much more about itself than it did 2000 years ago, or 5000 years ago. It knows. And whether the children are protected from those realizations, they're part of the collective psyche. There's just some kids who are more open to that, just like some kids are more open to this intuitive capacity for music, or– this isn't something you control, it just is. My sense is if we really believed that every child is the Earth becoming conscious, and has this capacity, we would be liberating an incredible generation of humans [by] enabling them to develop from the primary source out of which
they've come. Not secondary, not reading about books not watching on TV, not even BBC's One Planet. It's- it's a different- it's a direct experience.

*Imagining children this way, thinking of their wonder and curiosity as Earth’s wonder, as the universe’s wonder at itself, makes me think of my 5-month-old son, particularly at the wonder so evident in him recently as he examines his hands, or my hand, holding it close to his face and turning it. I feel my mouth curve upwards. I say to Rosemarie “I'm just smiling, because I'm thinking about that and my son. And seeing– so he's now started to take his hands and just like, look at them with such...”*

Yes, and this is what I mean. Thomas [Berry] has written incredible– he’s written a great deal about the natural capacity of Earth, in a child, for fascination as our primary experience. That's why our minds are designed to want to know and be curious. And so you're starting with total potential, and then you look at the answers to the questions the children raise and it crushes it – in a lot of instances, not everywhere. ‘Don't touch the dirt, you'll get sick.’ ‘Don't touch that bug, it'll give you a disease.’ That's a cosmological issue, because we don't even understand the role of insects over the last 65 million years of the Cenozoic era. So first, we have to deal with the teachers. We have to deal with the parents. It's the whole social system, it's not just schools. It's the whole bigger picture.
“How does that– I mean, how do you see that all coming about?”

So hard. That's what we're involved in now, and it takes 24-7 non-stop to provide insights into the situations we're in – just in this region, in this watershed. With, let's just say 99% of the leaders and the doers and shakers in this society convinced that what they're doing is right because they're good people. It's not about good or bad people... It's not simple. But there are people all over trying to do it. I'm not the– certainly Inception Farm and myself, we're not the only ones. But that's what we– this is our moment to be in existence, and Thomas would often say that, you know, none of us asked to be born when we were born, but we all have a calling. We have a role and a calling. We don't have jobs, we don't have professions, these are words that keep us off track. We're part of the Earth's life. And Earth wants to live, and wants to become more beautiful, not less beautiful. So it's really still about beauty, truth, and goodness. It is not a simple, easy thing, but it's doable, or we wouldn't be sitting here having this conversation.

When Thomas and Brian rewrote the first edition of what came to be published as The Universe Story – do you have you have that book?

“I do, yes.”
Okay – well, they had a manuscript that preceded that. It got a lot of critique from people, they invited all of that, then they went away and re-wrote it. I still have the original manuscript, and there is insight in that original that I keep falling back on. When I think 'oh, I know this guy, this guy who’s a dairy farmer, I’m going to give him a copy of this, because it’s so well done. So clear.’ So I have these files of articles and things being published now, but also of their [Thomas Berry and Brian Swimme’s] work, that I’ve individualized: this is for so and so, and so and so, and so and so. And then I’m out there waiting for the appropriate moment to say, ‘you know, I thought you’d like this article.’ That’s– I don’t know, I feel like I'm a firefly or a butterfly or… a pollinating insect. It's not my stuff, I'm bringing other pollination into their thinking. And we’re in this time of belting, which is the flowering time of Earth here in this area. A seasonal change, it's between the spring equinox and summer solstice, but if the flowers don't bloom then the cross pollination of the insects can't happen. It's the same on the inner level of the human psyche: when we’re opening to flowering, new thoughts that want to bear fruit, you’ve got to get lots of cross pollination. Sometimes it's hard, because it's not what we wanted. It challenges us, but that’s part of the work.

“I like that – wrapped up that way.”

So you may find yourself changing the whole focus of your dissertation, and that's great, if it's meant to be, because I don't know what you're doing. But if that is the case, it's going to be, you know, hard to complete this. There's a stress to
that. But stress is what causes you to evolve more. The Earth teaches us that creativity happens, and Thomas [Berry] and Brian [Swimme] both quote this – I think it was an anthropologist, I forget, and I never remember his name – who says creativity, or evolution, happens at the level of the greatest possible stress an organism can manage creatively. If it's too much, it'll explode. If it's too little, it atrophies. But the stress, the tension, has to be right. It has to do with that rate of expansion. If you're not in stress and tension, beware, you know? Hanging out on a hammock sipping martinis is not a good thing to be doing…

Walking tour of the school

This piece is about a walk that I took around SRS at the end of my time there. As I took the walk I ran my recorder, sometimes recounting aloud memories of things that happened in particular places, sometimes recalling bits of conversations and sometimes describing what I'm seeing around me as well as simply capturing the sounds I heard as I walked. The words that follow in this section emerged as I carefully listened to this recording while reading through fieldnotes (including sensory details, quotes, jottings, drawings and so forth) and other resources (e.g. newspaper clippings, student work) that I collected. These resources were important as I attempted to extrapolate outwards from what was captured in the audio and what I was able to recall from memory. The sensory details available to me – what I can hear on the recording, the notes I took trying to describe the place etc. – helped position me back there, served as a clunky time machine of sorts, transporting a contemporary version of myself backwards into a version of the past, visible through the blurry lenses of time and space. Also included in
this section are some additional ‘maps’ that students created that depict particular places at the school.

I open the car door and step out. A cool, gentle breeze carries with it microscopic chemical compounds, made buoyant by the warm sun, that interact with receptors in my nose – connections are made deep in my brain and past years of eastern springs rush to the forefront of my mind. The lilac bushes responsible for this nostalgic wave are planted around the small lot where visitors and office staff seem mostly to park. Close to the nearest building, the school’s office, more flowers are pushing through the newly thawed earth. The school’s structures, all grey and simple portable buildings, stretch away from me in a line that curves inwards, positioning me on the outside of a semicircle. Beyond the buildings in front of me I can see hints of the valley below and the ridge that extends further in the distance. A covered entrance leads the way inside the circle and promises to reveal more of the valley.

My feet note the transition from pavement with a light sprinkling of gravel, to a concrete path for a moment and finally to the wood beams that make up the walkways that connect the school’s separate portable buildings. The wide wooden boardwalks are well worn but sturdy. Walking through this entrance I can recall the line of parents who gather here as the end of each school day draws near, waiting to retrieve their children. The awning overhead a welcome respite to waiting families on rainy days. I pass under the awning and find myself now inside the semicircle of buildings, looking outwards over a valley, a long, high ridge in the distance. Nearest to me, down a four-step stairway and across a few stepping stones is a mulched area with benches, arranged in a circle concentric to the larger circle suggested by the positioning of the school’s buildings.
sit. I hear the wind moving through nearby pines. I hear birds and the sun warms my face. I try to imagine the land before the school.

Many times in Earth’s story this place was covered by glaciers. After their most recent recession caribou, mastodon and woodlands bison roamed across the tundra that once was much of the land in this region. Humans, having recently (at least on the scale of this story) migrated across the land bridge that once connected the Asian and North American continents, came to share this place with these other animals, becoming part of a network of living that lasted at least 10,000 years. The first settler-colonists arrived to find the Lenape – translated as ‘human beings’ – living on what they called ‘Lenapehoking’: the land, or house, of the people (Fur, 2009). As is the story in much of the Americas, the settler-colonists became the current occupiers of the land, of this place, while the number of Lenape dwindled due to violence and disease. Most recently this particular piece of land was the site of an organic farm – sitting on the sunny hillside it is easy to imagine rows of vegetables that recently filled this place.

I try to recall some of the pictures I saw flipping through the school’s books of newspaper clippings and other memorabilia. When the school acquired the land it was largely cleared for farming – the pines closest to me, as well the other assorted trees scattered further afield, are all approximately the same age – that of the school. Much of the land is covered in meadow, various grasses and other shrub, through which mowed trails weave. Beyond the circle, away from the school’s structures, the hill spills downwards. On my left side plants and the contour of the land suggests the presence of a slow-moving waterway, though a stream is not visible. This area descends into a small muddy basin. Adjacent to this basin, furthest from the marshy area, a flat and
rectangular portion of the meadow is mowed short. A soccer net sits ready. From this mowed area my gaze wanders back up the hill, now looking to my right, coming to rest on the school buildings once again. I stand and walk out of the circle of benches to the outer edge of the mulch circle. I step back across the stepping stones that provide safe and mud-free passage across to the small staircase. I take the steps up, returning to the wooden walkway, the bridge that connects the multiple and externally identical buildings. I want to walk, to know this place, and to remember.

My feet – walking – help me to know a place, and to remember it: “it is surely through our feet, in contact with the ground (albeit mediated by footwear), that we are most fundamentally and continually ‘in touch’ with our surroundings” (Ingold, 2004, p. 330). I sense through my feet: the stimuli, diluted by shoes, travels through my body’s longest nerve to my brain. My brain, in turn, tells the musculature of my feet and legs to do something – contract, relax – in response to that which I walk upon. I don’t do this, my brain, working independently of me, does the work. But I can remember the feeling of the ground. If I want to think about a place it helps much to think about my walking there. These ‘feelings,’ this sense of the ground, I might best describe as a gathering of various stimuli, from which an understanding of the ground emerges – this is especially true when wearing shoes. If a collection of stimuli can help us capture a feeling in a moment, can a collection of moments in a place, told through a hodgepodge of stories, help us capture a sense of that place, even though our experience is mediated, diluted, by time and space? How might we know a place if we are not there?

And so I walk. I weave my way back on the wooden walkway between two buildings, towards the eastern corner of the school’s property. Down a small set of
stairs, tucked away behind the classroom buildings, is a greenhouse. My feet move from wood plank to damp grass to the crunch of woodchips that make up the floor. Translucent plastic allows in light and the space is warm. The smell of soil fills the air. Each class has an indoor bed, the soil raised and enclosed by large planks of wood. Some beds are cleared and ready to plant, another has healthy looking arugula. Two other beds overflow with 4-foot-tall plants, topped with tiny yellow flowers. I’m momentarily tempted to snack on a few of the delicious yellow tops – a treat I had been unaware of before a first-grade student had explained to me that these kale plants, and many other vegetables I enjoy, are all related to wild mustard, and that all of their flowers are both edible and delicious. Imagining the joy with which the young class had devoured the flowers and leaves is enough to dissuade me from taking some of their future snacks. At the back of the greenhouse a table is covered in planting equipment, above which a small white board is mounted. Written on the white board is a simple question: “what’s going on in the greenhouse?”

I asked a second-grade student to draw me a map of the school – I told him it could be a map of the entire place, or just somewhere that he thought was important. He chose to draw both the inside and outside of the greenhouse, describing various features as he drew (Figure 3). He explained that he thought “it's very important to grow plants… it's just a very important place to grow plants. Also season extension. That's the main point, where you grow the plants in the winter even though it's very cold, because on the inside of here, as I mentioned, there is a heater so even in the winter, they're constantly feeling warmth.” He added that “something that's really important that we do in the greenhouse is we help the pollinators so that they can collect pollen… we
have our greenhouse right next to the orchard.” When I asked him how he felt when he was in the greenhouse he explained “I feel really proud about it, for everybody who pitched in and helped with the greenhouse, helped planting all the plants and the flowers.” Next to this are two other buildings where outdoor supplies and camping equipment are stored. Both buildings are in the shadow of three large solar arrays.
Figure 3: A illustration of the greenhouse, drawn by the second grader who said he felt very proud of the greenhouse. His drawing shows each class’s planter, the work tables, seed trays and fan with heater, with waves of heat warming the space.

Standing next to the solar panels on a slightly raised hill, I turn back for a moment. My eyes settle on a circular of grass and other plants in the middle of the larger parking lot: the ‘Island,’ a name given to this place by the students, transforms what would be a teardrop-shaped patch of asphalt into a circular pathway for parents and buses (see upper right section of Figure 4). Four students included the island as part of their maps of important places at the school, one of them placing it prominently in the middle of their drawing. Staff and guides park along the outside of the teardrop, horizontal to the flow of traffic. I imagine the view from overhead: a giant peritrichous microorganism, vehicular flagella radiating outwards, the Island a nucleus.

Centrally positioned in the island is the requisite flag pole, though I wonder if it has always been present. In an opinion piece in the town’s local paper, one resident of the community, while expressing his frustration about the school’s charter status, wondered “if public funding is going to be used then shouldn’t there be a sizable flag pole on the site plan” (Herrmann, 2003). While present, it is notably different in that two flags ripple in the breeze – on top an American flag, below it a blue flag with a large
image of Earth. Two of the students who drew the flagpole captured this unique feature. Surrounding the flag pole are three large boulders, which are in turn surrounded by an area of mowed grass. The other half of the island is a rain garden. A sign explains:

“this garden is designed to intercept, treat and infiltrate stormwater at the source before it becomes runoff. The plants are native to the region and help retain contaminants that could otherwise harm nearby waterways. Rain gardens are beautiful, low maintenance and inexpensive gardens that you can install at home.”
During lunch the parking lot is transformed from pickup area to recess space – the ‘Island’ is one of the places where students play and explore. When walking and conversing with a former student he brought me to there as he considered the ways in which he had learned the sense of responsibility and connection that he feels toward e/Earth. He told me that, as a student, he saw a guide he really respects watering plants in the island – he offered to help. Inspired by the experience he decided to start a garden club to help take care of the school’s flora. He continued by explaining and that’s the to tie in to connectedness and those silent things I’ve learned. You know, no teacher was like, you should do this, you know, I just knew that we were, at that point, learning to value the life, the environment around us, and here’s one person, by themselves, doing that.

I continue my walk: the solar panels on my left and the ‘Rock Pile,’ as I’ve heard it called, on my right (see: Figure 18 and Figure 20). This mound of large boulders with various plants growing in and around them, has been referred to often in conversations I’ve had with current and former students. For some it’s a place of adventure with enticing cracks and crevices to explore, for others it’s a spot to sit and relax. I often saw groups of older students here during the lunchtime recess. As I walk closer I note the various edible plants growing at the base of the pile – the kindergarten and first grade class served me an array of different wild comestibles when we walked past here. I
wonder again about taking a nibble, but the plants that were so easy to identify, as well
as the students’ admonitions about what to avoid, jumble together in my head and so,
wary of choosing the wrong thing, I continue walking.

Grass underfoot, short yet dense with a sponginess that suggests wet soil below – the buildings and gardens and solar panels and parking lots behind, a fence line to my right and bright green, knee-high meadow to my left, I move northeastwards and upwards. I reach the northeastern boundary of the school-land and turn right. I remember my first day at the school, walking with a guide as the group of students we were with raced forward to this gate where the waited eagerly for us adults to catch up. I can easily recall the anxious state I was in the first time I did this walk – nothing familiar, purpose unclear, my legs moving my head through outdoors-space, thoughts and emotions keeping me disconnected from my surroundings, and I marvel at how quickly this has all become a place imbued with meaning: somewhere particular, stories that I’ve heard and stories that I’ve lived, layered on the land, giving depth to physical space, deeper meaning to the stimuli flooding my body. Still recalling that first day I can see the guide opening the gate to let us through while urging us to be sure the gate was always closed after use – one of many well-intentioned attempts made by the school to keep a voracious and booming population of deer at bay. I make sure to close the gate again as I pass through this time.

To my left is ‘Log Wood’ – a space whose mystique has grown within me over the time I’ve been here. Once a favored location for activities and exploration, the land was sold. The new owner, thinking differently about their land, told the school that students and staff were no longer permitted access to the land. I’ve peered in at every
opportunity, looking down overgrown pathways in hopes of understanding more about this place. Feeling a bit bolder, or overwhelmed by curiosity, I make my way down one of the overgrown paths. A fallen tree blocks my way. Beyond the tree the grass of the path is long, branches reach across: the way forward is obscured and dark. The trees’ new leaves effectively block much of the light and my eyes need time to adjust. I move into shadows where the air is cool and still. Small creatures rustle in the leaves. I stand and breathe and consider the path through the undergrowth. With poison ivy and ticks on my mind I retreat. This is different from the others areas of the school – the trees are older and taller. New and different opportunities for learning and play abound.

The pathway I was on, before my divergence into the off-limits trees, continues along a border: meadow to the right, these woods to the left. A path splits off – I follow it through the meadow and up a hill, anticipating the view I know lies just ahead. On top of the hill a small clearing has been mowed. This was the final destination with the class who had sprinted to the gate. On that first trip those 4th and 5th grade students had explained to me that the name of this place, ‘Four Directions,’ was because you could see for some distance in all four directions, north, south, east and west. I didn’t understand until later that those directions have a deeper significance at the school, as the focus of a choreographed set of tai chi or yoga-like movements taught and practiced by members of the school community since its founding.

One staff member explained to me that in the school’s early days all staff and students would partake in the choreographed activity outdoors at the beginning of each day. Visible from the road, she suggested these movements may have contributed to the impression held by some members of the town that the school was a ‘hippy school.’
No longer a daily routine, I did have the opportunity to learn the movements and their connection to the directions from a group of second and third grade students. They shared the movements during a school-wide assembly as part of a unit that uses the routine to help the students consider questions including: “What are the four directions? Which way is North? How are the directions a pattern? And what changes with the directions?” I take a moment to appreciate the view in each of direction, lingering on the view to the northwest: as spring sets in the green haze of just-emerged new leaves covers deciduous trees far into the distance; the sky is deep blue and marked occasionally by small and bright-white cumulous clouds, puffy islands in an azure sea; where sky meets land a ridgeline-as-border extends to the north – to the south it plummets downward abruptly to meet the massive river, not visible, that has cut its way through.

Walking away from four directions I head down the hill, continuing along the border path towards a wall of trees. I'm looking for a gap in the fence that runs along just in front of the first layer of this tree-wall; when I find it, the opening puts me on a narrow footpath that leads to the stream below. Moving into the trees again feels good. My first steps are tentative as my eyes slowly adjust to the shadows. The noise of the birds chirping in the meadow is overwhelmed by the noises of water moving over, around and down rock. After the mowed grass of the border path, I find the packed earth feels solid under my feet. The air is cool and damp. I can smell water and wet soil and other odors of early eastern springs.

The narrow path moves diagonally down, three long switchbacks that take me to the edge of the stream (Figure 5). From below I can see that the pathway has been
carefully constructed – branches have been pushed into the ground to form small retaining walls that create a somewhat flat surface on which to walk along the steep slope. A former student with whom I spoke with explained to me that he had constructed this path as a community service project during his final year at the school. He connects his decision to do this project to early experiences he had in this spot:

I had many fond memories of walking down to the water in my first few years at the school. Due to constant travel, plant growth, and erosion, the trail had degraded over the years to the point where it was kind of dangerous to traverse. For my final project I wanted to restore it to its former glory and hopefully improve on the design.

The trail delivers me to the water’s edge where I perch on a rock and watch the water move towards and around me. The flow has drowned out any noise. Odors of algae and wet mud and old-house-basement swirl around me and fill my nose. New green growth reaches out to me from the trees above and the undergrowth around me. Surrounded in green and scents and the noise of water I feel encapsulated. Extending my bare feet in the water helps me complete my immersion here. The stream is used frequently. Students explore it, using hands and nets, looking under rocks to investigate what life makes it their home – an activity that becomes part of a competition during the school’s ‘Earth Olympics’ where students compete to identify as many types of aquatic life as possible. For the 6th and 7th grade students it becomes a springboard helping them to prepare for an in-depth study of watersheds. Math classes use it as part of a
stream-monitoring project. Students having experiences with streams is also included in the school’s charter:

Exploration is the objective of this bonding-with-the-natural-world phase. Our plan is to immerse the children in the stuff of the physical and natural worlds. Exploring the landscape and flora/fauna via thematic nature hikes, following streams and pathways, hunting and gathering, searching for treasures, making forts, creating imaginary worlds, gardening and shaping the earth, and taking care of animals are primary activities in this stage.

Figure 5: A student-drawn map of the stream area.
I sit here for a while, letting the ache from the cold waters wander from my foot upwards – the dappled sun provides a contrasting sensation on my face. Though I’m reluctant to leave I eventually pull my now nearly numb feet from the water and place them in a spot of sun nearby where I watch them slowly dry. Dark spots expand on the rock around my heels, my feet’s pallor ebbs as blood flows back into the warming skin. With shoes and socks returned to my feet I retrace my steps, up the winding footpath, into the meadow, up the hill with the Four Directions to my left, Log Wood to my right, through the gate which I’m careful to close and back towards the solar panels. On my right is what I’ve heard called the Potato Field: long rows full of plants with mowed spaces in-between. Three students included the Potato Field in their maps (see: Figure 16, Figure 17, Figure 18): one noted that this was an important bird habitat and thought of this place as important both because it offered an opportunity for bird watching and also because this was a place where the collected food that they used to prepare meals for the overnight camping trips; another connected this area with the upper garden, which I find myself standing uphill and in front of as I pass by the end of the long rows of growth.

Standing at the gate I look down into the garden. It’s a long, narrow and rectangular – I’m in the middle of one of the short sides, looking down the length of the gently sloping space. To the right of the main area is a newer addition to the space filled with small fruit trees and berry bushes. Beyond this new area and the garden, closer to the school buildings are various mature fruit trees. Two rows of raised beds extend away from me – a quick count suggests there likely enough for each grade/group of students to have two beds in which to plant. As with the greenhouse, which I see just
beyond the garden, the beds are in various stages of growth: some appear empty, either awaiting the eruption of recently sowed seeds or the positioning of baby plants; others are a bit further along with small plants stretching towards the spring sun, and a few overflow with growth. Woodchips are spread across the pathways though grass has still found the force to burst through this barrier in a few places. A fence surrounds the entire area (another deterrent to ward off voracious deer).

Though it’s empty here now it’s easy for me to recall the students of the 8th grade class sitting and kneeling in the sun around the edge of two of the boxes, planting small strawberry plants in the damp, rich soil. I had been invited to help weed and sow – I sat with the class as everyone talked and laughed and worked in the soil. While the moment may have been unremarkable (though quite pleasant), this aspect of the school’s curriculum is fundamental – students spend time in this garden and greenhouse throughout their time at the school. Early plans for the school grew out of conversations amongst people involved in a nearby organic farm and education center. The importance of gardening is written into the school’s curriculum framework. Each day I was at the school I saw students and staff in the garden, working and learning, talking and snacking. The garden is a source of learning and nutrition: sustenance for the body and mind.

I continue moving down the hill now, walking next to the garden fence. Looking to my right I see the outdoor classroom (Figure 6): benches made from six-foot-long logs cut in half down their center form a circle. One log, uncut, stands upright, it’s top sliced at an angle to form a place to for papers – it’s easy to imagine one person standing at this log-lectern, talking, while others look on from the circle of benches, though I didn’t
see this area used that way. My experiences here have been with the younger students who come for lunch and play. As I look at the now empty space it’s easy to imagine the first-grade class dashing through the long grasses, rolling in the fields, returning to their guides, who are usually positioned within the circle of benches, when they discover something that intrigues them or when they find a tick (one student, in his map of the school, noted this area has “lots of ticks”). Some of the students climb trees or carry sticks, other mingle, talking and running. Groups congeal briefly to inspect a bird, negotiate rules to a game, or explore some other phenomenon, only to disperse moments later. The school calls their play time neoteny – a term that refers to the retention of juvenile traits into adulthood.

Figure 6: A student’s map of the outdoor classroom.
One of the kindergarten guides explained that this continued outdoor time is important, that it allows the students to get familiar with the experience of being outdoors. This guide described what I witnessed often during my time at the school:

A lot of the times that we're outside it's exploration – we call it on our team outdoor exploration. So the kids are choosing if they are just running around, or if they're really studying something. We have a bunch of kids in our class that are really into mushrooms this year. So they're really studying the mushrooms that they can find outside. But other kids are building forts and building shelters out of sticks. And maybe some kids are just playing tag or something. But they're all kind of doing what feels right for them at the time.

Through continued exposure to outdoor places students’ interests develop over time. Importantly, this guide thought, much of the learning that students do outside here takes place over weeks or months of work and exploration. One example of this is the tapping of maple trees, collection of sap and making of syrup – a months-long project that culminates in a meal highlighting the syrup made by the class. This guide felt that if their outdoor time was limited it would be difficult for the students to have meaningful experiences:

it's really over time that things happen. And I think that's another reason why it's important to go outside every day. So if you were at a public school, and you said, I'm going to go outside and have this great experience, that probably
wouldn’t happen, because it’s their first time outside. So they’re just, you know, getting used to being outside. But we really work on building over time, what we’re working on.

I continue down through the circle of benches and down the hill. The meadow around me bustles with life. Green plants push upwards from the damp earth, reaching for the warm spring sun. Birds chirp as they dart across the path and settle in trees. I’m moving through the area known as the Lower Meadow, which one student captured accurately in their drawing of a place they thought was really important at the school: long grasses and plants swaying in the breeze with a few small trees growing in their midst (Figure 7). Mowed pathways cut through the field in various directions, providing multiple routes through the meadow. I follow one of these down to the lowest part of the land owned by the school, a flat part of the Lower Meadow that has been mowed to create a place to play. Nearly every day I see at least one of the older classes down here playing some type of organized tag-like game. The current favorite is a game of tag that includes a ball.
At one end of the field sits a small soccer goal missing its net. I walk in that direction, looking past the net-less goal to the depression just beyond it – a bit of mud sits in the bottom near a drainage pipe that carries the water that flows down through the school's land to the other side of the road that serves as border along this edge of the school-land. I recall seeing one of the guides, equipped with tall rubber boots, a collection of nets and buckets, and a group of students, heading in this direction early in my time at the school. One of the students announced that they were going to rescue any remaining tadpoles that were living in what was a puddle but is now just mud: the last remaining wet spot in the depression – dark brown muck surrounded by dry dirt.
Standing at the bottom of the hill and looking upwards I see trees and meadow bathed in warm sun. Barely visible amongst the trees I can spot the school buildings. Behind me I know there’s rarely traveled road, a dead end with few houses further along it, that isn’t visible through the brush. It’s easy to imagine, standing here, that I’m out on land with no buildings nearby; I feel immersed in nature.

From here I walk along the edge of the low wetlands area, where water clearly flows at wetter times, slowly making my way up the hill at an angle. Only a trickle of water is moving now and it disappears into the earth before it makes it to the pond. The path I’m on ends at an intersection with another, very well-worn path. If I were to turn left I would head back up the hill towards the cluster of school buildings still barely visible. I turn right, heading down the path and across a wooden bridge caked with muddy footprints. I peer down into the clear trickle of water, watching as a small plant creates a barely perceptible disturbance on an otherwise perfect reflection of the clouds above me. I spent time standing in this water, exploring the wet earth as part of a class lesson on soil types. I can recall the feeling of mud squeezing through my fingers while the cool water seeped through my mostly-waterproof boots; the joyous categorization and naming of the various mud-types discovered by a class learning about soils; the shoe temporarily lost in the mud as a student stepped out of the hole they had sunk into; a class of students caked in mud from head to toes, smiling and laughing and considering how the soil changes as they move from one part of the school-land to another. The corners of my mouth curve upwards as memories drift. I step off the other side of the bridge and into Autumn Olive Land.
By the time I arrived at SRS I had heard about Autumn Olive Land from many of the people I had spoken to about the school – it had taken on near-mythic proportions in my imagination: a secret garden where wild things rumpus. A conversation with one of the school’s guides about how they use the school-land to teach captures both the genesis and use of this place:

It's using the place to teach... And what's in – who else lives in this place? It's using the Earth as the primary teacher. So that's the context for our learning: this bioregion. It doesn't mean we don't look at global issues, because we do. But definitely, it's about learning who shares this place? And what are the issues that surround this place? And the geology? That's the context for learning.

So that makes it much more hands on, right? They can learn about the rain forests... but there's research – and I'm not going to be able to cite what the research is – but there is research that if they’re going to be somebody in the future who is going to care about the Earth you want them to care about this forest, you know? The forest that they grow and play in, and that they touch and that they interact with all the time: that's what they're going to love. Then, when they're older, they can understand – because they have a love of this forest, it allows them to understand the importance of the other forest.

Many times, kids are just learning about the rain forest, but they're not going to see rain forests, you know? They're learning through a computer screen and it's
not real – it's far, far away. But when your forest is right here, and something happens in it, all of a sudden you care about that.

Here’s an example: we have some wetlands on our land, and we have a lot of invasive species on the land because the land was disturbed. One of the causes of the disturbance was putting the school here, but there were other things too, over the years. So down in these wetlands there were all these autumn olives, which is an invasive species. It grows this red berry, and is also really fun to climb, and it creates little passageways – it's very fun. But it's also invasive and it'll choke out other species and everything else. And the berries… the berries are edible and kids like to eat them.

So, when my daughter was in maybe first or second grade, we had some grant that was going to allow us to restore the wetlands on our land, and they were going to remove all the autumn olives. And the kids in first and second grade, they loved to play in the autumn olives and were very upset, they called it Autumn Olive Land (it's called Autumn Olive Land, and everyone just knows it as that). They ended up meeting with the land care committee to voice their dismay over the fact that they were going to lose all their autumn olives that they like to eat and play in and everything else.

And they ended up creating an autumn olive festival to celebrate the autumn olive, but also teach people about how it is an invasive species and how to eat it
so that you don't spread the seeds: there's a little teeny little seed in it, so you can just eat it and swallow the seed (it's about not spitting out the seed). Just because they're invasive species doesn't mean that they don't have benefits. They have more lycopene in them than a tomato and all these things. So they learned all that and they made games and everyone collected autumn olives and made things out of the autumn olives to have at the festival, like little autumn olive cheesecakes and little autumn olive pancakes, and this and that. And every year they make autumn olive fruit leather.

So they did remove some, they did do restoration, but they did also leave autumn olives. And we've had the festival like every year since then. And it's very strange, like people who are like big on the removal of invasive species are like freaking out that we have an autumn olive festival that celebrates this invasive species. So we continue to remove autumn olive trees, and we keep some you know, so it's like this constant push and pull – how to have a relationship with the land and honor, you know, the ideas of a child, and how they experience the land. And also recognizing that we don't want it to get taken over by autumn olives everywhere, because that's not going to be good for the land either. So, and again, we're making these decisions as humans that could be making lots of mistakes along the way. But it's not native to this area, and we're trying to keep that in mind in our decisions that we make around the land.
This student-led endeavor, which established Autumn Olive Land as a place of significance, is both a reflection of the school's priorities and an example of the complex types of negotiations necessary as humans attempt to understand and mitigate the damage some of us have done to e/Earth. In an article about the school in a local paper, autumn olives also come up:

Students are encouraged to pursue their own interests in their studies. 'My experience as an educator is sometimes children go through school, but they don’t have the experience of making their own decisions,' [Rachel] said, noting the children organized an autumn olive festival last year in celebration of a fruit-bearing shrub found around the school. A non-native plant, the autumn olive is considered an invasive species by the government, leading [School for the Renewal of Soil] students to start a vigorous campaign in support of the plant. 'It was so empowering for the children,' [Rachel] said." (Keller, 2009)

I wonder about this place’s history as I enter the wooded area – a space in conflict: native wetland restoration or invasive scrub; overlapping claims staked to the various cleared areas by students from different classes; the autumn olives voracious consumption of resources needed by other nearby plants. The autumn olives are low trees (technically shrubs) that fill this corner of the school-land. Many thick branches emerge at the base of every tree, creating a cover overhead. Deer and child sized conduits channel through the dense thicket, while branches have been cut away to create a class and adult-sized pathway that meanders through Autumn Olive Land.
Students have further managed the space: everywhere I look their small pathways lead to different small spaces, often demarcated by piles of sticks and branches. Anywhere the ground is cleared footprints, from tiny to adult-sized, texture the damp, dark soil. A sweet floral scent from the trees’ recently-emerged flowers fills the air each time the breeze blows. With the help of local pollinators these flowers will turn into the berries that become the centerpiece of the cheesecakes, pancakes, fruit leather and other foods offered at the school’s yearly autumn olive festival.

As I stand amongst the autumn olives I consider the land that I’ve been walking over and the discussions I’ve had about it. Through pictures and descriptions I’m able to imagine it as it was when the school took ownership and stewardship here. Previously a farm, the land was clear – few, if any, trees grew on the gently sloping hillside. Alongside the work of leveling space for the buildings, driveways and parking areas, there was also planning for the remaining area. Placement of outdoor spaces, consideration about which trees to plant and where, were all part of the planning that took place. Even now, 15 years after the school’s beginning, one of the guides takes on a secondary role working with the outdoor spaces. Much thought is put into how SRS, the current occupants of this place, could use the land to support students in a different way of learning and play.

Of all the places at the school, this is the one I’ve heard the most about, and where I’ve spent more time than any other while here. Many of the maps I asked students to create featured Autumn Olive Land – classes use it as part of their break-time and as part of their curriculum. One of the kindergarten and first grade guides described an activity those students do each week for the entire school year:
We have outside sit spots that we take kids to every week, and they sit in the same spot for between 10 and 15 minutes not talking to anybody, and they're all separated from each other. And then the we gather back together, and we share what we experienced, and then we write about it, and draw about it in our journals. But then the cool part is seeing the progression over time, you know, how has their reflection grown? And what they are noticing, how has that grown over time? I think that's pretty important.”

Figure 8: Example of one page from a student’s sit spot journal. In some cases, students write their own observations, while other times guides will record what students tell them, as can be seen on the left page of this journal entry.

I joined this group of students on an afternoon excursion here. Our time began with building, digging, climbing and exploration, including the discovery of a mostly-
buried old shoe filled with dirt and a growing plant as well as a log covered with a recently emerged mushroom congregation – both of which brought the entire class together for an enthusiastic inspection. Some in the group climbed upwards through the densely packed trees while others dug down into the earth. A cool mist from thick grey clouds served as an ever-present reminder that summer was still more than a month away. Eventually the joyous and mud-covered class gathered together in a circle. After a few reminders students dispersed again, walking silently to their sit spot locations – places they’ve chosen within Autumn Olive Land to which they return weekly throughout the entire year.

Figure 9: Another example of a sit spot journal. Students are encouraged to write and draw whatever they notice or find interesting while they sit.
I hunker down in a central location and join the class in their silent observation. An ant clamors across deep footprints in the mud. The intermittent breeze carries cool mist and the scent of sweet flowers; in the breezeless moments the odors of wet earth and wild onion drift upwards from the ground, the heavy, dank scent replacing that of the light and effervescent autumn olive flowers. I also watch the students – sitting and standing, in trees or on the ground, looking, occasionally picking things up, and, for the most part, silent. Legs swinging from branches, gentle bounces on long limbs, there is slight movement everywhere, almost as if the breeze is gently shifting the children along with the leaves and other plants. Only twice does anyone need to be reminded of the importance of the momentary silence.

I had imagined that this type of activity would only work for a couple minutes with students this young but they quietly observe their external and internal worlds for 15 minutes before quietly returning to the circle. They collectively perform an imaginary lifting of a veil of silence, reaching down by their feet and pulling the veil upwards, releasing it above their heads. A bit of chatter ensues – a few observations are enthusiastically shared. One student explains that she spent her time wondering if a worm she was watching would die – it had been cut in half and appeared, to her, to be bleeding. Another reported seeing a spider while a third watched a snail slowly leave a trail along the soil.

The students’ sit spot journals are distributed, they sit again – on branches and fallen logs or directly on the ground – and record what they saw and thought during their time (see: Figure 8, Figure 9, Figure 10). On this cold, grey and misty day one of the students draws a bright and beaming sun, and includes a caption below: “I felt happy.”
The journals are rich with experiences, observations and thoughts and looking through them is to see time pass, to see the seasonal growth and change of both land and student. A few words captured at the beginning of the year (“I sou a brd”) becomes much more by the end (“May 6th when I was sitting in my sit spot I saw some wichis butter and I also saw a really cool black spidier and I also saw a babbey maple tree and lots of joul waed and lost of bird chiping”). Difficult to decipher scribbles transform into carefully drawn jewel weed leaf diagrams. The pages of some journals are filled with brightly colored depictions of the student in their spot while others resemble a scientist’s notebook and are filled with notes, observations and small sketches.

Figure 10: A third example of a page from a student’s sit spot journal. As can be seen here, students sometimes drew themselves sitting in their sit spot, surrounded by the things they noticed while there.
Standing here, looking around, the ground tells an obvious story: this place is frequented often and by many. Footprints abound, trampled ground, spaces cleared and constructed and construed. These autumn olives are as successful in the school’s curriculum as they are on the land. For example, each year the students in each class have a lens through which they examine various issues – in the first and second grade this lens is symbiosis. This concept, alongside the yearlong enduring understanding: “All living and nonliving things are interdependent and exist within systems” creates a frame from which the curriculum emerges. The conflicted Autumn Olive Land fits well within this frame, and the students spend the year considering the “Future of Autumn Olive Land Project” as their service learning project.

I try to complete my loop around the school-land by continuing along the class and adult-sized path that leads out and upwards, back towards the buildings, but I’m forced to turn around; there’s no bridge to cross the small wetland area that separates autumn olive land and the mud is deep. It doesn’t hinder the students or their guides though, most of whom wear rubber boots that cover their legs below the knee – even here footprints texture the deep mud. In the midst of this, rivulets of clear water thread their way through the grasses that are already growing long in the early spring. I make my way back the way I came, one last stroll through Autumn Olive Land, across the sturdy wooden bridge, and up the hill towards the school’s buildings.

About halfway up the incline I pass through a line of spruce trees. I try to recall the early pictures I saw of the school and can’t remember this line of trees – that, along with their size, leads me to conclude they’re likely about the same age as the school. My first day here I joined one of the guides and a couple students around one of these
trees to nibble at some of the soft and bright green needles, about an inch long at the
time, which were the first of the tree’s new spring growth. As I chewed a few of the
delicate spruce tips, which were delicious (and filled with vitamin C), I had my first
opportunity I had to hear a student and guide discuss the idea of Honorable Harvest.
Both the students sampling the delicious tips were older and the discussion was about
balancing the desire for a tasty snack with the needs of the tree. The guide encouraged
the students to indulge but explained that the tips were the beginning of the tree’s
growth for the year. By picking carefully, and avoiding places where many tips had
already been taken, they could help ensure the health of the tree.

In the early grades this is foundational and introduced through the established
curriculum. It also appears at the end of the students’ time in the school, with the middle
school students, during their “Systems Study,” exploring the question: “Are what we
purchase worth the lives consumed to make that purchase?” In conversation with one of
the guides I asked about the term ‘Honorable Harvest.’ The guide explained that “the
term Honorable Harvest is another Native American term – and it's not an arbitrary
choice to use these terms.” Kimmerer (2013), whose book Braiding Sweetgrass is very
familiar to some at SRS and used in their various parts of their curriculum, writes at
length about the concept of Honorable Harvest, explaining that “collectively, the
indigenous canon of principles and practices that govern the exchange of life for life is
known as the Honorable Harvest. They are rules of sorts that govern our taking, shape
our relationships with the natural world, and rein in our tendency to consume” (p. 180).
This guide sees the concept as both a way to harvest and an attitude that can inform
other areas of the curriculum, or of living, and described some of the ways it plays out in classrooms with the youngest students:

We harvest a lot of wild foods here, and teas – CommuniTea is something I started here too. So, CommuniTea is [when] we have members of our community in that have done something that we're interested in, and they come in and share their experiences with us. And we share tea with them that we've harvested on the land, and we always really want to impart to them that the tea that we've harvested – all those plants – have joined us. They've participated willingly in our terms of understanding… when we're harvesting, we listen for the answer. So we don't just pull and take anything – we see a patch of nettles, we're not just going to rip everything down – but the children, you know, they might pull and feel one that doesn't – it's too tough to come out. And they might say, oh, like that one doesn't want to come, and they might just move on to the next one.

It's kind of giving – like Thomas Berry said, we're communion of subjects, not a collection of objects$^3$ – so it's like giving that subjectivity back to the natural world.

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$^3$ I feel compelled to include Berry’s actual text here because I think it offers an interesting connections both to the root metaphors (including anthropocentrism and mechanism) as well as the discussion about objectification:

“Two things are needed to guide our judgment and sustain our psychic energies for the challenges ahead: a certain alarm at what is happening at present and a fascination with the future available to us if only we respond creatively to the urgencies of the present. We are concerned here with the second of these requirements and wish especially to outline the conditions for entering a future that will lead to the larger fulfillment for which the entire planet, as well as ourselves, seems to be destined.

“The first condition for achieving this objective is to realize that the universe is a communion of subjects, not a collection of objects. The devastation of the planet can be seen as a direct consequence of the loss of this capacity for human presence to and reciprocity with the nonhuman world. This reached its most decisive moment in the seventeenth-century proposal of René Descartes that the universe is composed simply of “mind and mechanism.” In this single stroke, he devitalized the planet and all its living creatures, with the exception of the human.” (Berry, 2006, p. 17-18)
And this is the way I kind of approach it. So we teach the children that, you know... for example, today, one of the children said 'the first dandelion is up,' and he showed me and he said, 'but I'm not gonna pick it 'cause of Honorable Harvest.' And I said, 'well, what do you what do you mean?' And he said, 'because it's the first one, and there's only one.' You know, so for him, he understood that you never take the first and only one, you never take first one because the rest of – other beings, the bees might need it, or the other beings that are around might need it. And because it's the only one you see it's not for you, you know? If there's a patch, you can take a percentage of the patch, if that you know is allowing.

In certain situations, when we're harvesting carrots – a huge row of them, then we have to move quickly and, you know, we might overall just have a moment of gratitude for all the carrots, nothing crazy, just like a moment of acknowledgement, and then recognize that they've been planted with the intention of harvest. But when you have wild things I feel like it's a different story, you know? So when we harvest the wild berries at first, you tell them if a berry is holding on it's not ripe yet. A raspberry – if you're pulling a raspberry it should come right off: it's ready and wants to be harvested. That's one of its niches, that's part of its purpose... everything has niches. But if it's holding on, it's not ready, and it wouldn't be honorable to pick something before it's ready, you know? So it's an overall attitude. And that attitude, weaves through everything.
As I pass by the trees now I resist the urge to snack, noting the tips that remain within arm’s reach are now more than two inches long. The bright green growth has new meaning – more than an indication of spring the fast-approaching summer, it’s a treat and a resource for teaching fundamentals of the school’s philosophy. It’s also, I realize, another way to measure my time here. I find myself wondering, what it would mean to measure one’s life in inches of growth instead of months and years. Meaning, through experience, becomes layered – laminated – on places over time: what do these trees mean to the students who have spent years snacking on them, considering their needs and watching them grow?

Figure 11: A student’s map of the octagon - an outdoor multipurpose space.

One last small but steep hill brings me back on level ground with the school’s buildings. Directly in front of me is a space referred to as the octagon (Figure 11). Long
wooden planks embedded in the ground set the space apart from the grass surrounding it. Just inside each of the eight boards are long benches. I’ve seen this space used throughout each day at the school: small meetings, groups of students congregating to chat, whole class meetings and the focal point for outdoor whole school events including a May Day celebration that occurred early in my time at the school. The ground inside the octagon is a mixture of dirt and determined plants who are mostly small, except under the benches where their incursion hasn’t been hampered by the frequent daily footfalls. I sit on one of the benches, look out at the ridge across the valley and make a quick sketch (Figure 12):

![Figure 12: An example of a quick sketch found in my field notebook. This is the view looking over the octagon towards the ridgeline in the distance.

Sitting on these benches arranged in a circle reminds me of one of my early interests in the school: their focus on non-hierarchical leadership and a consensus-
based model of decision making. I’ve been told that many of the conversations and meetings at the school, from the school board and teacher meetings, to morning classroom gatherings, to the resolution of disputes between students and some other disciplinary issues are resolved using a collaborative conversational method variously called ‘circle governance,’ ‘circle process,’ and ‘circle way.’ As a teacher, I often have classes of younger students meet or discuss in a circle, but this was something a bit different. The conversational framework the school uses is derived from a method called the ‘Circle Way’ described in a book of the same name (Baldwin & Linnea, 2010).

In its complete form, circle process is much more than simply meeting in a circle. The appearance is similar, except that circle process typically includes a ‘center’ – this is an object or objects that are placed in the center of the circle as “a symbolic representation of a group’s intention, purpose, or goal – and these objects allow people to visualize their reason for gathering” (Baldwin & Linnea, 2010). There are community agreements that all who participate in the circle are made aware of; there are roles that different participants take for the duration; there are stages that each meeting progresses through: a start-point and end-point, in this case the ringing of a chime, bookend each gathering. I had not experienced a fully actualized circle until attending a school board meeting – they use this process for each of their meetings. One former board member told me they believed it was “the single most important tool for the success of founding the school.” I stand and watch the trees and valley spread out before me. A few clouds float through the sky, illuminated in various colors as the sun sets behind a ridgeline in the distance.
Mapping the school

Over the course of my time at the school I drew three maps, one very early in my time there, one in the middle and one at the end. I was curious how the experiences I had there, or my understanding of the school in general, might be reflected in these endeavors. I also asked the different students with whom I spoke if they would be willing to draw a map while they told me about their experiences at SRS, though I encouraged them to use a very loose definition of ‘map’ in hopes that they would depict the school in whatever way they wished. It seems important to present these maps here – they are useful in that they provide a visual guide to the school, and they give some valuable insights into how the students, and I, think about the school-land. All of the places I mentioned in my description of my walk can be found in at least some of the maps that follow. The student creations I’ve included in this section are maps in which the students attempted to capture the entirety of SRS in some way (if the student’s map was about a specific part of the school it was included as an illustration in the walking tour). Accompanying each map I’ve provided some of my thoughts, observations, and, when necessary, highlights of some student writing.

My initial map
Figure 13: Map drawn by me after only a few days at SRS
My midpoint map

Figure 14: Map drawn by me about halfway through my time at SRS
Looking across the three maps (Figure 13; Figure 14; Figure 15) I drew I'm struck first by the change in scale and focus: in the first two drawings the buildings are featured prominently, and positioned centrally, while in the third the group of buildings takes up only a small amount of actual space and is decentered. This reflects an important change in how I came to see the school over my time there. Initially I thought about the classrooms as the areas where the learning took place, the center of educative aspects of the school, and saw the outdoor areas as sites of recreation and
enrichment. Gradually this perspective shifted as I experienced the various ways in which the outdoors was integral to the curriculum. Each day at the school the majority of my time was spent outdoors. I believe this is also true of the students, particularly the younger ones. By the end of my time there I had spent much more of my time in the various places outside the classroom. This shift in how I thought about the school can also be seen in the notes made on the three maps. In the first I have noted many details about the classrooms including the ages of students, the names of the guides and the name SRS has given to each group. While this may have been practical, there was much I was trying to remember those first days, it also demonstrates a change. Over time, in the last two maps (particularly the final map – Figure 15) memories, quotes, experiences and other details increasingly fill the whitespace in the outdoor areas while the spaces where buildings are depicted are empty. These three maps all reflect something important about the school: the out-of-doors places are integral to what happens at the school – even activities done indoors are often bound-up in endeavors that have outdoor components.
The student who drew this map (Figure 16) chose to identify the different significant areas of the school, and then provide important details for each place they acknowledged. I find it interesting that these details are associated with each location except the classroom, which they simply describe as ‘learning space.’ This is important, and I don’t think it is entirely coincidental that they use the term ‘space.’ The classrooms, two of which are housed in each indistinguishable and prefabricated structure, are identical. The teacher working in that room applies features that makes them feel unique. Students also change classrooms as they advance to older grades.
This is very different from the distinct outdoor places, like the outdoor classroom and Autumn Olive Land, which students visit repeatedly throughout their time at SRS – for those who enroll in kindergarten and stay through eight grade the exposure they have to some of these outdoor spots is significant.

Even the details suggest the many ways in which the different outdoor places are experienced – from what might be found in a place (‘lots of TICKS’) to general descriptions of the type of activities that happen there (‘hands on’) to the specific ways in which these places are used (‘bird watching’). All of the things associated with each place are specific, concrete occurrences, particular to that place. This is different from a classroom, where there are many different activities that take place, though the activities themselves don’t emerge from and aren’t otherwise linked to the class space. So the classrooms may take on some characteristics of place, based on Casey’s (1996) description of place as primary, but the abstracted, dissociated nature of the class activities makes them different than the outdoor places in which the activity/experience is directly tied to the place itself.
Another concept map (Figure 17) drawn by an eighth-grade student who had been at the school for many years. What strikes me here is, again, the focus on the other-than-classroom spaces. Only two aspects of the school that are identified here are interior spaces, ‘classrooms’ and ‘community room & universe building’ (a multipurpose room), everything else is outside and are places used by students in all of the grades.
This diagram (Figure 18) is the only student-drawn map that features the school's property line, though I find the most distinguishing feature to be the tombstone-like depictions of the classrooms, office, and community room. I also find this map intriguing because of the white space between the different locations, including the 'space that I accidentally wasted (yay)' area. I wonder, how does the maker of this map imagine these in-between spaces? Is the 'wasted' space, as well as the space between the various shapes, superfluous, or does it also have a role at the school?
In this map (Figure 19) the student positioned areas of the school in relation to one another, including the pathways that connect the various locations. The stream is conspicuously positioned at the very top of the drawing. I find it interesting that the ‘Field’ is the center around which all of the different places orbit, and yet there is no path that leads to or from it. It captures something important about SRS’s land: while there are many places where the students spend time exploring, learning, playing, there are also vibrant meadows that separate these areas. While some intrepid students venture into these areas they are set apart, and less utilized than the other areas drawn here.
Student map 5

This map (Figure 20) features approximately half the classroom buildings, the rock pile, parking lot, road, and a diagram of an autumn olive tree, in the approximate location of Autumn Olive Land. This map is notable because it is the only student-generated map that doesn’t feature primarily locations outside the classroom. Of note in this drawing is the identification of the rock pile and parking lot area. These parts of the school are particularly significant to some of the older students because they are both locations where older students go to sit, eat, and socialize during lunch and other breaks.
Student map 6

Figure 21: Student-drawn map created by a younger student.
This map (Figure 21), created by one of the younger students with whom I spoke, was drawn with passion and enthusiasm and accompanied by energetic and continuous commentary. While both sides feature arrows, the back side contains a number of locations and arrows that seem to connect them. It was unclear whether this student was suggesting a relationship between the different areas, or simply identifying the pathways that physically connect the locations. Text on the front side (spelling corrected) reads: “Things that I think are important about SRS - council of all being – teaching you to respect others like your surroundings the habitat! the things that live in nature and realize and respect that this is where they live and I’m glad they teach that.” Text on the back side includes: “A bird house is a place they make nest and lay eggs” and an arrow that points off the top of the page with text that says “over there is hill that leads to creek.” Also identified on this side of the map is the area known as ‘four directions,’ the ‘rock wall’ (I never saw this particular feature), a pathway, the lower meadow, and more.

This is nature people, so deal with it!

I’m invited into one of the 2nd and 3rd grade classrooms on a Friday afternoon to see what “KLE” time looks like. KLE stands for key learning experiences – these are hybrid lessons that bridge science, social studies, and other topics that aren’t covered in the math and language arts classes. I’m excited. The classroom is distinct and densely packed. The walls are covered in student art and other work. A pot boils away in a corner – I assume it’s soup in the making until a closer look reveals avocado pits and skins being agitated by the bubbles. An older looking and soft-spoken boy explains that
they are trying to use avocados to dye fabric pink. Jars filled with a fuzzy and fibrous material, in various colors, sit on a shelf – more are scattered across student’s desks and tables. There is a mixture of ages in the classroom. I look around unsure of what everyone is working on – a table of girls invites me to sit with them. They explain that they’re felting – and as I watch their careful work I begin to understand the process. With precision and speed they are poking a sharp needle through colored wool – a barb on the needle catches the wool and pushes it into the ball of twine the wool is placed on top of. After many quick pokes with the needle the wool begins to be embedded in the twine ball, over time covering it in a fuzzy layer of wool.

Everyone is working on the same project – one of the girls enquires with a teacher, Guide Amy, to see whether they have more materials so that I can also participate. After my participation is approved this student, clearly very familiar with and comfortable in the classroom, marches to the other side of the room, pulls supplies from various places and sets everything I need on the table in front of me. The group proceeds to provide me with in-depth instruction on how to proceed – I’m to cover half the twine ball with white wool and half with black wool. They are doing this, they explain, because the class is studying the phases of the moon. They continue by telling me that one half of the moon is always illuminated, like the white side of their ball, and that the different phases of the moon that we see is because we can’t always see the entire bright side. One of the girls holds up the ball to demonstrate. Another mentions that she can list all the phases of the moon and begins reciting the names from memory, starting with a new moon. The entire group joins in, naming each phase, helping each other when confusion of waxing and waning arises. We continue to felt. They seem to be
poking the needle through at least three times for each of my attempts – the quick, precise movements leave their moons quickly covered in a soft, fuzzy layer of wool.

The students’ second teacher, Guide Xaya, arrives – I learn later that the teachers split this afternoon KLE time to give each an opportunity to get through prep work, planning, grading and sometimes lunch. Clean-up happens quickly, students know where materials reside, and their approach is collaborative. Ten minutes later everyone is seated on a carpet looking toward their second guide for more information. Sitting to the guide’s right side is a display rack of books, all of which deal with soil. She reminds them that they’ve been learning about soil and asks them to tell her what they remember: why is soil important? What types of soils do plants grow well in? What is soil made from? The enthusiastic group is full of ideas, hands pop up, those who are too excited to wait call out. I hear them making connections to their life, their time outdoors and their school garden – carefully thinking about the soil in which they play, dig and plant their classes’ vegetables and herbs.

Guide Xaya explains that they’ll be learning more about the different types of soil, and thinking more about what these different soil types provide for plants. Soil identification guides are passed around and procedure is discussed and demonstrated: to start, take a small handful of soil and add a bit of water; knead the soil once the water is added (remember making bread); keep adding water and kneading until the soil can be formed into a coherent ball; grip the ball in one hand and gently squeeze the soil thumb-wards; using that thumb flatten the soil as it is pushed out from the hand, over the forefinger; attempt to form a ribbon of soil; keep pushing the ribbon out until it breaks free; observe carefully.
We’re standing around yet-to-be-planted vegetable beds, the students are eyeing the soil they contain with enthusiasm. Everyone is outfitted in weather-appropriate attire. It’s early spring and the sun is warm but the air is cool. A gentle wind leaves tall grasses lazily waving. All but me and one student are in boots suitable for the muddy conditions forthcoming. Waterproof pants and jackets have also been donned – this is part of the extra clothing and wet weather gear all the students are asked to bring and keep at school. Their bins, which fill the entrance area of each classroom, are stuffed full: hiking boots, hiking socks, muck boots, sun hat, warm hat, fleece jacket, waterproof jacket, winter coat, waterproof pants, insulated pants, lightweight gloves, winter gloves, neck warmer or balaclava and an extra set of clothes. Casually dressed in pants and a pair of running sneakers I’m obviously not prepared for the same conditions as the rest of the group. This is the last day I forget my boots.

Demonstration and directions completed the students eagerly begin; all hands are in the soil. It’s cool and damp and smells delicious – it’s the odor of early spring in places that have a real winter. As I work to collect my first soil sample a few inches down from the top layer I can see and hear the excitement. I dribble water from my bottle onto the spheres of soil held by students who I’m working near and we begin to knead. Producing the ribbon is tricky, but after a few tries we’re all getting the hang of it. We consult the soils identification guide – some of the ribbons are just shy of an inch long when they break and we wonder if we’ve found some sandy loam. With more experience the ribbons become a bit longer – is there clay in the mix? We put some of the soil into our palms, add water and use a finger to push the mixture around: the texture can give us more hints about the soil’s composition. I can feel grains of sand
and a smooth, slick clay covers my palm. A giggling student across from me slowly smears wet soil down her arm. Soon both her arms are covered and she’s applied some to her face. Classmates ask her what she’s doing – she quickly gets to her feet and proclaims for all to hear: “this is nature people, so deal with it!”

A couple garden beds away another student announces the discovery of a spider. The class crowds around to watch the quarter-sized spider as it uses its eight limbs to smoothly navigate rough terrain. There is audible enthusiasm from multiple students – others express concern that the spider has been scared from its home, or could be inadvertently injured by the gathering crowd. The student who had originally made the discovery gently encourages the spider onto his hand, walks it to the long grasses nearby and releases it near their base. Guide Xaya brings the class together to consider their first test. An inch long ribbon, combined with the presence of clay, dried but still obvious on many palms, and one forehead, suggests the soil might be best classified as sandy clay loam. Why, asks the student’s guide, might this soil have been used to fill these beds? The discussion turns to the needs of plants that soil provides – nutrients, air and drainage, the ability to hold water.

Our next stop, Guide Xaya announces, is the bridge to the autumn olive grove. An enthusiastic class washes down the slope away from the buildings of school towards a place they have all spent many hours and much energy exploring. Most of the class has reached the bridge before I arrive with Guide Xaya, and are looking with anticipation at the mud beneath them. What is the difference between this soil and what we found in the garden beds, we are asked? Once released to conduct their tests, the class, in near unison, disembarks from either side of the bridge. Most are ankle-deep in
mud within seconds. Hands follow feet into the mud where test samples of the wet soil are collected. Having both hands in the mud feels spectacular: it’s cool and smooth and the spring-after-a-real-winter odor, the scent of decay and new growth, is more present here. Our muddy hands struggle to form coherent boluses – though kneading helps in eventually expressing excess moisture and soon some soil balls are ready for testing. The ribbons are much shorter, breaking nearly as soon as they’re formed. Consulting the laminated and now thoroughly mud-covered testing guides confirms what we can feel in our hands: clayey sand.

Exploration and play continue, observations are made and descriptions of the mud are offered. One student suggests slime, which is quickly amended by another student to include foamy. Elsewhere, smooth pudding is accepted by a number of students as an apt characterization. Guide Xaya asks that the students return to the bridge. One after another emerge from the ankle-deep mud, which grips tightly to boots as they struggle back to the platform. Students already on the bridge lend assistance to those still working to extricate themselves from the foamy and smooth pudding-slime. As one student, who had lingered a bit longer in some of the deepest mud, hoists herself back to the bridge the grip of wet soil holds fast – her socked foot arrives bootless to the wooden bridge. As she balances on the still-shoed foot, with the help of a nearby shoulder, others manage to wiggle the stubborn footgear free.

Guide Xaya begins the next discussion by asking the students to consider what they know about the needs of plants – what might be the impact of this clayey sand? The conversation turns toward the observation that there are not as many plants growing here as on the hillside nearby, and that the plants in this place of puddles and
rivulets are distinct from their neighbors on the hill. We all gaze at the wetlands around us: plants from last year, long stemmed, tall and grey and topped with a spiky seed pod, sway in the breeze. Beneath them, the next generation, this year’s vegetation, has taken advantage of the mild spring to clamor upwards, broad green leaves reaching for the rays they need to synthesize their food – carbohydrates from the carbon dioxide they breathe and the water in which they make their home. Some plants, those adapted to wet conditions, do well in this soil. For most, though, the wet and heavy soil makes growth difficult. Is this, Guide Xaya queries in conclusion, the kind of soil in which you would want grow vegetables?

Conversation complete, the class casts their eyes longingly back towards the muddy wetland. Let’s follow this up a ways, suggests Guide Xaya. Moments later we’re back amongst the mud, tracing the course of the slow-moving water, deep puddles connected by fine ribbons of water, the direction of their flow made apparent by a slight shimmer in the sunlight. Students explore as they walk and play, new and different muds are discovered. A student far ahead calls out, high-pitched and joyous, that he has discovered mushy pudding. Enthused, another races ahead to confirm the discovery by submerging both her hands completely. We regroup at the next pathway, a trail that will take us back into the autumn olive orchard. As we head into the trees one student points out newly emerging mushrooms for our muddy feet to avoid, while Guide Xaya reminds us to walk on the wood planks to help mitigate erosion in this heavily trafficked area.

We all are covered, clayey sand coats shoes, pants, jackets, hands – faces are speckled, hair is clumped. In the orchard-cum-classroom-cum-playground the student
are offered temporary release to play and explore. In an attempt to become marginally cleaner mud is transferred from hands to trees and newly emerging grass as the students wander, some at high speed, others at a calmer pace, to various areas they know well. Each child-made clearing a place, full of stories and trees, bushes and soil and meanings. In some of these places students sit, sun dappling ground and child as it passes through branches whose first leaves are beginning to unfurl. In other places work is happening: branches are collected and stacked, building boundaries; debris is cleared, a previous child’s work undone – each small, created place an ongoing negotiation with past and future inhabitants as students from all grades visit and create here. Those who aren’t sitting or creating are investigating, closely inspecting the surroundings: annelid and fungal visitors are discovered with excited announcements. All around us plants, whose names and possible uses many of the students happily share with me, are emerging.

    The class gathers around a worn, dirt caked shoe from which a new plant is growing. One student, after a close examination, suggests the sneaker must have been buried for a while due to the degree of decay. Others want to know where it was found, and how. It is passed through many hands as the discussion continues. Finally, the class agrees that the shoe should be left where it was found, so that others can enjoy this oddity, and so that the plant can continue to thrive. Returning to our investigation of soil types we move to the final spot that Guide Xaya has readied. A short walk along an old, sagging fence that establishes the boundary between school property and the adjacent privately owned property brings us to a deep hole.
As we, students and I, peer expectantly into the hole Guide Xaya explains: there are often layers underground, tiers of soil with different compositions. Looking down through the hole we can see horizontal bands, easy to distinguish because of their color. Testing reveals further difference – more clay in the layer that yields longer ribbons and more coherent soil balls; shorter ribbons and less coherence suggests the topmost layer has more loam than those below it. The end of the day approaches and, while still engaged with testing and conversation, the students are more subdued. Being outdoors in the sun, testing soils, plodding through mud, alternately feeling warm and cool has left me feeling good, but also tired. I recognize this feeling, and revel in it – it’s a version of what I’m often left with after a day of hiking, warm and worn. Looking around at the muddy and happy students, I think many of them look how I feel.

Quietly, and at a slower pace, we make our way back up the hillside, retracing our steps to the classroom. Obviously familiar with this, the students are quickly ready to end their day – surprisingly I don’t see much mud make its way into the classroom. Bags collected and packed, end of the day chores complete, the students make their way to the end-of-day gathering. Standing with Guide Xaya, watching pre-dismissal play, we chat slowly, our conversation punctuated by pauses during which she attends to the students running and sitting around us. I take these moments to appreciate the warmth of the sun. She tells me she’s pleased with the lesson, that she has taught elsewhere, in more traditional schools and that she’s is excited about what is happening at SRS. The students are happy being outside, she explains, and engaged: they’re doing science, they’re playing, they’re learning, and they’re passing their state tests. I look around, her class is mingling with others – some are tossing a ball, others dash
around trying to catch one another, a few sit in the sun quietly chatting. Though I’ve cleaned my hands and removed most of the wet soil from my shoes, I can still feel it there, or the memory of it. My hands, my nose, my sneakers and feet all know different soils now, can feel soil composition, and I consider how it’s different to know it that way instead of through a worksheet or video or class discussion.

**A visit to an enslaved persons cemetery**

Starting in kindergarten with an overnight in tents on school grounds, with parents, guardians and guides, students at SRS do some type of camp out annually. The outings increase in complexity each year, culminating in 8th grade with a 3-night excursion planned entirely, from the route to the meals, by the students. It’s my second day at the school – I was told a day earlier, shortly after I arrived for my first day, that if I wanted to, I was welcome to join the fourth and fifth grade students on the first day of their overnight trip. In addition to being the class’s end-of-year overnight, this is a culminating event of a year-long focus on homeostasis that uses this particular region near to the school, which has both historical and environmental significance, as a lens.

Humans inhabited this place for more than 10,000 years before the arrival of European settler-colonists in the 17th century. The class’s curriculum has the students examine both groups. They learn about local indigenous persons by exploring these two questions: “What can we learn from the Lenape lifestyle?” and “What is the evidence that the Lenape Lifestyle exhibited Homeostasis?” They examine the settler-colonists, particularly those living in and around a small town called Walpack, with these questions: “How are the beliefs and traditions of the wider world revealed in Walpack?”
and “What larger lessons can we learn from the history of Walpack?” They also explore the ecology and geology of the region by asking questions including: “How have the ecosystems of the Walpack Valley changed over time?” “How are the rocks in this bioregion different?” and “Geologically speaking, how has the Earth maintained Homeostasis in this bioregion?” They also spend time throughout the entire year working on an ongoing project that includes investigating some of the families that lived in the town and drawing a map of the region, with particular focus on a long-established road that runs through the area.

It is along this road that the bus I’m on with the 4th and 5th grade class now trundles – I’ve been told it’s one of the oldest in the United States, that at one point it represented the furthest western extent of European colonial occupation and that it had been a trail used by indigenous groups that was then ‘improved’ upon by the Dutch. Formerly an important route, multi-lane highways that lie like ribbons across the long and low mountain ridges surrounding us have usurped this road’s initial purpose – it doesn’t appear to have been widened or improved any more than necessary for its current role as a destination for tourists and hikers. All of us riders on the bus have been assigned seats, the students’ audible expressions of enthusiasm or exasperation made it clear that this was a treat for some, but not for all. I’m squeezed inside a surprisingly small seat next to a fifth grader who’s likely being punished by being made to sit next to me. I do my best to lessen the impact of his seat assignment by asking him what kinds of things he likes to do, to which he quickly replies: Fortnite. While I know it’s a video game, that’s the extent of my knowledge. He tries to explain it to me but his voice is soft and the bus is loud, and he gives up after a few minutes. A moment later he realizes he
can have more rewarding Fortnite-related conversation through the space between the window and seat with the boy sitting behind us.

Potholes, likely made much worse by a wet winter and limited budget, leave the bus lurching from side to side, gently tossing us back and forth as we ponderously make our way towards our second stop of the day: a large home built along this road more than 250 years ago. One of the guides passes me a book, telling me it provides some good background on the area we’re visiting; the book’s front matter reveals that it was written in 1942. Amidst family histories of the settlers-colonists that first started occupying the land, I find derogatory language and troubling, stereotypical descriptions of the indigenous persons who are from this place. The guide later assured me that while they don’t share the book with the students because of these issues, it is a useful source of information to assist them in research projects they do about the European families who lived in this area. I’m left feeling uneasy. I hear Haraway in my brain, reminding me that it matters what stories we tell stories with.

We arrive at our stop and file off the bus – it’s a warm spring day and birdsong surrounds us. Ahead, on the other side of the road, sits the building we’ve come to visit – while it’s referred to as an ‘inn,’ we’re told that this place was actually a ‘yaugh house,’ which was a home in a remote area, required by colonial law to shelter and feed those who were traveling along the road. While there is no documentation of the house’s early visitors, the tour guides mention the possibility that some well-known individuals, including John Adams, may have stopped here as they traveled to and from Philadelphia. This area also saw military activity during both the French and Indian War and the Revolutionary War. The house is built on a gradual hill rising away from us and
is constructed from rocks, left in their natural shape, that were found in nearby fields. It sits behind a retaining wall made from the same material. Ten steps lead up to a small porch. Behind the house trees with a haze of bright green buds extend up the hill while behind us, in the other direction, fields of new spring growth stretch downwards to a wide expanse of river.

Three older women, volunteers from the local historical society, file out of the house and down the stairs, greeting us warmly while standing on the retaining wall. They outline the plan for our time here – we’ll begin with a short hike up the hill behind the house, where they will point out a few areas of significance including, one of the docents explains, a “slave cemetery.” She pauses and looks around, there doesn’t appear to be much recognition on the students’ faces. This is reminiscent of something I had observed the day before, when one of the guides had mentioned the cemetery while talking about the trip: a group of girls I had been sitting near started whispering, one of them asking the others what slavery was. None of them seemed to be sure. ‘I think…’ said one, though I wasn’t able to hear the rest of her reply because the guide redirected their attention back to what was being said to the group. I find myself wondering what, if anything, the students know about slavery. The docent from the historical society also seems to see this lack of recognition, and after looking around for a minute she decides to elaborate by saying “you know, a black person cemetery.”

I look around at our all-white group, a bit shocked by the description, expecting one of the guides to provide additional context for the comment. The docent continues, uninterrupted, by explaining that slavery was legal in New Jersey (until 1846), and that many people who lived in the state had owned persons who were enslaved (though
they used the term ‘slave’ throughout this description), including the family who owned the house we’re standing in front of. But, they explain, the man who owned this house freed those he had enslaved when he died. Furthermore, they tell us, the person who lived a bit further down the road made a similar decision, though he did so while he was still alive. I get the sense, as the docent speaks, that she wants us to be impressed, particularly so when she mentions that one of those freed individuals felt so comfortable at the house that he had chosen to stay. After mentioning this she pauses, begins to look anxious, and quickly adds “I'm not saying, you know, that it was a good life for them, or that this was a common experience.” Our group continues to listen quietly while my mind spins. They caution us to tuck our pants into our socks as the tick population is thriving. This will be the only information that the students receive about slavery during the time I spend with the class.

We begin our hike up the hill to the cemetery site. The leaves are emerging and the sun is warm. Quickly our group expands, stretching into a long line with a couple guides and the historical society docents in the front, another guide at the far end. I notice that the guide at the back of the line stops frequently to examine the surroundings, pointing things out to the small group that has congealed around him. I’m in the middle, chatting with the students strolling nearby. At one point a student near to me discovers a woolly bear caterpillar, the back half of its body has been stepped on. A group gathers around, one of the students calls ahead to the guides at the front, one of whom walks back to where we all stand looking down at the dying animal. Suddenly one of the students announces “I’m going to put it out of its misery” and crushes it with his foot. The guide, clearly frustrated, asks him “do you need to step away?” He repeatedly
assures her that he does not. The entire group stops a couple times, once to examine two cenotaphs memorializing people buried elsewhere but significant here and once to peer through the woods at a location nearby where historical society believes a military fort once stood. A bit further up the hill we come to a small trail that breaks away from the main path. Our docents ask us to pause. They explain that this is the pathway up to the cemetery, and note how lovely the location is. One of the three spends some time romanticizing about the forested location, casting it as a beautiful place for a burial and helping us all to imagine the funeral procession following this pathway up through the woods. Stopping at this trail, she muses, they would have taken the deceased from the cart and carried them the rest of the way to the cemetery.

The first step onto the narrow path is high, prompting another docent to ponder how difficult it would have been to lift a casket that distance. Newly emerging vegetation lines our route – when one student steps on a couple of young plants growing off to the side a teacher admonishes him and reminds everyone to be respectful of the things living here. We make our way up the trail to a clearing in the forest. Most of the undergrowth has been cleared away, sunlight pools on the ground anywhere it’s able to get through the tangle of branches and new leaves above our heads. Small plants and grasses intermingle with last fall’s layer of leaves. A few trees grow in the irregularly shaped clearing. Rough, unmarked stones emerge from the ground. As I look around I feel unsure I would have recognized that this was a cemetery if I had come across it while walking through these woods. These stones, a docent explains, mark the graves of those buried here. With that, a different understanding of this place begins to emerge, and while most of the stones have been placed without an obvious arrangement, I do
see two large and three small headstones laid together in a line, reminiscent of family burial sites that I’ve seen in other cemeteries. I try to make a quick count as I look around and realize that I see more than 40 of these stones, including one right at my feet.

I take a couple steps back, not wanting to be disrespectful and feeling a bit overwhelmed by the experience. A similar awareness dawning, the boy I sat with on the bus steps back as well, away from the stones, and stands next to me. The names of those who have been buried here, we’re told, are unknown, save one woman, likely the last person interred here, whose burial was witnessed and recorded in 1882. Our docents note again how lovely the cemetery’s location is, what a beautiful place to be buried. I’m upset because of the feelings I’m having being in this cemetery, but also because of the lack of discussion about what this means and the glamorized story of slavery we’re all being fed. It feels like we’re all just taking a stroll through the woods to a pretty clearing while learning about some interesting local history.

On the walk back down the hill I hear one of the guides ask the docents not to tell the students about the ‘massacre’ that took place in the region – I later learn that the house where we started our walk provided shelter to a large number of settler-colonists who were living in the area when they were attacked as part of a land dispute between indigenous groups and the colonial government. I overheard the guide mention that they try to avoid giving the students ‘bad news.’ Later, when I asked a different guide who was on the trip with us about the student’s curiosity about slavery, and lack of information provided, she told me that slavery also falls into this category, and that the school tries to avoid telling the students ‘bad news’ before they’re in the fourth and fifth
grade, at which point they start to bring it in gradually. She added that she thought the students were really curious about some of the stuff labeled ‘bad news’ and mentioned, without elaborating, that many of them regularly play violent video games. While our conversation ended there, the experience, as well as my curiosity and concern about the policy, continued throughout my time at the school – what is bad news, and for whom, and when?

This chapter has explored the school through stories and maps. I began with a conversation with one of the people who was very involved in the early stages of SRS’s development. This conversation is important because it connects some of the ideas that I presented in chapters one and two with the school itself. Concerns about hierarchy, patriarchy, human and Western exceptionalism and human domination of the land were amongst the ideas circulating between founders in the early days of the school. Following this was an account of a walk I took, including the memories and thoughts that surfaced as I moved through the school-land. This served multiple purposes – it was foremost another placing endeavor: by using sensory details, stories and other particulars I attempted to capture both the primary sense of place as well as the understanding of place the comes with time and experience, and in doing so deepen the feeling of SRS as someplace particular. It also served as a carrying bag of sorts, where moments, comments and observations could accumulate; not enough for their own chapter, these small pieces are nevertheless significant and contribute important nuance to the school as a whole. Following this section was a collection of maps, some drawn by me, some drawn by students. These maps provide some interesting insights into the school, but also provide layers of visual depth to the description of my walk.
The last two sections of this chapter were different in that they described specific experiences that I had while visiting SRS. The first story is an attempt to capture the type of educational experience I witnessed often during my time at the school, one that is earthen, where content emerges from the school-land and where play and learning occur contemporaneously. The focus on the soils that surround the school is also important – the students were deepening their understanding of the school-land, what they learned provided further depth to their understanding of someplace particular. The knowledge the acquired had context, it was connected, made concrete, as they dug for soil in places they knew: the soil lodged under fingernails and speckling foreheads is the same as the soil in which they grow food and play. The second story added troubling but important complexity (which feels to me like increased density) to this emerging portrait. This story is important for the argument I'm trying to make: it highlights how important it is that teachers (and students and everyone else!) see a direct connection between the violence enacted against people and e/Earth. The intent in this chapter was to give depth, an increased sense of place, to SRS, give an example of the type of learning experience that I observed there, and then trouble this emerging picture with an upsetting experience, one that was difficult for me to place alongside the other stories. With a sense of place developed, in the following chapter I bring in additional descriptions of the school, but this time they are interspersed with my analysis.
Chapter 5: Some growth emerging from the soil

In this chapter I explore what might emerge from the soil that I’ve tried to foster. To do this I position additional material – soil – from the school alongside that which I’ve already provided, apply the ideas presented in chapters two and three, and discuss what emerges for me as I think through these mixtures. In the first section of this chapter, I explore the ways in which earthen considerations are incorporated throughout the curriculum. In the second section I look specifically at some of the ways aspects of the school challenge the value-laden hierarchical view common in my/Western culture. In the third section I examine the roots of SRS’s policy of ‘no bad news,’ consider the implications of such a policy and explore the notion of ‘bad news’ in a larger context.

An imbued curriculum

We are in the midst of some trouble. We are harming each other and Earth. The school’s mission – education for a hopeful, sustainable future – drew me there; it’s an exciting and important prospect for education and I wanted to know more. From the mission to the flagpole displaying the US flag and Earth, respect and care for the land is infused into much of the curriculum. It is far beyond a class or two devoted to the topic: the entire school is structured around concerns about and care for e/Earth. Dewey’s observations about the moral instruction of the school have been addressed – many aspects of the school, from curricula to the school grounds and school policies, have been carefully considered and demonstrate ways in which humans can have an ethical relationship with e/Earth. There are many good examples: assignments that address
practical skills and traditional school topics incorporate earthen issues – in one instance I spent time with a class who was working on a writing assignment that asked the students to take the perspective of a seed; bookshelves filled with books about nature and e/Earth; outdoor classrooms; a faculty obviously devoted to environmental issues; a focus on finding ways for students to spend the maximum amount of time outdoors; campouts building in duration and complexity that start in kindergarten; a lunch policy that asks students to bring meals from home that are enclosed in reusable containers. Far from a single class advocating for the environment, an earthen ethic is imbued throughout the school.

Much of the curriculum emerges from the school-land, and the students know the place well. They may spend years playing and learning in the same places. For some, this becomes an opportunity to ask complex questions. For example, during their eighth-grade year the students come up with a guiding inquiry, something that they explore throughout the year. One student wondered whether the “mass removal of invasive species” was ethical, a question that’s not surprising given the strong connection many of the students feel towards the invasive autumn olive trees, whose branches and leaves make up the pathways and special spots of Autumn Olive Land. In all of the maps that students created the buildings that made up the school were just a small part of what was drawn and in some cases the buildings weren’t featured at all. In comparison, Autumn Olive Land was a prominent feature in many of the drawings. During play and exploration the students’ connection to the land is clearly evident. In conversation with one of the guides they explained the importance of helping the students build a connection to this place:
The forest that they grow and play in, and that they touch and that they interact with all the time: that's what they're going to love. Then, when they're older, they can understand – because they have a love of this forest, it allows them to understand the importance of the other forest.

Students expressed a similar sentiment. One middle school student explained:

By spending more time in nature and learning more about it, we can more easily protect it. We learn outside, we play outside, we take notes outside – it's pretty much our second classroom – it is our classroom. So we have like our indoor classroom, but then we have our nature, nature – which is all the property – is our classroom… Being connected to a smaller part [of nature] makes us think of the world as a whole. When we're younger, we kind of think of just this area of land. And then as we get older, you kind of realize… how big the Earth is. We learn about nature here a lot… so everywhere we go, we see nature and think of here.

We also learn here how much nature takes care of us. Some people just depend on other people, or what else they have, but we kind of depend on nature here. So being in nature, we realize how much we depend upon nature, like we cook with some food we grow here, that kind of makes us realize how much we need nature – well, everyone needs nature, but some people don't realize it as much.
Because it’s like if they go to the store and they get like, if they get lettuce or something, we grow lettuce in the garden here. On our overnight [camping trips] we try and get all local food to make our food. So we kind of feel like other schools are less directly connected to nature, I guess, but they’re still obviously dependent on it. But here we’re fully connected to nature – we’ve gone into the garden and just picked lettuce and eaten it.

It’s interesting to consider the relationship between the land, curriculum and guiding philosophies of the school. The people who founded the school started with a shared orientation to the e/Earth and embraced some big ideas that, to some degree, are still important to those who work there, but they didn’t have land and they hadn’t yet developed their curriculum. In some ways they changed the land to suit their needs, but in other ways features of the land became pedagogical opportunities: the wetlands, the autumn olives, the stream and four-directions. The school-land, in tandem with those guiding ideas, appears to be a generative relationship that informed the development of curricula and led to school-wide and classroom-specific practices. In other words, much of what happens at the school emerged out of an interaction between their guiding philosophies and the place where SRS is located. Rigid structure, imposed from afar, is unable to account for the nuances of place. This is as true for education as it must be for sustainability, which must be, at its core, a place-based approach to living. This was also evident in the school curriculum when comparing, for example, how the state-mandated math curriculum was enacted to how the Key Learning Experiences (KLEs) are taught. The math classes I sat in on were worksheet based and delivered
traditionally, with aspects of e/Earth sprinkled in when possible. KLE units, on the other hand, presented an opportunity for students to complex relationships between science, math, arts, engineering, exploration, play and e/Earth.

**Challenging relationships with nature**

The hierarchical view of the world that positions humans above other aspects of e/Earth is problematic. The introduction to the school’s curriculum framework lays this concern out clearly while also explicitly naming some of the root metaphors noted previously:

The mission of [The School for the Renewal of Soil] is to educate for a hopeful sustainable future. We believe that in order for this to occur humans must experience a profound shift in their understanding of and relationship with the earth, universe and each other. Part of this shift has to do with what we study, but most of the shift has to do with changing the lens, angle or perspective from which we view the world and our stories of it. The current scientific, mechanistic and anthropocentric approach to understanding things has led to a disconnection from relationships and the corresponding wide-ranging impact of our choices. We seek to move into a more system-based, ecocentric view of the world in which learning and understanding occur within the larger, holistic context of the planet and universe.
These concerns also emerge in the curriculum. Starting in kindergarten and first grade students are introduced to the idea of Honorable Harvest – a board member described what this looks like:

“they do a lot of picking herbs for teas and dying [and] they'll say [to the students] ‘should we pick that? Is that apple ready to be picked? Have a moment where you think is that apple ready to be picked and kind of mentally communicate, can I eat you?’ It's just really appreciating everything around you, you don't take it for granted, you don't just say, oh, that apple tree is just human food – there's another reason for it. It might feed the bees, it might do this, it might do that. If that raspberry is not ready to be picked then don't take it.

I had a chance to experience the students go through the process of deciding what to pick on a trip to the nearby Inception Farm where the ideas about the school were first formulated. The day started with a bit of information for the students, as well as myself, about the value of the dandelion, a plant I had grown up thinking of as a troublesome and persistent weed. We learned that dandelion flowers are particularly high in various nutrients, and that if they were picked at the right time could be made into a beneficial biodynamic compost. As a group, it was explained, we were going to spend a bit of time collecting these flowers, which would then be mailed by the farm to a place where the compost was made. Following this the students were asked to consider how they might go about this while keeping the idea of Honorable Harvest in mind. They responded by mentioning it was important to ask the plant if it was OK to take, and
listen for its response; they also mentioned it was important to look and see if other flowers were nearby because they didn’t want to pick all of them from a particular area.

Expectations established, we all set off to explore and collect. There was an abundance of short and deep green grass surrounding the barn from which we emerged, and much of it was speckled with the yellow flowers we were interested in collecting. The areas in between Inception Farm’s large, angled solar panels were particularly full of flowers, though the soil was sodden and each of my steps sunk deep. The kindergarten and first grade students approached the task slowly and with care. Each dandelion was inspected, some were left in their place and some were removed. Occasionally a student would ask the guide if a particular flower seemed willing to be harvested. We were particularly interested in finding those flowers that had unfurled most of their petals, but that still had a tightly packed, unopened center.

As I watched it became clear that the ‘listening’ they were asked to do was more than a metaphysical endeavor – it changed the approach to harvesting entirely. In asking a plant if it was OK to harvest a student was finding a way to communicate with the dandelion and its surrounding, and giving it a voice in the process. While not audible, the message that emerged, what the students ‘heard,’ was a result of careful attention to the state of the particular organism (had the flower matured completely and therefore as full as possible of its beneficial nutrients?) combined with considerations about the land and other organisms who might rely on this flower (did some flowers remain so that their nutrients could also be shared with the soil in the place where they were growing?). There was also no directive that we collectors try to acquire a particular number of flowers – no challenge to stockpile more than others. This removed any
sense of competition and created a pace of collection that felt relaxed and allowed us all to be intentional in our gathering. This left me wondering if I, as a teacher, need to more carefully consider how I frame the activities I do with my students: what are the other messages sent when I set up an activity where students are competing with one another, even if just for fun? How can I emphasize quality over quantity, experience over achievement, in the work I ask my students to do?

Framing the harvest and consumption of other organisms as a process of consent challenges the value hierarchy and provides an opportunity to consider the ways in which root metaphors such as individualism and anthropocentrism metastasize, slowly growing into all areas of our lives. Further, it provides another important example of how Nussbaum’s (1995) definition of objectification can shed light all types of violence. Instead of an analytical-deductive procedure that asks them to decide what is best for the plant, or for themselves, the students engage with the plant (a ‘weed’ no less!) as equals – the student-flower collaborations doing important work together, communicating in hopes of finding a balance that allows some flowers to be collected, processed and turned into a beneficial soil additive, while others remain behind, benefitting the soil from which they grow, and to which they will return. With humans as collaborators the plants are able extend their reach.

To be a consumer of others, and to be in a position where we can consider this consumption, puts humans the complex position of choosing how and what to consume. To be a consumer in a world and in a place where the harvesting and culling is done by others, and often by machinery, both of which are often far removed from our daily experience, makes these choices more complex and more remote. The hierarchical
view might then be considered not only an underlying feature of our culture but a necessity – how can we live our lives, how can participants in my/Western culture live from day to day, if we don’t abdicate our responsibility to the world around us? How could we accept agricultural practices that deplete the land or the often-brutal treatment of animals raised for food if we didn’t see those things as lesser? Nussbaum (1995) is important here because I believe that the mental gymnastics we must engage in to make this all feel acceptable involves objectifying life and the land on which we all rely; all that we’re surrounded by becomes a tool, a resource – things that lack autonomy, that are replaceable and interchangeable. Kimmerer (2013) inquires deeply into this quandary, which she describes here:

If we are fully awake, a moral question arises as we extinguish the other lives around us on behalf of our own. Whether we are digging wild leeks or going to the mall, how do we consume in a way that does justice to the lives that we take?... When we rely deeply on other lives, there is urgency to protect them. Our ancestors, who had so few possessions, devoted a great deal of attention to this question, while we who are drowning in possessions scarcely give it a thought. The cultural landscape may have changed, but the conundrum has not – the need to resolve the inescapable tension between honoring life around us and taking it in order to live is part of being a human. (p. 177)

Another activity I had the opportunity to observe, one that further opened the possibility of thinking differently about, of decentering, human’s relationship with e/Earth
was called the Council of All Beings. Originally designed as an activity for adult participants, a guide at the school has reconfigured it for younger students. I was brought into this project when I was asked to spend some time in the classroom helping the students use hot glue guns, scissors and other implements of crafting as they created masks. What I experienced was far from what I had been expecting for first graders. The masks were elaborate: one was covered in mosses, another had a long snout, a third was slowly being covered in small rocks. As they pieced their masks together everyone was enthusiastic and spoke with me about the part of their bioregion they had chosen – or, in the students’ telling, the part that had chosen them. Plantae, animalia, wind and lightning and the sun – the students were creating masks that represented much of the natural world around them. While cutting and gluing they peppered me, and anyone within hearing distance, with information: what they eat, where you might find them, their roles. The enthusiasm was palpable. In the next section I’m going to use the words of the guide who adapted the activity alongside drawings made by the students, after the activity’s culminating event, to describe the Council of All Beings.
An illustrated compendium to the Council of All Beings

Figure 22: The various beings in one class's Council. One of the students in this class chose to represent the entirety of the bioregion itself – see lower right corner. (student-created drawing)
[The students] spend a couple weeks listening to the animals in the bio region

[Error! Reference source not found., Figure 22], metaphorically and realistically. If they have an encounter with a fox, I asked them to pay attention to that. And if they are really allured to ferns, I tell them just pay attention to that – whatever it is, any being in the region that they’re seeing, maybe the deer are crossing in front of their car, every time they pull out, or maybe the spring peepers are really exciting to them or something like that.
Then I have them kind of choose, or be chosen, by a creature – I kind of frame it as they're being chosen that they're that that being is asking them to speak for it. And they spend several weeks learning all about the being. I read them– the seventh graders come down– actually, we go to the library, they get books, the seventh graders come down and read them all the books about their beings, and help them identify important facts about their beings and then they write about them [Figure 24].
And then we make masks of their being [Figure 25, Figure 29].
And then we go to this very special place at [Inception] Farm and we look into the mirror at our human self, that's kind of intense, we look - every child looks in the mirror, and then pulls their mask down and acknowledges that they're going to speak for their being, and they cross a bridge [Figure 26].
And as they're crossing [Figure 27], I ask them to use that time, when they're on the bridge, to get into that mode of leaving the human behind and ready to speak on behalf of fox or whoever that they've chosen. So they already have a long relationship with this creature by the time they're doing this. And then we get to a spot where all the creatures are on the other side of the bridge and we invite the future ones of their species to be with us in our minds.
So the future foxes, the foxes that might be here in 500 years, and the foxes that were here before, we'll ask their memory to be with us as we're speaking today. And then we kind of then we go into this one spot in the woods and we sit in a council [Figure 28]. And there's a human representative and the creatures speak their gifts, speak to the human about what their gifts or concerns are. And then the human acknowledges them. And there's, you know, several rituals that happen. And when I say ritual, I mean, like a symbolic movement or gesture that can be without words. That can help embody the experience.
The non-human voice is again acknowledged here, and given space to sit and share, to speak and to be heard. In learning about various aspects of the bioregion for the purpose of inhabiting them, even in some small way, the students may have the opportunity to see it differently. To understand each thing, animal, plant or non-living aspect as something that may have its own set of wants opens up the possibility of moving beyond a conception of all that surrounds us as objects. This is also true of the Honorable Harvest. In both cases there is a cognitive move required, a shift in perspective that could challenge the notion of nature as resource, nature as a tool for humans to use in pursuit of lives that exist outside the delicate balance established in places around Earth over many millions of years. Additionally, both activities draw on knowledge that might be addressed in a science class and ask students to use that as a foundation from which their imagination – or intuition – can find and give voice to another. The guide who spoke with me about Honorable Harvest referenced this quote during our conversation: “the universe is a communion of subjects, not a collection of objects” (Berry, 2006, p. 17).
I want to dwell in this activity a bit more, because even here there are complex messages here that are worth considering through the lens of root metaphor. To begin with I want to return to the earlier discussion about humanity and the distinction between difference and diversity. The root metaphor of progress informs this thinking, as does the deeply held ethnocentrism present in my/Western culture. As I discussed earlier, a conception of people as more or less the same – on the same trajectory, although possibly at different points along the line, leads to the belief that some cultures are just more ‘advanced,’ they’ve made more progress in the pursuit of what it means to be human. This is a way of thinking that sees all people as iterations on a single theme. On one hand, that the Council of All Beings includes only a single human representative challenges the predominance of humans – they are but one member of a large group of organisms. On the other hand, I wonder, could this reinforce the view of a single humanity, one in which all humans have the same needs and interact with the land in similar ways? Is there really just one human voice that can adequately represent all of the different humans, even in just this one small and rural bioregion?

Bill Bigelow (2020) describes an activity that provides an interesting counterpoint: in *Constitution Role Play: Whose ‘More Perfect Union’?* students participate in a role play where they pretend to be drafting the US constitution. In this version of the writing, in addition to those originally involved in the process, the voices of farmers, workers and enslaved African Americans are also included. The goal is for “students to recognize how the interests of a given group might translate to what they wanted out of our country’s governing document” (p. 2). Social issues and ecological issues are bound together – when we work to include more voices, the many peoples and many other
aspects of Earth should all be considered. There is much that is said about those who are not included: Bigelow’s activity is as lacking in other voices from the land as the Council of All Beings is lacking in voices of different people. In both cases what is needed is an expanded definition: the social, our society, must be broadened to include e/Earth (e.g. Kissling, et al., 2017) and likewise we must find ways to include the many and different human voices when we discuss issues of the land. Humans, and our lives and our stuff must be seen as natural – of nature, of e/Earth. In doing so we can start to imagine what it might be like to hear more voices and reposition humans to be part of, not above, the complex e/Earth, emerging from the soil and bound tightly to the myriad networks that are essential for each organism’s survival.

**Challenging hierarchy through consensus**

There are other ways in which the school challenges hierarchy. The staffing of the school is built around an awareness of tiered structures: there is no principal, rather leadership of the school is approached as a team effort, a carrier bag of sorts, containing multiple people who collaborate to keep the school functioning. Instead of grade levels, as students move forwards in their schooling the name of their level represents ever increasing levels of astronomical coherence – from stardust, to nova and constellation and finally galaxy. The school has even adopted a meeting practice, which I heard called both circle practice and circle process, that is utilized by the board of trustees, the faculty and individual classrooms. In essence, these various groups convene meetings in a circle and utilize various conversational techniques to ensure
voices are able to speak and be heard, and when decisions are to be made, consensus can be reached.

This process challenges traditional school power structures and has been important for the school. A longtime board member, serving since the school’s founding, noted that they could only remember one or two decisions that were made without having all members in agreement. This, of course, is not without its challenges: multiple community members pointed out that there were still hierarchical structures in place. In some instances the school’s position in a hierarchical culture necessitated this. For example, New Jersey requires a single individual be designated as leader of the board; at SRS that position rotates amongst the roster of current board members. Likewise, the school is still an employer and the board, in conjunction with the leadership team, makes decisions about hiring and firing, compensation and other aspects of the staff’s jobs. Multiple guides explained that they still had to bring big and new ideas to the leadership team and board and that they were sometimes told ‘no.’

In conversation with one of the guides I asked how the circle practice and consensus model of decision making were connected with the school’s mission of ‘education for a hopeful sustainable future.’ He explained:

as Americans, you know, we're not the best listeners, right? I'm not a great listener. We hear something and our brains start thinking about what our response is going to be prior to allowing the rest of the information to register. By using circle practice, by using a talking piece where we're really trying to not call out, and waiting our turn to speak. It's really about listening, active listening –
even if a kid has the same idea as somebody else [this allows] them to hopefully realize, 'Oh, my ideas maybe reflect what John was saying across the circle' – it's really working on those listening skills. And the compromise of consensus, I think, [helps] to separate the child from the default setting of ego.

The teacher paused here while considering how they might explain what they mean by the 'default ego.' Eventually they continued with a couple examples:

There's a great video of a fish that asks another fish 'how's the water?' and they don't know what water is because it's all around them. And the idea of like, you know, if you hit traffic on the highway your ego default kind of kicks in [and] you're like, god, don't these people know that I'm trying to get somewhere, I can't believe this happened to me. When, obviously, someone could have died in an accident or – you never know what's causing the traffic.

By working in circle practice, working to consensus, I might have my idea what I think is right and what the decision should be, but working through circle, and listening to other perspectives, allows me to sort of modify that default ego and say, oh yeah, they have a point, maybe my way is not the only solution to the problem. And maybe that's how it sort of indirectly tied to a sustainable future. Maybe it's a skill that we need to develop in our youth so that when they grow up they're better listeners and communicators, and not so inclined to immediately be connected to their default ego, but to kind of thinking more globally, like, what is
not just good for me but what is good for the group? What is not just good for me, what's good for the planet? If planet Earth could be personified, have a seat at the circle, you know, then they would have a thumb that they could either put up, or to the side or put thumbs down and could have a direct effect on the consensus.

Circle process, from this teacher’s perspective, is another way to encourage the inclusion of more voices as well as a tool for collaboration. Whether asking for consent to pick a flower, or working to consensus around a class decision, the students are being asked, when looking at the Latin roots of these two words, to literally ‘feel together.’ Only one human is included in the Council of All Beings. The teacher whose words are quoted above talked about personifying Earth so it could be part of the process of building consensus, yet it too is given only one representative. It is difficult to imagine how we as individuals might ‘feel together’ with an abstract ‘human,’ or the entirety of Earth. In both cases one thumb, one vote, and one voice just isn’t adequate; attempting to generalize ‘human’ and ‘Earth’ doesn’t do justice to the complexity or difference that characterize both. This again highlights the importance of the particular, the value of difference and the significance of place, as we think about sustainability, or living well, or surviving. We must know who we might collaborate with as we consider how to move forwards.

No bad news, but for whom?
‘No bad news’ is a practice at the school that asks teachers not to share anything that might be deemed unpleasant or upsetting with the students before fourth grade. Other than the two instances I heard it applied during the field trip to the cemetery (once when discussing ‘the massacre’ and once when discussing slavery) any time the policy was mentioned in conversation, the ‘bad news’ people were concerned about sharing was related to the environment. As a board member explained, at these ages the school is “really focused on getting kids to appreciate nature.” From my understanding of the policy, beginning in fourth grade bad news is slowly phased in, so that by the time the students are in middle school they have been exposed to climate change, species extinction and other serious environmental issues. This is an important practice for some at the school: I was told that it is very significant for some families, and their decision to send their children to the school is, at least in part, because of it. The hope is that this phased approach will help students build an appreciation for, and a personal connection to, nature before they learn about the troubling things that have emerged from some human’s relationship (or lack thereof) with the land. This is both for the student’s well-being and the belief that this practice could lead students to have attitudes that will lead to them making pro-environmental choices in the future.

Learning about slavery should be upsetting. The reality of climate change should be overwhelming. The scale and scope of these things is huge and the ramifications of both are widespread in my/Western culture, and around the world. The practice of not sharing ‘bad news’ emerged at some point after the founding of the school. It came about because there were concerns that the students, including some in younger grades, were receiving information about climate change and other environmental
issues that was leaving them feeling overwhelmed, hopeless and anxious. This presented a quandary, as one person from the school explained: “how do you deal with the emotional and psychological well-being of each individual in the community, when you don't know how something's going to hit [them]?” Another person I spoke with suggested that the practice was in part the result of one student who became quite upset after learning more about the potential future impacts of climate change. I had the opportunity to speak with this student who clearly remembered feeling upset:

When I was here [as a student], there was all kinds of things, like people would come and they would talk about climate change… And I remember being very scared of that, because I couldn't do anything. Because I was too young and I didn't know how to make any change. I didn't know how to do anything about it and for a while it really scared me…

The second reason for this practice, in addition to concerns about students’ well-being: multiple community members mentioned that they believed more pro-environmental action would come about if students were able to develop a hopeful, caring connection to e/Earth before they learned the ‘bad news’ about the current state of things.

We don't talk about climate change or destruction or anything bad happening because we want the kids to love it first, because in order to really care for something, and advocate for something, and you should probably love that thing
first. So I think we are exposing them to nature so nature is not just something else. It's not like, 'oh no! they're cutting down trees in the rain forest,' but they're feeling connected to this place right here. And I think that's really important for their future.

This sentiment was echoed by an older student when they said:

In the younger grades you spend so much time outdoors. And then when you get older, when you're learning about climate change and stuff, you already have that, like you care about nature. So I think you care more about wanting to make a change.

Avoiding ‘bad news’ and fostering hope were seen as connected. One of the school’s founders, who was also very involved in the crafting of the mission statement, explained some of the thinking behind the inclusion of the term ‘hopeful’:

So much of the ‘environmentalism’ over the past 20 or 30 years, and this is my own view, has been about, you know, bad news, and grim news, and we need to suffer, and we need to go back to a simpler age, and… you know, everything is horrible… And a bunch of us were just trying to figure out, well, if, if we can't go about this [caring for Earth] with a sense of joy, what's the point? … we just want kids and families to understand that we're about hope, joy and creativity, exploration, and making sure that we're looking after the place.
Having the option to choose when to share bad news is a privilege and silence still speaks. Considering the trip to the enslaved person’s cemetery illuminates this: when teachers don’t provide a counter-narrative to the glossy portrait painted by the docents from the historical society a story takes root and it matters what stories we tell stories with. In the lives and thoughts of white people it is far easier to hold onto a story that allows us to believe things weren’t always so bad, that some previously enslaved people made the choice to stay on the land where they had spent most of their lives imprisoned. For our all-white group, these stories weren’t bad news and they were delivered without comment or critique.

It feels critical to quote Haraway (2016) again here: “It matters what stories we tell to tell other stories with… It matters what stories make worlds, what worlds make stories” (p. 12). The world of white people made these stories, and these stories help make a world that keeps us comfortable and safe, one that actively erases violence, past and present. Keeping this world intact perpetuates the foundations, the root metaphors, on which it is built. For other groups, though, these whitewashed stories would be bad news, an oppressive and known reality: they carry forward a worldview that permits violence, both against people and e/Earth. This should not have been the only story told. How would the students’ experience that day at the cemetery, listening to the stories provided by the historical society, have been different if they had some background knowledge about slavery? What questions would they have asked as they considered how what they had learned in school lined up next to the accounts provided that day? What context might the teachers have provided, beforehand, during or after, if
they didn’t have to consider this policy/practice? Certainly there are details about slavery, and about climate change and a range of other issues, that students in 4th grade and younger don’t need to know about. There are aspects of those things that are angering, upsetting, appalling, and overwhelming even for adults. I believe, though, that there are appropriate ways to introduce and teach these terrible yet terribly important topics, and I worry that a policy/practice like this, if its scope is not clearly defined, leads teachers to make decisions that may not benefit their students or the communities to whom they are responsible.

The avoidance of ‘bad news’ is not unique. Parents and teachers and family and friends of children, though particularly those born into privilege, can (and do) find ample opportunities to avoid the telling of things that could be upsetting. To not have to deliver the ‘bad news’ about racism and discrimination; to not have to caution young children about their potential interactions with police and other authority figures purportedly part of the community to protect; to not have to worry about, think about and talk about the violence that emerges from hatred; to avoid these conversations, and others, is a privilege that the parents of white children enjoy. By locking the doors when they drive through the ‘dangerous’ part of town, while not saying anything, by letting comfortable, safe, white narratives in while locking out difficult truths says much, and children are listening. Climate change, the climate crisis, is now a reality – this generation of children, and many to come, are experiencing the impacts of this crisis, which has been caused by our contemporary ways of living. For some, the immediate impacts may not be noticeable, and for others the impacts are manageable. But for some the impacts are massive: lives, homes, communities and livelihoods lost to fire, flood and drought. For
some beaches and rivers are clean and accessible, while others must contend with a constant flow of pollution in their water. To avoid the ‘bad news’ about the current state of the environment is a place-based and economic privilege.

One of the many manifestations of privilege is the opportunity it presents to avoid thinking about, talking about or telling our children about things that might be considered ‘bad news.’ With this in mind, it is interesting to turn back to the school for a moment. While they avoid the telling when children are young, there is a clear acknowledgement of the importance of this knowledge, at least as far as it pertains to the environment – they have established points in their curriculum (e.g. 4th grade) where this information is brought into their learning. This prompts important questions: Continuing to embrace Haraway’s (2016) observation that it matters what stories we tell stories with, what is the impact of silence at early ages? What knowledge should be introduced and when? Are children who face the ‘bad news’ about social or ecological issues early in their lives really less likely to become adults willing to take action?

As much as we might try to protect them, to protect and isolate the narrative they acquire, children are accumulating stories – ideas – about Earth and about other people from very early ages, even from silence and the soft sound of car doors locking. Baldwin (1963) addresses this, arguing that children see the world, including things we might think of as bad news, sooner than we may want, and are “not yet aware that it is dangerous to look too deeply at anything, look at everything, look at each other, and draw their own conclusions” (para. 4). Children will build knowledge about the world from the material they find around them. In this there is a risk: what they build, what they learn, the stories and silences they hear, may carry forward root metaphors – beliefs
about the world that have led to the current state of things. There needs to be other stories told, other information given, more soil dispersed, so the stories that seep in, often presenting themselves as innocuous and safe, can’t take a foothold without being challenged by a counternarrative.

Students, children, all of us – we need new stories to make stories with, to make worlds with. We need to broaden the scope of our knowledges, our ideas, our languages, so that we can begin to fulfil Bowers’ (2008) hope of “acquiring the language necessary for exercising the communicative competence required in the democratic process of deciding what needs to be resisted, fundamentally changed or conserved and intergenerationally renewed” (p. 332). Bowers is saying we need to provide students with the ability to name, and therefore see, the forces that are at play in our culture, because it is only once they become visible that we can start to make choices about what we wish to carry forward and must leave behind. Education is one means to accomplish this, an opportunity to lift the veil, to reveal what’s behind the curtain, to tell stories, share ideas and knowledges that challenge the status quo, and reveal the beliefs that brought us to where we find ourselves now. These stories show some of the ways SRS takes steps in this direction – by challenging hierarchy, seeking out unheard voices, and immersing children in e/Earth, SRS has taken steps in important directions.
Conclusion: emergence, soiled

In chapters four and five I storied a few aspects of the school that are important to thinking and wondering about education for sustainability. From this mixture – my soil – three broad themes emerged that connect back to the ideas presented in chapters two and three: SRS’s imbued, e/Earthen curriculum; the school’s attempts to challenge a hierarchical perspective of all that surrounds us; the practice of not telling students ‘bad news’ before they reach a certain age. The imbued curriculum is evident everywhere – Earth, soil, nature, the land, all is present and made constantly visible through the structure of the school (including the Earth flag), the amount of time spent outside, and the integrated lessons (the KLEs: key learning experiences) that give teachers the space to create innovative, hybridized lessons that merge science, design, arts, social studies and more with issues of e/Earth. Even the adornment of the classrooms, including the books, posters, plants and more, center and emphasize e/Earth.

All of this speaks to my concern, explored in chapter two, that education for sustainability (distinct from sustainability education) necessitates these issues be present throughout the school and curriculum. The ways SRS incorporates – imbues – e/Earth throughout the school and curriculum is an example of this. From explicit messages, like an Earth flag hanging below the US flag, to implicit messages, like a student being inspired to take action and care for plants at the school after observing a beloved guide doing the same, the imbued curriculum means that more of the intended
and unintended messages (the explicit, implicit and null curricula) are oriented to the school’s mission.

The ways in which the school attempts to challenge hierarchical thinking (including, again, the Earth flag) are intriguing, but messy. This is in part because there are structures outside of the school’s control that impose hierarchy on its various functions: the school’s status as a charter school and its role as an employer both limit its ability to be truly non-hierarchical. Despite this, it was exciting to learn about some practices, introduced in the early grades, but found throughout student’s time there, that challenge human supremacy. Examples of this include the Council of All Beings, Honorable Harvest, and the consensus-based circular meeting structure. Beyond the classroom, SRS has found other ways to resist hierarchy including the structure of the board of trustees, the leadership structure at the school, and, again, and significantly because everyone in the school, guides, staff, students, and board, engages with this, circle practice. In all of these cases there is an emphasis on taking the time and creating the space necessary to ensure more voices are able to speak and be heard.

That teachers and board members also conduct meetings and make decisions, from the mundane to very significant, using circle practice is particularly significant because it shows an institution-wide commitment to challenging hierarchy. Hierarchical, value-laden, thinking is, as noted earlier, problematic. Troublesome, persistent root metaphors inform and structure this value hierarchy. While I didn’t observe times when the school was explicitly calling out root metaphors, I believe that any time a hierarchical belief is challenged it opens the possibility that the root metaphors that inform a particular value-based judgment are also challenged. It leaves me wondering whether
practices like Honorable Harvest might challenge beliefs like anthropocentrism and commodification? While what I observed at SRS challenged human-supremacy, I did not see much that challenged white and male and cis and straight supremacy, which leaves me curious what practices might upend notions of androcentrism, ethnocentrism, and patriarchy?

While the experience at the cemetery was troubling, it was also significant because of the questions that emerged, the most important of which might be: what, and when, is bad news, and for whom? Deciding what knowledge, what stories, are important to children and when to tell them is a constant undertaking for all who teach or care for children. But this calculation is complicated: for children who are geographically, economically, and/or socially privileged it is tempting to avoid telling them things that we adults believe could be upsetting. The problem with this is that stories have a way of seeping into consciousness, flowing through cracks and filling in the spaces left when questions linger. Common stories from my/Western culture, the ones that feel innocuous from repetition, may be heavily influenced by problematic root metaphors. If left unchallenged, if these stories are the ones that continue to make worlds, we will continue to recreate the challenges we face now.

We humans, and all of our e/Earthen collaborators, are in the midst of social and ecological challenges that are scary, as are the beliefs that have led to these issues. There are ways, beginning in the youngest grades, that these matters can be introduced and discussed, and students can be given the opportunity to wonder and ask questions. Ignoring or deferring conversations about topics that don’t directly impact us, that might be perceived as scary, or that might upset some, leaves teachers, schools, parents and
caregivers silent on important issues, and in this silence much is said. It is also in this silence that space opens up – space that we must attend to if we don’t want the same troublesome narratives seeping through the cracks, filling space and making worlds.

Education for the environment, for sustainability, for justice and for hope must recognize that the roots of all the issues we face are inseparable. A school devoted to the environment cannot afford to be silent on social issues. We cannot address these issues separately. When we don’t understand the ways in which they are connected, and when we don’t teach these connections, our only hope is to continue treating outbreaks, to treat the symptoms without treating the problem. Cultivating love, caring, and hospitality, for e/Earth and for other people, is essential, though not all that is needed – the knowledges and the stories that tell us how we arrived here, in this moment of crisis, are critical, even if some of what they tell us is upsetting or angering. Understanding that our culture harbors a problematic set of beliefs that sit just under the surface, easily visible once we know how to look, is important. There is much that must be changed – including a way of living that is firmly entrenched in and reinforced by the stories and imagination of my/Western culture.

As I write this and consider these words I feel challenged by the awareness that things may not change. The pandemic has made evident the widespread resistance that exists amongst many people to anything that challenges the way of living that so many people have become familiar with. Corporate interests, for example pharmaceutical companies’ desire to retain patents to medicines that could save lives, and the well-being of the economy, including (apparently) the bank accounts of the wealthiest individuals, evidently still supersede the interests of individuals, even in the face of
widespread death and illness. There are many structures in place that limit well-intentioned efforts to challenge hierarchical notions. It is difficult to imagine how billions of people might change their lives in the course of a generation when each decision, each choice that each person makes, is part of such a dense network of connections that the full ramifications of any action are likely beyond our ability to conceive. In just the collection of data for this dissertation I was responsible for the release of 1,850 kg of CO$_2$ into the air – that doesn’t even take into account any emissions from the use of electricity to power my computer or the plane flights back and forth to my dissertation defense. It is with sadness and frustration that I note the amount of CO$_2$ I am responsible for emitting for this research is more than the annual per capita production of CO$_2$ for people living in 78 countries (Ritchie, 2019).

Another challenge to any hope of change is connected to the chasm that exists, at least for me, between theory and practice. At the same time that I’ve been collecting, writing about, thinking about, and talking about my ideas, the arguments I’m making here, I’ve also been teaching middle school science. I’m fortunate to have a small class and have them for entirety of each Friday – that’s nearly 6 continuous hours (with breaks) for instruction and exploration. It feels ample and I know many science teachers who would be enthusiastic for so much time dedicated in a single chunk. I’m even more fortunate because I share the classroom with a co-teacher, collaborator, friend and ally. We teach together, plan together, commiserate together and cover for one another when the need arises. I’m well aware of how lucky I am.

Unfortunately, it’s become clear to me that what I say and think and claim and argue while sitting here looking at my computer, comfortably immersed in these many
words, does not translate into my practice. Each day that I teach I wonder, how can I enact, in our classroom, education for sustainability as I imagine it, as I talk about it here? How might I challenge hierarchical perspectives in my science classes? When and how do I point out hidden root metaphors? And if I am going to point them out, what portion of the class we’ve planned am I going to abridge, what content that the students are expected to know am I going to gloss over, or assign as homework? How do I address any of the things I talk about here in a way that feels meaningful, important and connected to the content we’re exploring in class?

This disconnect was a constant source of frustration and dismay, and my attempts to bring any of this into the classroom was piecemeal and poorly executed. One day I was able to introduce the students to some black scientists, and as a class we wondered about and discussed why the names of these scientists were unfamiliar while their work was well-known. On an outing where we hiked near the beach, as students swatted away flies, I challenged the group to think differently about the insects we call pests and the plants we call weeds. On another outing, as we walked through our school’s neighborhood, we passed by an American flag with a blue stripe. This became an opportunity to talk about how saying ‘black lives matter’ is different from saying ‘all lives matter’ or ‘blue lives matter’ because of the differing values ascribed to various groups of people in our culture.

These were small, momentary wins, in a long year of teaching and learning. I wondered and struggled and tried to incorporate more of these ideas into my practice. I spent time thinking and I started to worry that what I was arguing for here, in these words, was impractical – after all, if this was such a struggle for me, with six hours each
week to say something, anything, about these issues, how would it be possible in a class that was any shorter, or one that had more content to cover? It was in a moment of frustration that I recalled the cautionary note I’d written at the end of chapter two: that it is difficult an individual to bring about change when their context, the structures that frame our lives, culture, economy, government, are at odds with what that person is trying to do. It was with this in mind that I began to understand that SRS’s institution-wide commitment to ‘education for a hopeful, sustainable future,’ as well as other aspects of the wider community, such as Inception Farm, that support this commitment, are essential.

While the school still exists in a context that makes it difficult for them to challenge hierarchy in its many permutations, where students are still part of a wider culture that reinforces and rewards values and behaviors the school may hope to change, SRS’s commitment, its mission, creates a structure large enough to provide shelter, allowing teachers to find small ways to challenge hierarchy, confront at least some root metaphors, and incorporate e/Earth throughout the curriculum. This piece, the school’s explicitly stated belief that the education they provide is for something, is essential. The outdoor places are wonderful, the earthen and innovative aspects of the curriculum intriguing, the guides, staff, and board well-intentioned and dedicated – but the school-wide commitment is what allows them to do some things differently. All aspects of the school, teachers, staff, policies, curricula, the indoors and outdoors, become collaborators, collectively working towards an end that is understood, known: education for a hopeful, sustainable future.
Afterward: the first sprouts

One of the goals I mentioned earlier was to use the work of writing, reading and reflecting on this dissertation to generate questions that are important as we consider how education help foster sustainable communities. Said differently, as we consider education for sustainability (not sustainability education), what might we wonder about? What kinds of questions might come up, breaking through the soil and into the light of the sun? Below is a collection of questions, all of which emerged as I learned about, discussed, and the wrote about the School for the Renewal of Soil. These aren’t questions that have easy, clear answers. Rather, these are starting points, places to imagine and wonder from.

- Thinking about expanding our definition of social:
  - To whom and what might we extend the social?
  - If we were to settle on including that which is alive, what and when is something ‘living?’
  - Should material that was once alive, or that could be part of something alive in the future, be included?
- When we expand our definition of ‘social,’ when we seek to include more of the voices of those we are surrounded by:
  - What will patriotism look like?
  - How will democracies account for the added sets of voices;
  - How might agriculture and animal husbandry reconsider how the produce the food we rely on?
  - How would our daily living, our diets, our interactions, change if we adopted this new perspective?
  - To whom and what would we feel accountable when making decisions about what, how and where to build new housing or commercial structures?
  - Thinking dead deer on the side of the road each day as I drove home from SRS, it leaves me wondering, how long would that animal be left on the roadside after it was killed by a car if we considered it a member of our community, part of our social group?
o if we – our identities – are already always emerging, if we are always becoming in concert with all that surrounds us, what might change if we valued the other differently, equitably?

o How might necessary infrastructure projects proceed when some voices aren’t steamrolled (literally in some cases) in the process?

o Could we ever justify the construction of another oil pipeline?

• If we take the points made by Nussbaum and treat both people, as well as the rest of land, in the opposite way:
  o How might agriculture and animal husbandry change if we were to treat the land and the animals we consume as vibrant and alive, with intentions and experiences of their places and lives?
  o How would we mine if we had to account for a mountain top’s boundary-integrity, if we considered it’s features as inviolable?
  o How would construction and development proceed if we didn’t see sections of the e/Earth as places in need of ownership?
  o How would we live our lives if everything that surrounds us has value equal to that of our own?
  o What does progress look like if we challenge the notion that we are surrounded by things that are either tools for our advancement, or challenges to our cause?
  o Can living things and materials still be ‘resources’ if we decide that they can’t be owned?

• When we listen to, and value, different voices:
  o Where might knowledge come?
  o From whom and from what?
  o Where and when might we collaborate and with who and what?

• If we can ‘read’ the histories of the pines by knowing how to look:
  o might we also be able to read entities, landscapes and places in other ways?
  o What might we learn, and how might we live if we started to think of all that surrounds as alive, intelligent, and affective – as aspects of Earth that have developed complex solutions over millions and billions of years?

• As we consider and explore other knowledges, created by different peoples:
  o Are we positioning other ways of knowing as equal to Western knowledges, or are they constructed as beliefs and treated as remnants of civilizations continually being erased?
  o What happens if we look around us and see a world filled with knowledge as powerful, dynamic and nuanced as our own?

• When thinking about challenging the value hierarchy:
  o Is it possible to challenge such deeply entrenched cultural beliefs, and if so, what does a school that works towards that end sound, look and feel like?
  o Can this type of learning take place in tandem with the myriad standards imposed by external sources, or must the standards change before meaningful change can happen at the level of schools?
  o How might schools adjust what they do as they work to address this change in mindset and orientation to the world?
The hierarchical view might then be considered not only an underlying feature of our culture but a necessity – how can we live our lives, how can participants in my/Western culture live from day to day if we don’t abdicate our responsibility to the world around us?

- How could we accept agricultural practices that deplete the land or the often-brutal treatment of animals raised for food if we didn’t see those things as lesser?

- Our range of possible positions and identities emerge through interactions with other people – we are positioned, and we position, identities emerge and accumulate and we become in a process that goes on throughout our lives.
  - How might the range of positions, and resulting actions, change if instead of just negotiating between ourselves and other people, we are involved in a negotiation with the entirety of our place?
  - What might bloom in the cracks opened by vast range of different pressures if we’re accounting for all that we’re surrounded by?

- Developing a sense of a place:
  - If a collection of stimuli can help us capture a feeling of a place in a moment, can a collection of moments in a place, told through a hodgepodge of stories, help us capture a sense of that place, even though our experience is mediated, diluted, by time and space?
  - How might we know a place if we are not there?

- About my teaching:
  - Do I need to more carefully consider how I frame the activities I do with my students?
  - What are the other messages sent when I set up an activity where students are competing with one another, even if just for fun?
  - How can I emphasize quality over quantity, experience over achievement in the work I ask my students to do?
  - Each day that I teach I wonder, how can I enact, in our classroom, education for sustainability as I imagine it, as I talk about it here?
  - How might I challenge hierarchical perspectives in my science classes?
  - When and how do I point out hidden root metaphors?
  - How do I address any of the things I talk about here in a way that feels meaningful, important and connected to the content we’re exploring as a class?

- Thinking about the impact of ‘bad news:’
  - What, and when, is bad news, and for whom?
  - Continuing to embrace Haraway’s (2016) observation that it matters what stories we tell stories with, what is the impact of silence at early ages?
  - What knowledge should be introduced and when?
  - Are children who face the ‘bad news’ about social or ecological issues early in their lives really less likely to become adults willing to take action?
  - Are white supremacy and climate change the same type of bad news? Can one be taught while one is not? Which is more important and why?

- Challenging root metaphors:
  - It leaves me wondering whether practices like Honorable Harvest might challenge beliefs like anthropocentrism and commodification?
While what I observed at SRS challenges human-supremacy, I did not see much that challenges white and male supremacy, which leaves me wondering what practices might upend notions of androcentrism, ethnocentrism, and patriarchy?

- Living in our places, here and now:
  - How might we shift our education then to answer Haraway’s call to stay with the trouble?
  - What are the knowledges that will be important to future living on a devastated landscape?
  - Who, what and where are the potential collaborators, human and other-than, that share our places with us?

- Important questions, asked by others:
  - “If we want to live healthy lives and pass on healthy and just communities to future generations, to whom and to what are we justly responsible” (Martusewicz et al., 2015, p. 43)?
  - “What needs to be conserved, transformed, restored, or created—here” (Greenwood, 2008, p. 339)?
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**VITA – Jonathan T. Bell**

### EDUCATION

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<td>Mari Haneda, Kimberly Powell, Chris Uhl, Mark Kissling (chair)</td>
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### PUBLICATIONS


### CONFERENCE PRESENTATIONS


